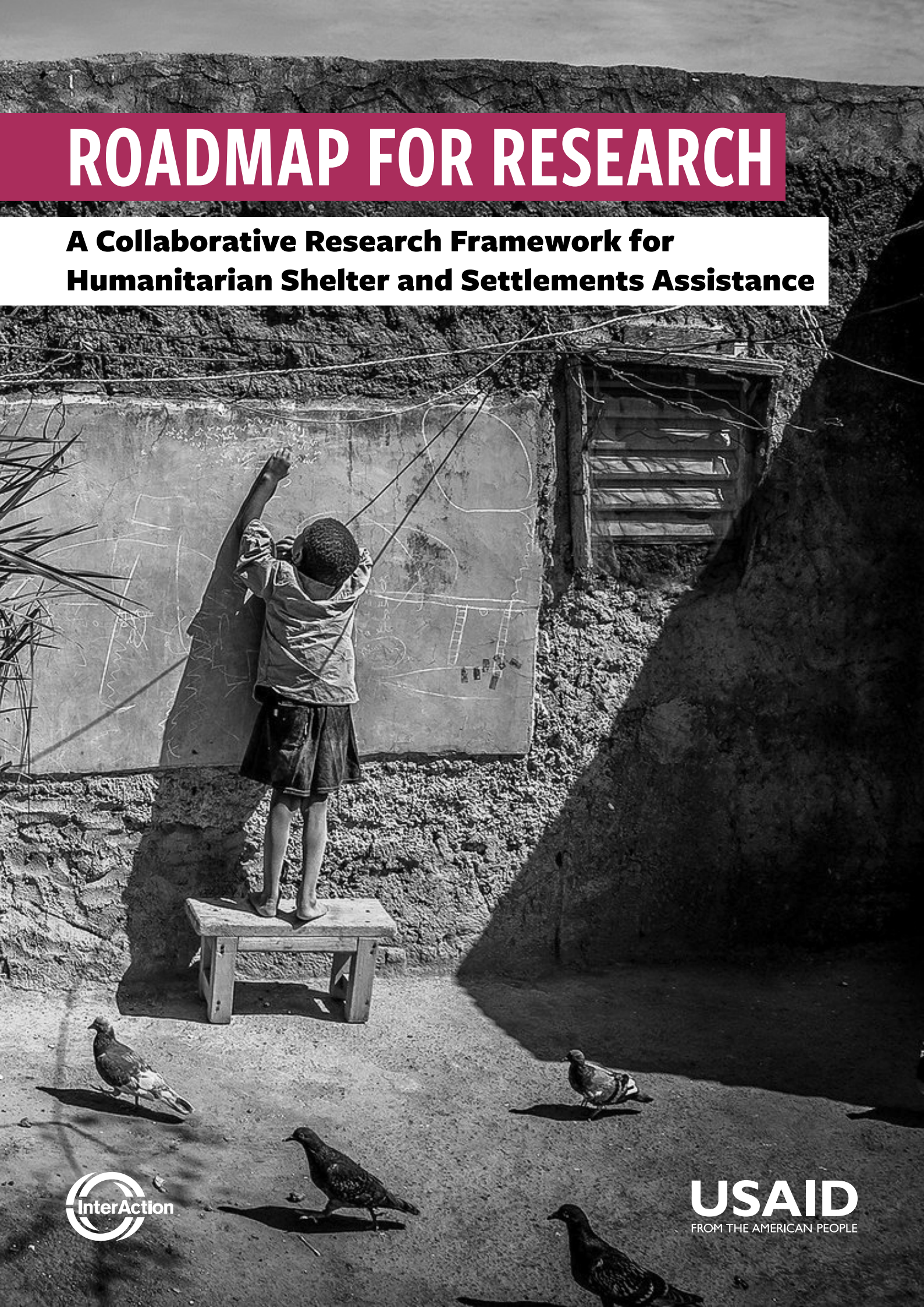
ROADMAP FOR RESEARCH

A Collaborative Research Framework for Humanitarian Shelter and Settlements Assistance



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Suggested citation: InterAction (2021) Roadmap for Research, InterAction

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This publication was made possible by generous funding from the **United States Agency for International Development / Bureau for Humanitarian Assistance** (USAID/BHA).

Additional support was provided by Michelle Neal, Morgan Martinez, Jeremy Doran, Kathryn Sidlowski, and the Humanitarian Policy and Practice Team of InterAction. Special thanks to Fiona Kelling, Casie Venable, Claudia Wesser, and Princess Bazley-Bethea for their contribution.

InterAction would like to thank all contributors and participants of the **Academic-Practitioner Collaborative Research Forum** (London and Washington DC, 2019), also funded by USAID/BHA. We also appreciate the contribution of the Shelter and Settlements Working Group members. Review and guidance provided by Charles Setchell, Alex Miller, Earl Kessler of USAID/BHA and Lee Malany, former USAID/BHA shelter and settlements advisor.

We would also like to appreciate the advice provided by: Amy N Javernick-Will, University of Colorado Boulder; Alice Obrecht, ALNAP; Olivia Wilkinson, Joint Learning Initiative; Jennifer Day, University of Melbourne.

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Credit: Debiprasad Mukherjee (2016)

FOREWORD

From a little further afield, it has been fascinating and very rewarding to witness humanitarian practitioners and researchers from the shelter and settlements communities seek each other, come together to jointly arrive to the release of the Roadmap for Research. We hope this will become a foundation on which more systematic collaboration will be built, bringing together national and international responders, researchers and donors, in support of communities whose shelter and settlements are affected by humanitarian crises.

It is our belief that the investigations undertaken in the Roadmap for Research will in turn generate evidence to better support the Shelter and Settlements sector as a whole, and ultimately make a real difference in the lives of those affected by humanitarian crises.

At InterAction, we cherish the relationships we have built with academic institutions and leaders and place real value in our unique role as bridge between research and practice, between focused humanitarian operations and a broader reflection around local leadership, humanitarian principles, standards, and accountability. The Shelter and Settlements sector, in collaboration with others, has a catalytic potential to improve the impacts of humanitarian action. The Roadmap for Research is our contribution to these efforts.

Julien Schopp
Vice President, Humanitarian Policy and Practice

INTRODUCTION

An inclusive and interdisciplinary roadmap

In 2019, over 70 academic researchers and practitioners came together for two roundtables facilitated by InterAction and funded by USAID/BHA. During the discussions, they identified the need for further collaborative research, particularly calling for stronger partnerships between humanitarian actors, research institutions, and donors. A lack of systematic research and peer-reviewed publications in the humanitarian sector, and particularly in shelter and settlements assistance, was underscored.

A year later, InterAction released Wider Impacts of Humanitarian Shelter and Settlements Assistance (InterAction, 2020), a study that revealed the influential role the sector has in all aspects of the lives of the affected populations. Specifically, humanitarian operations conducted by the Shelter and Settlements sector can also have positive impacts on gender outcomes, physical and mental health, livelihoods, risk reduction, environment, protection, civic engagement, and social cohesion in communities affected by humanitarian crises.

Taking initiative on these calls for better collaboration and research, InterAction facilitated the development of the Roadmap for Research in 2020. Supported by USAID/BHA, the project focused on issues impacting the Shelter and Settlements sector by bringing together humanitarian-focused academics and practitioners to identify key research gaps and issues requiring further investigation, proposing critical questions and methodologies for original empirical research. The 18 chapters presented in Roadmap for Research are the result of a collaboration of 75 researchers and practitioners representing over 40 organizations. The themes and issues selected are diverse and interdisciplinary but represent only a small portion of ongoing research and investigations.

The chapters are not presented in any order of priority, and none have yet undergone a formal peer review process. New research and evidence alone will not improve humanitarian assistance unless organisations continue to apply existing and evolving standards, lessons, and good programming principles. New evidence should also serve as a catalyst for change in policies, adaptation to evolving contexts, and the broadening of local response leadership for improved quality and coverage of humanitarian needs.

Credit: Jose II Ramos (2018)

CHAPTER THEMES AND CONTENTS

The chapters address a wide range of issues and approaches: inclusion and participation; protection; shelter and the environment; public space; different aspects of housing and the home; building practices; livelihoods; and conflict. These investigations propose building an evidence base in support of some of the most critical yet intractable aspects of the lived experience of those affected by crises. This includes leveraging both new and old technologies to address major challenges such as climate change and protracted crises and addressing systemic barriers to empowering the most vulnerable communities.

1. Marshall et al. ask what prevents humanitarian organisations from **including persons with disabilities**. They are disproportionately affected by disasters and conflicts, yet progress towards disability inclusion in humanitarian action has been limited. The research proposes to investigate barriers to inclusion of persons with disabilities in humanitarian shelter and settlements programming and the changes and support needed to deliver and sustain inclusive programming.

2. In **promoting children's participation in design**, Rigon et al. investigate the impacts of displaced children's participation in co-design of built interventions in humanitarian contexts. The quality of public spaces and learning and play spaces has an important impact on children's development and well-being. The authors propose to investigate the impact co-designing can have on children's empowerment, social cohesion between refugee and host communities, and child-friendly public spaces, schools, playgrounds, and shelter.

3. House & Dwyer et al. explore exclusion, violence, and discrimination against people of diverse sexual orientation, gender identity and expression, and sex characteristics (SOGIESC) in **addressing diversity of gender and sexuality**. There has been very little research on this topic, and guidance for practitioners is limited. This research seeks to investigate the impact of pre-emergency marginalisation of people of diverse SOGIESC; the consequences of existing shelter and settlements policy and practice; and how to strengthen and support effective community-based responses.

4. Aranki et al. aim to fill gaps in understanding how intrahousehold dynamics and gendered power inequalities shape women's experience of secure, safe tenure. The chapter **explores women's tenure security** and how it can be strengthened through shelter programming to provide benefits such as increased livelihood opportunities, empowerment, and reduced risk of intrahousehold violence. Looking more deeply into the connection between women's tenure security and livelihoods interventions will provide evidence for designing durable and effective cross-sectoral programmes.

5. Weinstein-Sheffield et al. address some fundamental questions about the meaning of **protection in shelter self-recovery** programming. Their research proposes to investigate enablers and barriers to good protection outcomes, and the impacts of self-recovery assistance on shelter-related protection concerns in crises.

6. George et al. examine how to improve **participation of affected populations in decision making**. Although participatory practices and locally led responses are widely supported in principle and aid agencies are committed to them, achieving successful participation in decision making in practice remains a challenge. The research proposes a wide-ranging review of participatory tools and approaches to derive a better **understanding of areas and methods for improving the participation of affected populations in decision making**.

7. Talocci et. al. seek to study **public spaces through design ethnography**, an ethnographic approach that informs and inspires design processes, to rethink the design and use of public space in settlements. Through a series of explorations over time, the research will consider improving public spaces at many distinct levels, from households to settlements levels.

8. Identifying that the importance of housing for health is overlooked in humanitarian responses, Webb et al. argue for **adopting an environmental health lens** in post-disaster shelter programming. The research will consider a range of factors that cause disease, injury, and death, such as indoor air pollution, inadequate water, sanitation, overcrowding, and pest infestation.

9. Foden et al. assess methods for **quantifying the environmental footprint** of humanitarian shelter and settlement programming. Although there are tools and guidance on assessing the environmental impact of humanitarian shelter and settlements operations, they seek to investigate a more rigorous process to assess the environmental footprint of shelter options and its applicability to support decision making.

10. The chapter by Simons et. al. examines the **role of home-based enterprises** after crises. Shelter recovery can contribute to household economic activity and wider economic recovery by enabling households to restart livelihood activities and generate income. It proposes to investigate the characteristics and importance of home-based enterprises and how households prioritise shelter and livelihood needs.

11. Nabong et al. address the role of **shelter and livelihood in humanitarian crises** and how stronger livelihoods can support adequate shelter. Their proposed research asks how shelter and livelihood support can be better integrated into humanitarian response, looking at the tools used by humanitarian actors to understand livelihoods, how livelihood security and diversity affect shelter, and how existing inequalities affect shelter and livelihoods.

12. Flinn et al. explore how to **define a good home** for households recovering from conflict or disaster. They propose going beyond conventional shelter sector concerns of structural safety and space, which homemakers may not see as their top priorities. Understanding the importance of homemaking to long-term recovery must include families' own perceptions of what recovery means, which is often linked to intangible aspects such as place attachment, a sense of home, and belonging.

13. Corsellis et al. identify that there is a weak evidence base for understanding the shelter and settlement **self-help repair activities** of people affected by conflict, which limits understanding of what support should be provided to these households. Limited understanding of building physics in conflict contexts inhibits development of appropriate technical guidance for building repair. The research will focus on self-help repair of non-structural damage.

14. Parrack et. al address **shelter and settlements programmes in conflict**, where emergency response may be protracted, long-term displacement is common, and humanitarian actors focus more on protection issues, housing, land, and property rights, and community cohesion processes. The proposed research focuses on how recovery practices in shelter and settlements contexts can reduce conflict and contribute to social cohesion.

15. Crété et al. focus on ways to facilitate acceptance of local, non-engineered building techniques in post-disaster recovery. **Local building practices** cover a wide range of local knowledge and practices that are absent from building codes and may be overlooked by institutional actors. The research seeks to analysis social and engineering datasets and assist decision making.

16. Fernández-García et. al. consider how to design **safe pedestrian routes for responding to biological hazards** such as COVID-19. This is a significant challenge in informal neighbourhoods and temporary settlements, with overcrowded and poor-quality housing, limited access to essential services, where most people journey on foot. The research proposes to investigate a "safe routes" approach, where public streets or roads allow users to carry out daily activities without putting their health at risk.

17. Ahmed et al. make a case for **in situ upgrading of housing in informal settlements** as an alternative to relocation. Relocation is widespread in hazard events, but it often has negative social, economic, and psychological consequences for displaced and resettled communities. Focusing on the city of Honiara in the Solomon Islands, this research seeks to understand how to achieve affordable in situ upgrading to increase flood resilience.

18. Sargeant et. al argue that **integrating geoscience and communities' hazard knowledge** into programming will lead to better recovery outcomes and longer-term disaster resilience. Aspects of geoscience are already integrated into some shelter sector tools, but this research aims to demonstrate the value of integrating different types of knowledge for shelter resilience and increased understanding.

CHAPTER 1

Including Persons with Disabilities in Recovery

Credit: Jeremie Lusseau (2013)

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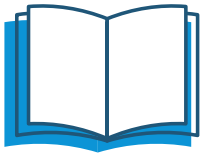
1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Persons with disabilities make up 15% of the world's population (World Health Organization, 2011). They are disproportionately affected by disasters and humanitarian crises, including higher rates of mortality (Fuji, 2012) and injury (Baker et al., 2017). How disability is understood has changed over time. In the past, emphasis was placed on fixing an individual's impairment or health condition. Today, it is understood that disability is the result of an individual's impairment and external barriers that prevent "full and effective participation in society on an equal basis with others" (U.N., 2006). Despite improved understandings of disaster impacts and of the barriers that prevent effective participation, progress towards disability inclusion in humanitarian action and within shelter and settlements has been limited.

This research will ensure persons with disabilities are engaged and effectively participate through an action-oriented research process. In response to gaps in the sector outlined in this chapter, the research will equip members of organisations of persons with disabilities (OPDs) with the skills and knowledge to effectively engage with the Shelter and Settlements sector. This will strengthen the sector's resource base and contribute to the longer-term outcome of increased disability inclusion in the sector.



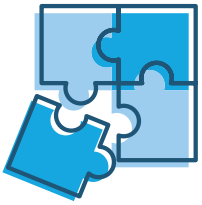
1.2 What is known already?

Article 11 of the *Convention on the Rights of Persons with Disabilities* focuses on "situations of risk and humanitarian emergencies" and parties' obligations under international law to ensure protections of persons with disabilities (U.N., 2006). However, it was not until 2015 that disability inclusion was widely acknowledged within disaster risk management. The *Sendai Framework for Disaster Risk Reduction 2015-2030* (U.N., 2015a) was a turning point and includes persons with disabilities as contributing stakeholders. This was followed by the *Charter on the Inclusion of Persons with Disabilities in Humanitarian Action* in 2016 (Humanitarian and Disability Charter, 2016) and the adoption of the *Humanitarian Inclusion Standards for Older People and People with Disabilities* (ADCAP, 2018) by Sphere in 2018. There has also been an increase in guidance, including the Inter-Agency Standing Committee (IASC) guidelines on the *Inclusion of Persons with Disabilities in Humanitarian Action* (IASC, 2019b) and shelter-specific guidance, such as *All Under One Roof* (IFRC, 2015).

Commitments and guidelines stress the importance of:

- Collecting disability data.
- Partnering with, or seeking guidance from, OPDs.
- Improving accessibility via applying universal design principles.[1]
- Implementing a twin track approach that mainstreams inclusion across programmes alongside providing targeted interventions for persons with disabilities and OPDs.

[1] *Goods, services and products can be used by all people on an equal basis. Universal design is a key principle in ensuring accessibility alongside reasonable accommodation, which refers to adaptions that an individual may require to ensure they can participate on an equal basis with others.*



1.3 What evidence is missing?

A recent review of academic and grey literature for Elrha's Humanitarian Innovation Fund found limited evidence on the inclusion of persons with disabilities in response. Overall, there are multiple gaps in the evidence on the inclusion of persons with disabilities in humanitarian response and shelter and settlements policy and programming. There is little evidence on outcomes for persons with disabilities, no evidence on costs and benefits of different inclusive approaches, ongoing issues concerning the collection and use of disability data, limited research conducted by persons with disabilities, and crucially, limited evidence on the meaningful participation of persons with disabilities overall (Robinson et al., 2020). The study found good awareness of frameworks and commitments to disability inclusion in the humanitarian sector but that current guidance was lacking in specificity and not meeting the needs of humanitarian professionals (Pryor et al., 2020).

The literature on shelter and disability inclusion is limited but highlights how physical, social, and attitudinal barriers contribute to poor health outcomes, hostility from other users, limited access to information, and a loss of dignity for persons with disabilities (Malpass et al., 2019). There is a growing body of academic evidence on disability inclusion in shelter (Maeda et al., 2017; Fannin et al., 2015; Tanaka, 2013). However, this is largely from Japan and the United States, with a focus on public evacuation shelters.

Practice-based literature focusses mainly on technical guidance for accessible shelters and construction (Global Shelter Cluster, 2019). Recognising gaps within literature and practice, the Global Shelter Cluster established a dedicated working group on the Inclusion of Persons with Disabilities in Shelter and Settlements programming in 2018.[2] The working group mapped disability inclusion across the sector in 2019. It found a lack of sector-specific policy, standards, and tools; little evidence on the use of disaggregated disability data; and limited evidence of the effectiveness of current approaches and outcomes for persons with disabilities and their caregivers (Global Shelter Cluster, 2019).

1.4. What questions need to be answered?

The primary research question is:

How can humanitarian organisations support greater inclusion of persons with disabilities in shelter and settlements programming?

This is supported by two subquestions:

1. ***To what extent can a co-research process, that includes researchers with disabilities, contribute to improving disability inclusion within organisations?***
2. ***How can a co-research process contribute to establishing a cadre of persons with disabilities as a technical resource that shelter practitioners can draw on?***

Researchers will explore the primary research question through an iterative process of action and reflection. The starting point should be an exploration of four areas that relate to organisational change:

[2] www.sheltercluster.org/working-group/inclusion-persons-disabilities-shelter-programming

Motivation

Attitudinal barriers prevent inclusion. There are examples of individuals and champions promoting disability inclusion within organisations. However, little is known about how attitudes in organisations influence decision making and contribute to and sustain or prevent exclusion.

Mandate

There is good awareness of global frameworks, commitments to, and standards for disability inclusion in the humanitarian sector. However, there is limited evidence explaining why frameworks and standards are not being adopted and institutionalised within organisations. There is a tendency for organisations to fall back on what they know and to leave disability inclusion in humanitarian responses to disability-focused organisations (Pryor et al., 2020). In contrast, there is limited evidence on what needs to change for shelter and settlement organisations to fulfil responsibilities for disability inclusion.

Capacity

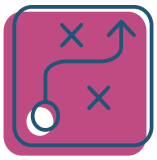
- **Shelter and settlement actors**
  It is increasingly recognised that current guidance does not meet the needs of many shelter professionals. However, questions remain about why accepted general inclusion guidance is not implemented more widely. However, there is demand for more technical support and assistance in the sector (Global Shelter Cluster, 2019).
- **OPDs**
  It is not clear to what extent OPDs are positioned and equipped to provide the tailored and specific guidance and support that the sector is demanding.

Funding

It is understood that donors can drive change and that disability inclusion and meeting disability-specific needs requires budgeting. It is less clear what is limiting the more targeted use of funding to drive change within organisations and improve disability inclusion.

More investigation into these areas will answer key questions for the sector and organisations around what internal change is needed to deliver inclusive programming, what external support is needed, and what systems need to be in place to sustain change in practice.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

This research will draw on participatory action research (PAR). PAR involves "researchers and participants working together to examine a problematic situation or action to change it for the better" (Kindon et al., 2007:1) through a cyclical process of inquiry. This research will focus on the PAR process and ensuring persons with disabilities actively participate in research design, data collection, and analysis. This co-design and implementation process will contribute to filling gaps in the lack of research conducted by and with persons with disabilities. The research will also build knowledge and skills on both research and shelter among participating OPD representatives. PAR emphasises "the processes of research as much as the products, so that its 'success' rests not only on the quality of information generated, but also on the extent to which skills, knowledge and participants' capacities are developed through the research experience" (Kindon et al., 2007:9).

The research team will include applied disability researchers, shelter practitioners, and OPD representatives, who should co-design the research.

One recommended output of the research process is a cadre of researchers with disabilities in Lebanon and Indonesia. They should be familiar with the specific inclusion needs and challenges of the shelter sector and have experience and confidence from direct engagement in the sector. This could be supported by ongoing exchange and facilitated knowledge sharing between participating OPDs in the two research areas. Through this process, the research would explore the longer-term potential of how these researchers with disabilities can be supported to provide ongoing technical assistance and guidance to the shelter sector in the selected locations. There is the potential for these to become hubs of knowledge and good practice for disability inclusion in shelter and settlements.

The recommended research process can be summarised as follows:

1. **Action:** Identify members of the research team, build relationships, refine the research questions, and co-design and finalise the research process.
2. **Reflection:** Reflect on the research design—including ethics, power relations, representation, and accountability—across the two research locations.
3. **Action:** Develop data collection tools, select respondents, analysis framework, and allocate data collection roles and responsibilities.
4. **Reflection:** Reflect on tools and need for any adaptations, and possible issues of comparison of findings, from the two research locations.
5. **Action:** Collect and analyse data. This process is repeated.
6. **Reflection:** Reflect on findings, analyse (including coding and interpretation) and recommend follow up data collection and/or action.
7. **Action:** Write and disseminate findings.
8. **Reflection:** Reflect on the research process as a whole and on next steps for further engagement with the shelter sector by researchers with disabilities.

Data will be collected in the two research locations and at the global level. Respondents should comprise shelter professionals, including select donors, persons with disabilities, and OPD representatives. The research should be largely qualitative and draw on a range of data collection tools, which can be finalised during co-design. The processes should include interviews, focus groups, and consultations. Researchers should also facilitate reflective learning and knowledge-sharing activities between the research teams in both locations and with the wider disability and shelter sectors. Data collection from persons with disabilities and OPDs should pay full attention to reasonable accommodation and accessibility. A range of visual and non-visual tools can allow the participation of individuals with sensory and intellectual impairments, including supported participation where appropriate. While the research will prioritise the voices of persons with disabilities, it should also include caregivers and family members. Participants should be selected to ensure inclusion of diverse impairments, gender, economic status, and age. We suggest that the research should include 30 shelter professionals at the global level and around 40 people with disabilities in each country. This may be reduced to a core group in subsequent rounds of data collection.

2.2. Expected outcomes

In a strict PAR approach, the research outputs and their intended audiences is "a collectively negotiated process" (Cahill & Torre, 2007:197). Researchers should ensure the outputs reflect the opinions and needs of both shelter professionals and persons with disabilities. Outputs should include shared learnings in response to the research questions and shelter-specific technical guidance. How these will be delivered to maximise potential for uptake and use, including considerations of accessibility, will be jointly explored and decided during the research process.

The critical output of the research will be the creation of a pool of researchers with disabilities who can provide strategic advice and technical support to shelter practitioners in the selected locations in the future. We anticipate this will contribute to changing the knowledge, attitudes, and practice of shelter practitioners or donors involved in the research. It is also likely to increase understanding of the constraints shelter actors face among participating OPDs. We intend that increased knowledge and self-awareness among members of the research team will lead to broader and longer-term changes within the Shelter and Settlements sector.

3. RESEARCH CONTEXTS

3.1. Potential contexts

More than 55% of the world's population live in towns and cities (U.N., 2019), while estimates suggest that more than half of internally displaced people and 60% of refugees live in urban areas (IIED, 2020). Meanwhile the majority of households affected by disaster rebuild their homes themselves (Flinn et al., 2017) and only "30 per cent of the world's refugees and internally displaced people are housed by humanitarian agencies [as] the rest stay with family, with friends or in makeshift accommodation" (Archer & Dodman, 2017:340). For these reasons, to be relevant to the future of humanitarian shelter and settlements programming, the research should be conducted in towns and cities, in countries that face ongoing challenges due to natural hazards or complex crises. It should also focus on humanitarian shelter and settlement programmes that aim to help people help themselves. Such programmes might for example, support shelter self-recovery, provide rental support, or provide support for host families, through cash, vouchers, material, and technical support.

The two countries proposed for this research are Lebanon and Indonesia. Per capita, Lebanon hosts the largest number of displaced people globally with most refugees living in towns and cities rather than planned or self-settled camps. Lebanon also benefits from OPDs experienced in working with refugees with disabilities, including Palestinian and Syrian refugees.

Fifty-six percent of the Indonesian population lives in urban areas and this figure is expected to increase to 220 million by 2045 (Roberts et al., 2019). There are multiple shelter and settlements actors operating in Indonesia with links to both the global and local Shelter and Settlements Clusters. Indonesia has made notable strides towards the inclusion of persons with disabilities in disaster risk management with national and subnational policy initiatives. Indonesian OPDs are increasingly engaged in disaster management planning and in the delivery of humanitarian response.

Credit: Antonio Aragon Renuncio', Burkina Faso (2017)

3.2 Potential partners

Cameron (2007) identifies three types of PAR (not mutually exclusive):

- PAR which aims to liberate or transform research participants.
- PAR conducted on behalf of institutions.
- PAR conducted with institutions.

This research adopts the third type, by establishing a research team comprising persons with disabilities, members of OPDs, academics, shelter practitioners, and humanitarian donors. We have suggested this approach because it can "address the challenge of getting institutions to act on recommendations, and can generate transformations for those involved and for the institutions themselves" (Cameron, 2007:211). For example, people with disabilities and members of OPDs can learn about the process of research and the humanitarian shelter and settlement sector. The process of collaboration and investigation may lead to changes in the knowledge, attitudes, or practice of shelter practitioners or donors involved in the research—potentially leading to broader organisational change.

Potential partners include:

OPDs in Lebanon and Indonesia

A small number of OPDs in both contexts are engaging with ongoing shelter and settlements related responses and activities with more potential OPD partners and networks engaged with the humanitarian sector at the national level. In both locations these OPDs could bring key local connections to persons with disabilities, deepen understanding of local contexts, and provide important input to the research.

Member organisations of the Global Shelter Cluster

The Inclusion of Persons with Disabilities in Shelter Programming Working Group, co-chaired by Australian Red Cross, International Organization for Migration, and Norwegian Refugee Council, works closely with disability-focused member INGOs such as Humanity and Inclusion (H.I.) and CBM. Combined with existing extensive networks with relevant partners and forums, the working group could also be a key platform for sharing information and engaging shelter practitioners from different organisations across the cluster.

Nossal Institute for Global Health, University of Melbourne

The institute brings a multidisciplinary disability inclusion team of applied researchers and technical advisers, including from development studies, disaster risk reduction, and global and allied health.

CHAPTER 2

Addressing Diversity of Gender and Sexuality

Credit: JClarisse, Philippines (2015)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

People of diverse sexual orientation, gender identity and expression, and sex characteristics (SOGIESC), which includes Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, Asexual (LGBTQIA+) people, face profound exclusion, violence, and discrimination in relief and recovery phases of humanitarian crises. Their experiences in crises are rooted in similar experiences in everyday life, which include violence within the family home; ostracisation from families, local communities, and faith communities; discrimination or violence in education, when seeking work, or accessing public services; and through criminalisation and targeted actions by law enforcement.

These experiences often continue during crises and are compounded by a lack of awareness among humanitarian actors, omission from needs assessments, and a lack of policy and practice guidelines for programme activities (Dwyer 2021; Dwyer and Woolf 2018). Problems accessing safe shelter and settlements solutions are dominant themes of the case studies that make up most of the limited literature on people with diverse SOGIESC in crises.

The Global Shelter Cluster Strategy 2018-2022 (2018:7) identifies three ways in which shelter and settlements programmes support people in crises. However case studies from disaster and conflict contexts suggest that people with diverse SOGIESC are often excluded from:

- Shelter in the form of a **physical dwelling that** "protects the health, security, privacy and dignity of families ..." and that "provide protection against threats—including those associated with gender-based violence ...."
- Shelter as a stable **foundation** "where other services can be accessed including health, education, nutrition, and safe and dignified water and sanitation facilities."
- Shelter as **a sense of identity**, as "a place in which one can consider the past and rebuild a sense of future."

For example, in Cox's Bazar camps, Rohingya refugees who are hijras report that violence perpetrated by family and community members in Myanmar continues in the camps. They also report that they are harassed if they move through the camps to access services (where they also experience discrimination) and that these conditions cause debilitating psychosocial stress and demoralisation (Dwyer, 2021).

Lack of identification documents—a problem for many transgender and gender non-binary people—led to exclusion from shelter in the aftermath of the Indian Ocean tsunami (Pincha 2008; Pincha & Krishna, 2008).

In other contexts, people with diverse SOGIESC report remaining in cyclone-damaged houses or seeking support from other people with diverse SOGIESC rather than going to community shelters (Balgos et al., 2012). This aligns with an experience recounted by a community member during a workshop run by Edge Effect and the Tonga Leitis Association in 2018. In that instance, the community shelter was a church building for a Christian denomination hostile toward people with diverse SOGIESC. Those that go to shelters often report harassment and violence, partly due to existing community stigma; but disasters are sometimes said to be collective divine punishment for the supposed "sins" of people with diverse SOGIESC (Dwyer 2021; Dwyer & Woolf 2018).

People in same-sex relationships report that they do not receive support rebuilding homes during the recovery phase, as they do not count as a family for the purposes of aid. Others

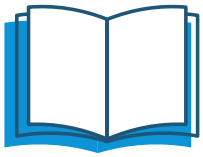
experience forced evictions by landlords and neighbours, especially in urban contexts (Human Rights Watch, 2019), and family abandonment.

Other issues faced by people of diverse SOGIESC include:

- Lack of safe access to WASH in community shelters or camps, and access to food and non-food items (WRC, 2016; Balgos et al., 2012; IGLHRC & SEROvie, 2011; Pincha & Krishna, 2008).
- Social isolation, lack of access to mainstream community support networks and not being welcomed by host communities (Moore & Waruiru, 2020; RefugePoint, 2018).
- Reliance on sex work for survival, seeking shelter on the streets and other high-risk behaviour, and increased vulnerability to sexual and gender-based violence (Moore & Waruiru, 2020; Millo, 2013).

Protection principles in the *Sphere Handbook* (Sphere Association, 2018) and commitments in the *Core Humanitarian Standard* (CHS Alliance, 2014) require policies and practices that are inclusive and do not contribute to harm. Organisations committed to rights-based approaches and leaving no one behind cannot ignore the rights and circumstances of people with diverse SOGIESC in their shelter and settlements activities.

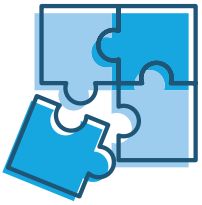
Lack of access to safe shelter often drives exclusion and harm in other areas of LGBTQIA+ people's lives. Poverty, exclusion from safe and decent work, lack of access to health and education, poor protection, and limited civic and political participation are all linked to unmet shelter needs (Stonewall, 2020; UNHCR, 2015). Better understanding of the extent, dynamics of, and drivers for SOGIESC exclusion in shelter programming offers insights for those seeking to understand other inclusion issues, and those seeking to take intersectional approaches.



1.2 What is known already?

Some of the richest empirical evidence comes in the form of single-country or single-disaster cases cited above. An exception is the 2018 Pride in the Humanitarian System consultation, which brought together diverse SOGIESC community service organisations and humanitarian and disaster risk reduction actors from across Asia and the Pacific. The *Pride in the Humanitarian System Consultation Report* (Devakula et al., 2018) outlines critical diverse SOGIESC issues and suggested responses for humanitarian programming. The associated *No Longer Left Behind* call for action (Rustinawati et al., 2018) frames these issues and responses as ones that can only be addressed through deep engagement with diverse SOGIESC civil society organisations (CSOs) and communities. *Mean Streets* (Women's Refugee Commission, 2016) also highlights needs in varying urban contexts, where challenges include stigma within local and displaced communities, lack of social safety nets, and discrimination and violence from security forces.

The Only Way Is Up (Edge Effect, 2021) includes stories of harassment and violence in shelter in three different contexts. Of the 35 participants in Cox's Bazar, 23 recounted stories of violence perpetrated by family and community members in Myanmar that has continued in the camps; harassment and violence that limits mobility and access to other services; harassment and violence involving security forces; and a pervasive sense that there is no one for them to turn to for assistance. The report also includes interviews with 25 Shelter and Settlements sector specialists. They reveal a striking gap between the specialists' level of awareness and engagement regarding diverse SOGIESC issues and the needs articulated by people with diverse SOGIESC. Only two of those specialists reported substantive engagement with people with diverse SOGIESC in their work to date. (Edge Effect 2021: 64).



1.3 What evidence is missing?

There is very little research on people of diverse SOGIESC in the Shelter and Settlements sector. Targeted needs assessments are rarely carried out and it is hard to identify good practice, as there has been little linking of learning. There is scant use of evidence in support of modelling or theory-building, with the result that literature and analysis continue to position people with diverse SOGIESC as idiosyncratic and as victims. A more effective approach would be to focus on the root causes of marginalisation, including the role of humanitarian actors in reproducing norms-based exclusion. Edge Effect's diverse SOGIESC Continuum Tool is a step toward such a model (Figure 2.1). Such an approach would encourage research that prioritises the lives and perspectives of people of diverse SOGIESC, and their strengths, agency, engagement, and contribution to communities and responses.

The limited existing research has focused on gay and bisexual men, men who have sex with men, and to a lesser extent, transgender women—all people who are male-sex-assigned at birth. Sex assigned at birth is a phrase used within the sector to refer to the assumed sex at birth, assigned on the basis of medical or social convention (such as that noted on a birth certificate).

The experiences of cisgender women (including lesbian and bisexual women) and transgender men—all people assigned female at birth—are often overlooked. This is a consequence of patriarchal gender norms in some diverse SOGIESC organizations, the tendency for those organizations to focus on key populations for HIV programs (male-sex-assigned at birth persons), and social stigma which often leads women of diverse SOGIESC to avoid engagement with diverse SOGIESC CSOs and community activities.

There is also a tendency to only study SOGIESC and displacement issues in disaster contexts, where greater societal tolerance of people with diverse SOGIESC may have existed prior to the disaster. There has been little research in more complex conflict and protracted emergency settings. Exceptions include research into refugees and asylum seekers in Ecuador, Ghana, Israel, and Kenya (Millo, 2013), urban shelter and protection needs in Kenya (Moore & Waruiru, 2020; RefugePoint, 2018), and in displacement and peacekeeping contexts in Bosnia and Herzegovina, Colombia, Lebanon, and Nepal (Myrttinen & Daigle, 2017:34). The latter found that people with diverse SOGIESC are "often among the most exposed to different forms of violence and exclusion, be it by armed actors or civilians, and escaping a conflict zone may not result in finding safety and security, and even expose them to further vulnerability."

Limited action has been by taken by humanitarian actors and there is limited guidance available for practitioners. *The Sphere Handbook* (Sphere Association, 2018:256) notes only that "some LGBTQI individuals prefer living with friends and peers rather than with their own families," relying on practitioners to find ways to apply general protection guidance to the needs of people with diverse SOGIESC. In the absence of humanitarian system support, people with diverse SOGIESC often rely on informal networks or community-led groups, sometimes supported by local LGBTQIA+ CSOs. The importance of these networks was apparent in the response to Tropical Cyclone Winston in Fiji (Dwyer & Woolf, 2018). Refugees in Lebanon and Uganda reported that "having an LGBTI peer network is essential to their survival" (WRC 2016:78). UNHCR (2018) also highlighted the importance of networks in a call for solidarity with displaced LGBTQIA+ people. As LGBTQIA+ people are likely to rely on a community-based response for many years to come, a better understanding of the strengths and limitations of these networks is important.

While this literature is still small and scattered, the time is also ripe for a broader, more concerted, and ambitious approach. It should link discrete findings, cover a more

comprehensive range of contexts and cases, and provide theoretical tools and impetus for future research. It is critical that people of diverse SOGIESC themselves are more fully and fairly involved in such a research approach.

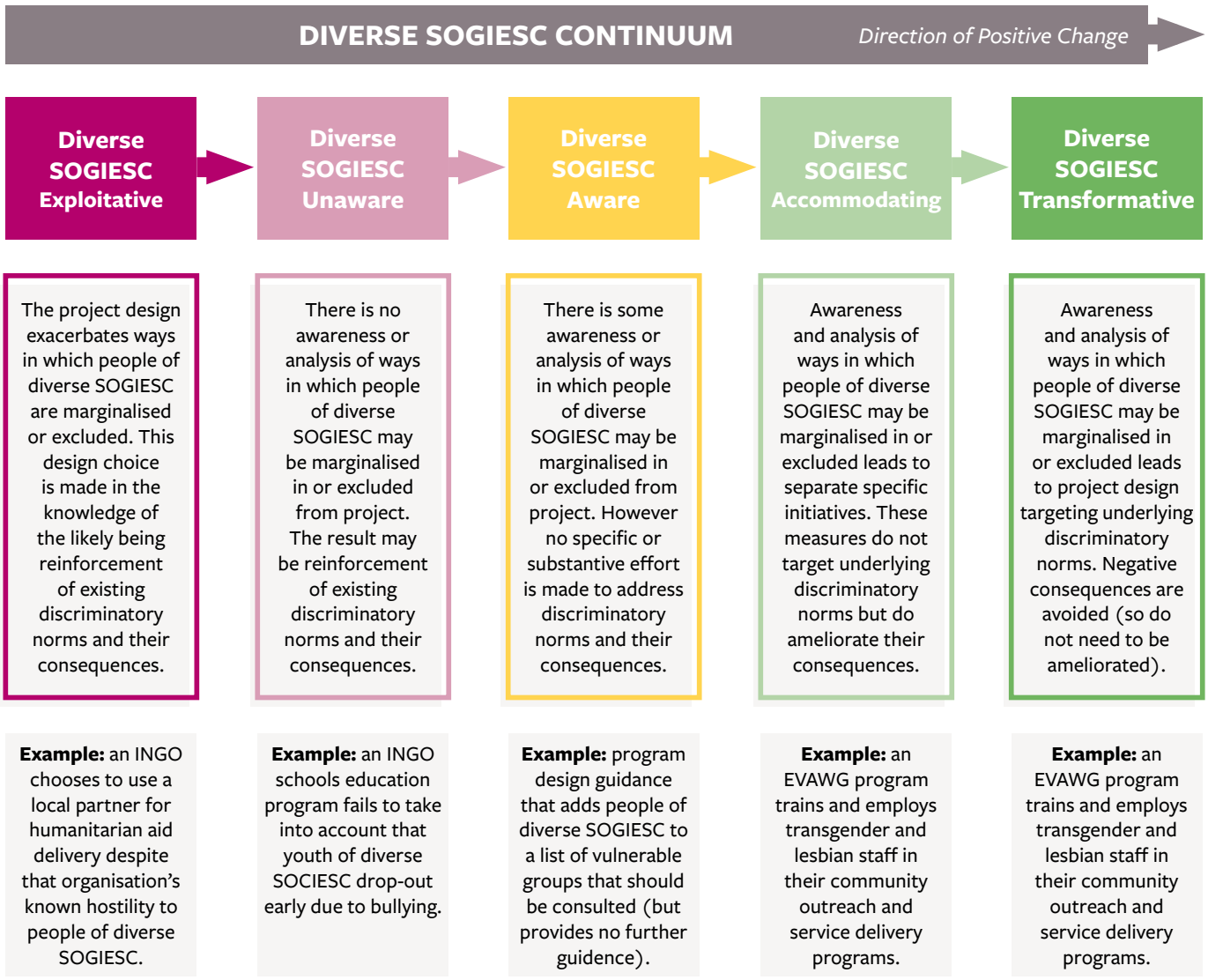


Figure 2.1. Diverse SOGIESC Continuum Tool. (Source: Edge Effect, adapted for this document)

1.4. What questions need to be answered?

The three main research questions are:

1. ***How does pre-emergency community marginalisation of people of diverse SOGIESC impact their experiences and choices regarding shelter and settlements in emergencies?***
2. ***In what ways do existing shelter and settlements policy and practice render invisible, reinforce marginalisation of, or otherwise cause harm to people with diverse SOGIESC?***
3. ***How effective is community-based response and how can it be strengthened or supported, especially in urban contexts and among hard-to-reach people with diverse SOGIESC?***

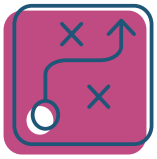
These questions are relevant in camp settings, but also in urban settings that attract people with diverse SOGIESC seeking anonymity, safety, community, and services from diverse SOGIESC CSOs.

Pre-emergency marginalisation is a crucial factor that has not yet been subjected to detailed inquiry, which is relevant to development and humanitarian concerns. Understanding the extent of it will address pushback in the name of impartiality (that is, that addressing issues of diverse SOGIESC is about unprincipled special treatment) by establishing the structural nature of the need.

The second question focuses on identifying the specific exclusion and harm people of diverse SOGIESC experience from existing actors and interventions. Harm offers an important entry point for building in accountability; so international organisations, government agencies, international and national NGOs, policy institutes, accountability networks, researchers, the private sector, and other humanitarian actors must act. The question also opens a potential focus on social norms, which existing research shows play a key role in driving exclusion, violence, and discrimination.

The third question foregrounds the realities, capacity, and agency of LGBTQIA+ communities that have so far been excluded in this area. This is the precursor for a more empowering humanitarian response. It will help unearth the deficiencies in current humanitarian response in relation to LGBTQIA+ inclusion and provide opportunities for the NGO community to build on to overcome these challenges and outdated practices.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

This research will establish firmer foundations for SOGIESC-inclusive approaches in shelter and settlements responses, including through linking learning from existing research and undertaking a collaborative international perspective on these issues. Researchers should use mixed methods and participatory and action research approaches. Responding to the sector-wide knowledge gap, research should be guided by representation, comprehensiveness, contextualisation, inclusivity, and strengths-based approach considerations.

Diverse SOGIESC-inclusive shelter solutions can't necessarily be applied in all contexts, as a wide range of legal, political, and social factors impact refugee and host-community attitudes, the willingness of government actors to support work, and the risks perceived by NGOs and other humanitarian actors. Multiple studies in different contexts and humanitarian settings will better generate knowledge that can support global policy and practice and inform future responses. It should draw on and support contextualised approaches to knowledge production, including through:

- Ensuring country researchers have the knowledge, skills, and networks to reach and understand the lives and needs of marginalised groups.
- Using inductive approaches to data gathering and analysis.
- Centring ideas which challenge accepted practice, research, and thinking.

Consistent with the No Longer Left Behind call-for-action, it should take an inclusive and strengths-based approach by working with diverse SOGIESC communities and civil society as researchers of their own lives and designers and implementers of responses.

Literature review

The study should commence with an in-depth review of a limited range of cognate and country-based literatures to:

- Identify conceptual frameworks and empirical insights useful for refining research design and supporting the research team.
- Situate the country field sites in broader cultural, political, social, and economic contexts.
- Explore how do-no-harm principles and practices (Anderson, 1999) have simultaneously protected people with diverse SOGIESC and rendered them invisible.

The literature review should summarise existing knowledge of issues faced by people of diverse SOGIESC in shelter and settlements contexts.

Country review

The next phase of the project should evaluate existing responses from a SOGIESC-inclusive perspective. Options include a standard mix of targeted document review, interviews with key informants, and a standardised survey/assessment tool. However, participatory methods such as storytelling often provide richer qualitative data. Research that illuminates lived experience is often more useful than research focused on counting and prevalence, as it can assist organisations to design programmes that various people with diverse SOGIESC can access without the need for self-identification as a marginalised person.

Consideration should be given to working with local CSOs and using peer researchers. There are many reasons why people with diverse SOGIESC may withhold participation or information, so establishing trust is essential. Peer researchers should receive training in trauma-aware research processes, and community participants should have access to psychosocial support during and after engagement with researchers.

A robust informed consent process is also essential, including opportunities for participants to withdraw consent and any data provided, and secure data management processes. Extreme care should be taken with any identifying documentation, from the most obvious—photos—through to receipts for per diems and other documentation that may incidentally identify people. In this phase of the project, researchers should use a range of methods to document the lives, experiences, strengths, agency, and projects of people and communities of diverse SOGIESC.

Importantly, sensemaking workshops (INTRAC, no date) can bring together relevant service providers and communities of diverse SOGIESC. Sensemaking is a collaborative process in which people from different perspectives—sometimes including research participants—explore data together. This process often generates insights that may escape a process limited to external researchers. Collaboration of this kind also ensures that longer-term context and systemic exclusions inform analysis and that the relief and response phases are not viewed in isolation. During this phase, researchers should focus on assessing existing practice against benchmarks such as those in the Edge Effect Diverse SOGIESC Continuum Tool (see Figure 2.1), thereby documenting the extent to which organisations, institutions, and/or services are currently exploitative, unaware, aware, inclusive, or transformative.

Broader approaches

Where longer research programmes are an option, researchers may find that participatory action research (PAR) offers a pathway through the challenges of diverse SOGIESC inclusion. Through multiple cycles of workshops and action in different countries over time periods of 6-18 months, groups including people with diverse SOGIESC and shelter actors could

explore challenges, collaboratively design, and iteratively test solutions. PAR requires good connections with local CSOs and communities, and tailored consent and ethics processes suitable for a more intimate working relationship over time. Expertise should be sought before pursuing this option.

Regardless of method, researchers should remain critical of carrying ethnocentric assumptions into field contexts. Reflexivity and adaptability are also key approaches, especially given expected concerns around power, participation, and culture, as well as likely constraints due to COVID-19.

Credit: Md Ashrafuzzaman (2019)

2.2. Expected outcomes

While individual case studies could be completed in shorter periods of several months, a longer process of contextual analysis, community engagement, research design, and participatory data gathering and sensemaking is advisable. Expected academically oriented outputs of a multi-country programme would include four to five journal articles and a longer synthesis which builds on and across these studies. There is also a need for practical outputs that inform policy and practice of the Global Shelter Cluster and materials developed by shelter and protection clusters in specific settings. Interviews conducted with shelter specialists for *The Only Way Is Up* (Edge Effect, 2021) highlighted a perceived excess of general policy and guidance; those working in responses highlighted the need for contextualised guidance and for real-time support. There is also an opportunity to draw on research into how change actually happens in the humanitarian sector, and for understanding resistance to change within the humanitarian system (ALNAP, 2018; CHS, 2018).

The participatory nature of the proposed research should also extend to the publication and use of research. If the research is relevant and accessible to diverse SOGIESC CSOs, they will be more effective at engaging and supporting their communities and better prepared to work within the humanitarian system as partners and advocates.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

Researchers could carry out this work in urban humanitarian settings, including cities of asylum, and in camp management settings. Potential urban settings include:

- Kampala, Uganda. Refugee-led initiatives to provide shelter solutions to the LGBTQIA+ refugee community exist in parallel with official humanitarian-led initiatives. While most refugees fleeing to Uganda from violence in neighbouring DRC, Rwanda, and Burundi live in refugee settlements, most LGBTQIA+ people prefer to live in the city, which offers a greater degree of anonymity but also poses its own unique protection challenges.
- Mexico City, Mexico. Initiatives led by grassroots community service organisations have sprung up in recent years in response to increasing flows of asylum seekers with diverse SOGIESC fleeing violence in Central American countries, mostly Honduras and El Salvador. The situation is a snapshot of responses to emerging crises.
- Beirut, Lebanon. A number of LGBTQIA+ organisations are leading community-based shelter responses both for displaced Lebanese and Syrians. They are doing this in the context of ongoing economic and political instability inside the country as well as neighbouring conflicts in Syria and Gaza, and in response to the August 4 explosion that caused mass displacement inside the city.
- Athens/Lesvos, Greece. Protection risks have been exacerbated for LGBTQIA+ asylum seekers and migrants arriving on boats seeking safety in Europe. Passengers arriving on the Greek islands are allocated temporary accommodation, but many make their way on to Athens. There, in response to the increasing number of LGBTQIA+ people arriving, a number of community-led initiatives have sprung up that seek to address the question of shelter.

Camp management settings are critical research locations, as some people with diverse SOGIESC do not have the means or opportunity to move to urban locations. Camp contexts may place people with diverse SOGIESC near potentially abusive relatives or acquaintances, may have WASH facilities that create potential for harassment and violence, or may involve disruption to networks and coping strategies. In these contexts, people with diverse SOGIESC may seek safety in stealth, hoping not to draw attention to themselves. However, living in fear of discovery is not psychosocially healthy, and stealth may not be available to people including many trans or non-binary people, or people whose gender expression is non-normative. Camps such as those around Cox's Bazar in Bangladesh, or the camps at Dadaab and Kakuma in Kenya would make suitable research locations, as there is a history of movement from the camps into urban host communities and mixed outcomes of strategies such as housing people with diverse SOGIESC in one zone.

A further design consideration is for one of the country case studies to be conducted with diverse SOGIESC communities amongst Indigenous peoples experiencing ongoing shelter and settlements exclusion within colonial state contexts. This could disrupt unhelpful assumptions that development and humanitarian action, and shelter and settlements solutions specifically, normally happen outside Global North contexts. It could also enable more critical reflection on neo-colonial dynamics and make visible the complicated distinction between shelter interventions and homelessness.

3.2 Potential partners

The research should be undertaken in partnership with grassroots and LGBTQIA+ groups. For example:

- Refugee-led initiatives partnering with UNHCR and other local CSOs in Kampala, Athens, and Mexico City.
- Lebanese organisations, such as Haven for Artists, providing support to LGBTIQ+ people living at the intersection of multiple crises and displacements.

For research in Cox's Bazar, the most likely partner is the Bandhu Social Welfare Society, which is already a member of a working group within the gender and protection architecture of the response. Bandhu operates a community facility within reach of the camps and has relationships with key U.N. agencies. A potential limitation is capacity to work with female-assigned at birth people with diverse SOGIESC. Edge Effect's research in Cox's Bazar with Bandhu has identified that these communities have been more difficult to reach and work with via existing community networks.

CHAPTER 3

Promoting Children's Participation in Design

Credit: CatalyticAction, Lebanon (2015)

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University College of London

Joana Dabaj
CatalyticAction

Riccardo Luca Conti
CatalyticAction

1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Children's experiences of displacement are diverse. Their experiences are influenced by:

- External contextual factors such as the length of displacement, availability, and quality of services.
- Power structures embedded in their environments.
- Personal factors such as trauma and/or violence experienced by them or their family members.
- Their gender, age, personality, family structure, culture, and religion.

Therefore, any response that aims to mitigate the challenges faced by children affected by displacement needs to be tailored to the context. A key assumption of this chapter is that children are agents and rights holders, powerful co-creators of knowledge, and experts in their own lives.

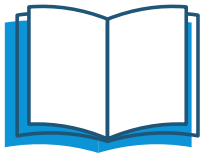
The quality of spaces available to children has an important impact on child development and well-being. Play is fundamental to this, given the impact it has on a child's cognitive and emotional development and which is also affected by the quality of space. Displaced families often settle in the poorest parts of cities and live in overcrowded conditions alongside the most vulnerable residents. Therefore, their children often suffer from poor access to quality public spaces, learning spaces, and play spaces.

Co-designing built environment interventions with children affected by displacement can:

- Empower children and have a lasting positive impact.
- Improve social cohesion, inclusion, social capital, and integration between refugee and host communities.
- Have a positive impact on the local economy, build capacity, and provide employment.
- Deliver better social infrastructures (child-friendly urban public spaces, schools, playgrounds) and shelter for children and their communities.

To achieve this, such interventions require specialised skills, resources, and ethical guidelines. They must have the children at the centre of the co-design process. This is not always possible, because they require professionals with different specialisms to work together, and often organisational structures do not make these collaborations easy. They require a larger initial investment compared to funds required only for the built product. But the major constraint is that their additional value is difficult to recognise because it is long-term, difficult to measure, and broader than the built intervention.

To understand the impacts of children's participation in the design of shelter programming, this chapter focuses on built environment interventions in humanitarian contexts. These include the design of public spaces and social infrastructure, such as schools and playgrounds. The choice was made because of the importance of the built environment to children's well-being and of the call for integrated assistance made by InterAction (InterAction, 2020).



1.2 What is known already?

Children in humanitarian contexts

Children make up a significant proportion of people in need during humanitarian crises. In 2019, nearly 80 million people were displaced globally—children encompassed 40% of that number. The displaced population is at a record high, doubling in in less than a decade. Developing countries host 85% of displaced people (UNHCR, 2020a). In urban areas, displaced people often end up living in peripheral slums with the urban poor, who are also socially and economically marginalised. In 2017, those most affected by the Syrian refugee crisis were under the age of 14, representing nearly 45% of registered Syrian refugees in Lebanon, Jordan, Iraq, and Egypt (UNHCR, 2017b).

The consequences of displacement on children's health, education, and security can be severe. The housing conditions in which the displaced settle are commonly characterised by minimum hygiene practices and unsanitary conditions. These environments are harmful to children's health as they increase the risk of infectious diseases. The loss of income that often accompanies displacement can force families to send their children to work rather than school.

Displaced children may also experience the breakup of their families and communities. The children are burdened with challenges—including changes in family dynamics—where they take on the role of family provider, or they become caregivers for their younger siblings or parents who have been physically or psychologically affected by their experiences. Children may experience highly distressing events before, during, and after forced displacement, and these may have long-lasting effects (Reed et al., 2012). Forcibly displaced children are often exposed to additional risks, including living with caregivers who are also experiencing trauma or stress, having irregular status in their host countries, living in poverty, facing separation from their family and community, and experiencing multiple traumas.

Children from both host and refugee communities may experience issues with safety and belonging in their environments. The influx of refugees into their areas may limit the ability of children from host communities to play in playgrounds, streets, or courtyards, as these spaces may become overcrowded or turned into spaces for refugees to live in. Food consumption, access to healthcare, and time to play may also be negatively affected among both refugee and host communities. Since most refugees resettle in low- and middle-income countries, poverty usually affects host communities as well.

Among the factors that may protect displaced children and help them overcome highly distressing experiences are good quality schools, childcare facilities, and safe spaces for play and learning. Restoring routine, play, and order in displaced children's lives, as well as support from families and communities, may help children recover. Children enjoy playing in environments where they can experience novelty, excitement, and fun but also feel a sense of security and stability (Henricks, 2006).

Child well-being and the built environment/shelter

Research shows a correlation between the built environment and children's well-being. Neighbourhood built environment may be important for reducing mental health difficulties and increasing mental health competence in young children (Alderton et al., 2019:18). Neighbourhood design can foster a sense of safety, positive identity, and belonging; reduce tensions; and provide protection from traumatic symptoms (Akesson & Denov, 2017:140).

The sensitivity of young children to poor living environments can cause irreversible physical and mental damage (Gordon et al., 2003). Therefore, spaces that encourage children to play,

express themselves, and socialise may be key in reducing stress, improving resilience, and contributing to their development (Bartlett & Iltus, 2006).

There appears to be a relationship between the built environment and children's sense of self-worth (Chawla, 2001). Children see deprived elements of the built environment as a humiliating reflection of their own value as people (Bartlett & Iltus, 2006). The link between poor living environments and poor child development is particularly evident in contexts of crisis. There, children often live in long-term encampments, which lack educational and play facilities. Informal settlements are characterised by poor structural quality of housing and lack of basic services. Poor households often construct their homes with recycled building materials, which are often very flimsy (Amorós Elorduy, 2017). These dwellings lack natural light and ventilation, thermal properties and privacy, and have inadequate indoor and outdoor spaces.

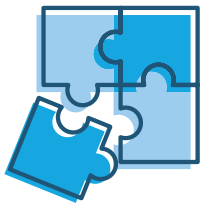
However, built environment practitioners frequently fail to consider the impacts that the spaces they design and build have on children's well-being. There is often an implicit (and wrong) assumption that "improved conditions for a community at large will affect children in the same way that they affect everyone else" (Bartlett, 1999:64).

Impact of children's participation in co-design

Co-design is an approach to build local human capacity, contributing to the sustainability of the end product (Hussain et al., 2012). Decision makers who use children's participation will be able to make better informed choices, leading to better outcomes.

Engaging children in participatory design activities can have a significant impact on their development, capacities, and well-being. Children's engagement in participatory processes can enhance social and cognitive skills, while increasing their sense of connection to other people and nature (Sutton & Kemp, 2002). Children's participation is an effective approach to improve self-esteem, empowerment, learning new skills, and developing into more active and responsible citizens (Sabo, 2001).

Engaging children in conversations about the production of their environments can be empowering, especially for those who experienced a loss of place and social networks. By giving children a sense of control, their participation in constructing their surroundings increases the meaning places have for them (Sutton & Kemp, 2002). Visioning and building spaces can be a healing process for children whose place attachment has been impacted by displacement.



1.3 What evidence is missing?

In recent years there has been growing interest amongst policy makers, planners, humanitarians, and other professionals in children's participation in shaping development interventions. Many high-quality resources have been produced on children's participation, children and urban planning, and children affected by displacement.[1] However, there is little understanding of the impact of interventions at the intersection of these; that is, children's participation in the design of built environment interventions in humanitarian contexts.

Co-designed built environment interventions with children affected by displacement contribute to complying with major global policy documents, confirming their policy relevance. These include:

[1] *The team authoring this piece has created an open access database of these resources available here: https://decid.co.uk/resources/*

- The *U.N. Convention of the Rights of the Child* (1989), which mentions the right of the child to express their views freely and having those views taken into consideration.
- the recent *New Urban Agenda* (2016a), which explicitly indicates "access to sustainable basic physical and social infrastructure for all, without discrimination" and "commit to ensure that these services are responsive to the rights and needs of... children and youth."
- the *U.N. Sustainable Development Goals* (2015b), which commit to "provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children" and "build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all."
- UNHCR's *Refugee Children: Guidelines on Protection and Care* (1994), which emphasises that "refugee participation - or permitting refugees to take back control of their own lives - is fundamental to developing, or re-building, a healthy community."

1.4. What questions need to be answered?

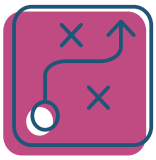
The primary research question is:

> ***What are the impacts of children's participation in co-design of built environment interventions in humanitarian contexts?***

This is supported by two subquestions:

1. ***How and in what ways does children's participation in co-design of built environment interventions in humanitarian contexts enhance the impacts of the interventions?***
2. ***How and to what extent does children's participation in co-design of built environment interventions in humanitarian contexts enhance children's well-being?***
3. ***How and to what extent does children's participation in co-design of built environment interventions in humanitarian contexts lead to higher quality design and implementation?***
4. ***How and to what extent does children's participation in co-design of built environment interventions in humanitarian contexts contribute to social cohesion?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

As a multidisciplinary team with a long experience in participatory approaches in different contexts and type of projects, we propose a mixed method research process in partnership with humanitarian actors. It should include a strong participatory action research and

participatory learning component with children. Children's participation provides researchers and practitioners with a unique understanding of and knowledge into children's life experiences. Participatory action research seeks to transform power relations by challenging conventional processes of knowledge production (Gaventa & Cornwall, 2008). It is a process to collectively address issues within their communities and organisations. Cycles of research, action, and reflection are deployed to engage with issues that are significant for those who participate in the process and become co-researchers. Such approaches challenge positivism and acknowledge the importance of the perspectives of the co-researchers in understanding their reality and acting (Reason & Bradbury, 2008). The methodology is also informed by "citizen science," which is based on the belief that collaborative research creates more meaningful outcomes, both for the researchers and the communities involved. This involves residents to becoming co-researchers. As in participatory action research, their involvement is not limited to data collection, but they help analyse the results (Heckler et al., 2018).

Research partners should develop a framework to assess the different dimensions of the impact of co-designed built environment interventions. This framework should be tested and feedback received, including from children. Researchers should use this approach to evaluate past projects.

After identifying relevant contexts and partners, researchers should identify a number of potential projects (n>50). They should use an appropriate matrix to classify those projects across a number of characteristics and criteria, including approach, type of built intervention, and context. Researchers should use the matrix to generate a diverse sample of around 20 projects on which to conduct an evaluation based on existing documents, a questionnaire, and semi-structured interviews.

After this first evaluation, six projects should be further selected for a participatory learning process, involving local communities, including children. This deeper evaluation process will reveal some limitations of the projects. This participatory action research should identify a small-scale intervention "hack" for each project—a clever small-scale change that addresses some identified needs—to enhance the potential of existing interventions. Their nature will depend entirely on the context and process outcome. Working through co-design to assess an existing co-designed intervention will allow participants to reflect on the impacts of the co-design process and intervention. It should provide evidence from the ground to address key research questions. Throughout the research process, participants iteratively construct the emerging design which constitutes part of the research results, while at the same time producing more findings through participants' co-interpretation and use of these results. The process uses participants' tacit knowledge to explore invisible issues. In the urban context, participatory design builds on the assumption of the social production of space and thus mobilises social relations to rethink space production.

2.2. Expected outcomes

The research aims to achieve:

- A deeper understanding of the different impacts of children's participation in co-design of built environment interventions.
- An understanding of the ways children's participation in co-design of built environment interventions affects the well-being of children and their communities in a diversity of humanitarian contexts.

Credit: JClarisse, Phillipines (2015)

- A comparative understanding of different approaches to children's participation and co-design and their effectiveness.
- Evidence on the impact of co-design on higher quality design and implementation.
- Evidence on the impact of co-design on ownership and long-term sustainability of the intervention.
- Lessons learnt and recommendations for programme design.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

There are several specific challenges to children's participation in co-design identified by the authors through DECID (2020), a research project based at the Development Planning Unit, University College London. That project focused on the participatory design of social infrastructure for children in urban areas affected by displacement.

3.1. Potential contexts

Choosing a diversity of humanitarian contexts will enable researchers to understand how co-design in humanitarian contexts works and the range of its impacts. Researchers should develop a framework that takes into account a number of dimensions including different regions, size of the city/settlement, causes of the humanitarian situation, length of the crisis, and presence of co-designed built environment interventions with children. Potential research contexts could include Lebanon, Uganda, Colombia, or Bangladesh with some of the largest refugee or displaced populations in the world.

As co-designed built environment interventions are unlikely to be possible during an emergency, we have suggested countries where it is relatively safe to set up co-design processes and associated research. We have also suggested countries with local partners who may be able to conduct research during COVID-19 international travel restrictions.

3.2. Potential partners

The Bartlett Development Planning Unit at University College London, local and international implementing partners, and NGOs such as Save the Children and Design Studio CatalyticAction could coordinate the research. The project should be implemented in partnership with:

- Agencies that shape global policy, such as such as UNICEF, UNHCR, and UN-Habitat.
- Local authorities, such as relevant municipal actors.
- Academic partners specialising in co-design in the countries of research, such as the American University of Beirut in Lebanon, the Universidad de los Andes in Colombia, and the Urban Action Lab at Makerere University in Uganda.

Local academic partners should coordinate field research and data collection, be at the centre of the analysis and ensure that research outputs are disseminated and used to advocate with decision makers at national level.

CHAPTER 4

Strengthening Women's Tenure Security

Credit: Ashley Peterson, Mozambique (2019)

Kirstie Farmer **Laura Cunial** **Caroline Dewast**

Naomi Petersohn **Dalia Aranki** **Alexandra C. Hartman**

1. BACKGROUND AND RATIONALE

1.1. What are the issues?

The process of sheltering people involves ensuring they can live in dignity, safety, and security in a home. This is especially critical for women whose weaker property rights threaten their access to and benefit from shelter during humanitarian crises. The benefits of secure shelter for women include increased livelihood opportunities, economic empowerment, and reduced risk of violence. The latest version of *The Sphere Handbook*, for the first time, highlights tenure security for women (Sphere Association, 2018:268). Significant questions remain about how to incorporate this into nuanced, safe, and evidence-based programming. For example, from the perspective of women living in shelters over time, how do we know when women's tenure has been strengthened? How do we ensure women are not placed at increased risk of violence at home through tenure security interventions? How does women's tenure security increase their livelihood opportunities? In essence, these questions reflect what sheltering can mean for women, or as Turner (1976) put it, "It's what a shelter *does* for you that matters, and not what it *is*."

The task of safely sheltering people is "too big and broad to be undertaken by shelter specialists alone" (Moore & Serdaroglu, 2018). This chapter proposes an approach involving specialists in shelter and settlements, women's tenure security, violence against women, and livelihoods. The aim is to address critical gaps in understanding how women in humanitarian crises experience secure and safe shelter. The proposed research will explore how women's tenure security can increase livelihood opportunities. It will also examine how shelter programming can strengthen women's tenure security without doing harm to women (namely through violence perpetrated within the household). Addressing these gaps can help practitioners understand how to make shelter and settlements programming address specific needs of women.

1.2 What is known already?

Women are discriminated against in many humanitarian crises because of weaker or insecure tenure. Reasons for this include local sociocultural norms, structural gender and power inequalities, economic constraints, threats of violence or exclusion, and discriminatory laws (NRC, 2014). Many of these dynamics play out at the household level. The most common unit for shelter and settlements programming is usually the household. This has significant potential to discriminate against women in most humanitarian contexts as shelter assets are controlled by men, via the established method of dealing primarily with the "head of household." This was further reiterated by the U.N. Secretary General's comment that "large-scale reconstruction is dominated by and overwhelmingly benefits men," and that action towards including women and their rights "remains insufficient." Access to, control over, and benefits from significant assets are rarely shared equally within households (NRC, 2016; Grown, 2014; UNOHCHR, 2012).

Ownership and control of assets within households affects household decision making and resource allocation (Doss, 2013). Shelter and settlements programmes often involve an individual's most valuable asset—a dwelling made from permanent materials—making intrahousehold access to that asset of critical concern to outcomes for each individual within the household and the household as a unit.

Based on the Sphere standard for shelter and the mandated human rights approach of non-discriminatory application of the right to adequate housing, women's tenure security should be integral to shelter programming. In practice, considering and supporting women's tenure security is not yet the norm. However, there is increasing recognition of its importance. It fits within "build back better" commitments. It also reflects the importance of connecting humanitarian work with longer-term recovery and development. If not considered initially and strengthened, including at intrahousehold level, tenure security can be difficult to change.

Women's tenure security can result in positive outcomes for women's empowerment, food security and family nutrition, livelihoods, economic growth, and broader rural and urban development (USAID, 2016). It is positively linked to the ability to retain assets by providing:

- Freedom from eviction and expropriation.
- Greater access to credit from being able to use land as collateral.
- Reduced vulnerability to food price shocks.
- Gains from trade in the rental and sales markets for land (Meinzen-Dick et al., 2017).

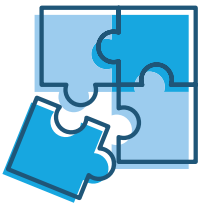
Without tenure security, women are not free to determine whether parts of the dwelling or land can be put to commercial or productive use (Chant, 2014). This limits their decision-making power and resulting income. Women with tenure security are more likely to be confident to make long-term investments in their business, and this often results in higher yields (Buvinic & O'Donnell, 2016).

The humanitarian sheltering process aims to provide a safe, secure home. This need is highlighted by women facing increased levels, intensity, and types of violence during and after humanitarian crises (Murphy et al., 2019; NRC & IFRC, 2016), including violence at home. Physical and sexual violence against women by armed actors, strangers, or community members has been the focus of global attention and humanitarian programming (Murphy et al., 2019). However, there is growing evidence that violence perpetrated inside the home by family members is even more common in humanitarian crises (Black et al., 2019; Palm et al., 2018; Contrares-Urbina et al., 2017). Unequal power dynamics, making women vulnerable to violence at home, can also be exacerbated by humanitarian programming which often delivers assets and services to the male "head of household."

Increasing women's tenure security can address these inequalities. Humanitarian programming examples include supporting women's recognition as tenants, occupiers, or owners of their land and home, jointly or solely (NRC, 2014). According to international law and embedded in various U.N. and NGO policy, strengthening women's tenure is a well-established component of the right to adequate housing (NRC, 2014; UNHRC, 2013; UNOHCHR, 2012). The impact of implementing it in humanitarian settings is far less understood. Examining this impact is significant because any change in household tenure arrangements is likely to affect dynamics within the family and beyond (Grabe, 2010).

A growing body of literature examines the relationship between women's rights to housing and land and their experience of violence at home (Heise & Kotsadam 2015; Bhattacharya et al., 2011; ICRW, 2005, 2004). Tenure may drive reductions in the prevalence of violence against women in two ways. First, strengthening women's property rights can prevent or reduce violence at home by increasing a woman's economic independence, her standing in the community, and her bargaining power in an intimate relationship (Hilliard et al., 2016; Grabe et al., 2014). Second, tenure security can provide an exit option from violent relationships, which can act as a deterrent to violence and provide an immediate escape (Panda & Agarwal, 2005). The research to date on this topic is mixed. Challenging existing tenure arrangements and consequent household power dynamics can increase the chance of women experiencing

violence at home (Peterman et al., 2017; Hynes et al., 2016). Investigating these findings in relation to the Shelter and Settlements sector is critical to understand the impact of sheltering within households and prevent doing harm.



1.3 What evidence is missing?

Existing literature is largely based on household-level data, leaving a gap in understanding how intrahousehold relations affect security of tenure. Understanding and measuring intrahousehold tenure security in shelter and settlements programming is challenging (NRC, 2017:38). Because strengthening women's tenure security is often connected with a woman's male family members, knowing more about what happens within a household and understanding a woman's experience over time becomes critical in answering the questions posed in this chapter.

Evidence on specific mechanisms linking women's tenure security and livelihood opportunities is insufficient (Meinzen-Dick et al., 2017), particularly in fragile and conflict-affected states. There is also a lack of evidence on which types of tenure interventions have a positive impact on gender equality in controlling livelihoods (Lawry et al., 2014).

In the development sphere, some types of secure property rights have been proven to increase the economic security of women (Buvinic & O'Donnell, 2016:29). Establishing an evidence base on how these linkages unfold in humanitarian settings is critical to designing shelter and settlements programming that supports women.

There has been significant progress toward understanding the prevalence and drivers of violence against women in humanitarian crises. However, little is known about the role women's tenure security plays in shaping violent outcomes. Programmes that aim for economic empowerment to relieve intrahousehold tension and reduce violence against women may instead exacerbate violence at home unless there is "wider programming focused on changing gender inequitable and power dynamics in the household" (Murphy et al., 2019:24).

One reason for the gaps in understanding is that there is minimal longitudinal assessment of the harms and benefits of shelter programmes (Davis & Parrack, 2018:12). This includes a lack of empirical evaluation and understanding of the impacts on men and women beyond the household unit (or male head of household) once the initial intervention has concluded. Grabe's study in Nicaragua finds that increasing women's ownership of shelter and land may be an important way to reduce levels of violence by intimate partners but notes the "lack of evaluations assessing the impact of resource allocation on power relations within the household" (Grabe, 2010:151). A USAID (2018) report about research on intimate partner violence and land rights noted a need to better understand the conditions in which increased tenure security for women protects against, or increases the risk of, violence in the household. The report also suggested further research to more clearly establish causality between strengthened property rights and levels of intimate partner violence.

Research is needed to evaluate shelter and settlements programming that aims to increase women's tenure security to understand the short- and long-term impact on power dynamics and violence on women and men in the household, as well as the community. This builds on recent progress in the shelter sector, working alongside protection specialists, to mitigate risks of violence against women and increase household tenure security, by looking beyond the provision of shelter products to how those products are accessed by household members.

1.4. What questions need to be answered?

This chapter proposes research that focuses on women's perceptions of their tenure security and collects data on a range of outcomes that may be affected by improving intrahousehold tenure security. It highlights intrahousehold power dynamics, which is a neglected area of research and practice in humanitarian and development sectors. The goal is to measure women's experiences within their households over time and to consider individual and community perceptions of tenure security that go beyond formal documentation. This means understanding better how intrahousehold dynamics and gendered power inequalities shape women's experience of tenure security and related outcomes. This would set the foundation for being able to correlate increased tenure security with other key outcomes such as livelihood opportunities and mitigation of violence.

We propose two research questions that explore the linkages between shelter and settlements programming, women's tenure security, violence against women, and livelihoods. The first research question is:

> ***How does tenure security in shelter and settlements programmes support women's livelihoods?***

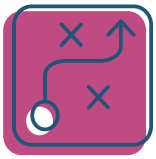
This recognises the severe economic hardship experienced in humanitarian crises and that poverty compounds gender inequalities (IASC, 2019a). Secure tenure is key to many livelihoods interventions, but shelter and settlements programming has not historically focused on this linkage. Looking more deeply into the connection between women's tenure security and livelihoods interventions will provide evidence for designing durable and effective cross-sectoral programmes.

The second research question is:

> ***How do shelter and settlements programmes with an intrahousehold tenure security element affect the prevalence of violence against women?***

Answering this can strengthen shelter policy and guidance documents by providing a better understanding of intrahousehold bargaining, women's agency, and violence experienced by women at home. Multiple pathways could link changing intrahousehold tenure security and violence against women. Identifying pathways specific to the research context (and evaluating the conditions for a specific pathway) will be a key contribution of the research.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

This research looks at the impact of the **change** on intrahousehold power dynamics and violence. What is relevant is where a woman did **not** previously have her rights to occupy, rent, or own property recognised and where through the intervention she is supported to have these strengthened in some way—solely or jointly with other household members. Operationalising and measuring intrahousehold tenure security should depend on context.

Credit: SujanSarkar (2018)

Gathering data from multiple household members (women and men) on knowledge of and perceptions about their real property asset is an initial step. Identifying differing knowledge about the household's assets (for example, when women and men within the household disagree about existence of documentation or loans or have differing knowledge of legal rights) is another critical step.

A critical step is to examine and draw on the experience of women going through the sheltering process in different contexts. Systematically measuring this experience, and documenting—in their own words—how their relationship to their real property assets changes over time will increase understanding of how to improve women's tenure security and livelihood opportunities during and after crises. Key factors to consider include:

- Intrahousehold decision making.
- Control over income, spending, and access to credit.
- Time management.
- Ownership of and investment in assets.

A key variable in the second research question is the prevalence of violence perpetrated against women within the beneficiary household, or by others in the same household, including over significant assets. Research in some humanitarian contexts shows how male family members often prefer to maintain control over property, deny women their property rights, and perpetrate violence against women who try to claim them (Syn, 2016; NRC, 2014). Although there are many definitions of violence against women, this research focuses on the incidence of physical and sexual violence. Prevalence is defined as violence experienced in the past 12 months. A minimum six of these months should be after the shelter/tenure security intervention to be able to assess the impact.

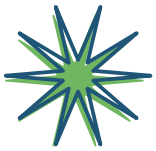
The research should take an expansive view of the household and the voices required to understand its changing power dynamics and vulnerabilities to violence. For example, it would not be sufficient to interview or survey the head of household only. Ongoing programming, monitoring, and research is often constrained by narrow definitions of households that ignore the experiences of women, multiple partners, extended family, and multiple generations. Allocating sufficient resources to include these voices in the research is critical to understanding the impact of the sheltering process.

Depending on resources and context, the research outlined here would best be carried out either through a rigorous counterfactual analysis built upon fine-grained quantitative data or through an ethnography built on trust.

Where resources and ethical considerations permit, counterfactual analysis compares women within households who have received a specific type of shelter and settlements support during a humanitarian crisis with women and households that have not yet received support. This comparison will identify causal linkages between the shelter and settlements intervention and impacts on violence against women and livelihoods. It will also eliminate competing explanations for changes in violence against women and livelihoods over time. There have been recent examples of this kind of randomised controlled trial and longitudinal research on violence against women in humanitarian settings. It requires significant resources, overcoming many logistical challenges, considerable ethical thought, including how best to design a comparison group (Murphy et al., 2019). In cases where research involving comparison groups is not possible, a research design that explores the "before" and "after" experience of programme participants may be considered. However, it is critical to note that these types of research designs cannot exclude other factors outside the shelter and settlements programme leading to changes in key outcomes.

Different types of data can provide compelling and nuanced answers to our research questions within a counterfactual framework. Most randomised controlled trials rely on systematic granular quantitative data collected from members of the participant and comparison groups. Such data is useful because it can be collected from many individuals and households and compared with data from other settings. This type of data could answer the research questions in this chapter.

3. RESEARCH CONTEXTS



3.1. Research risks, contexts, and partners

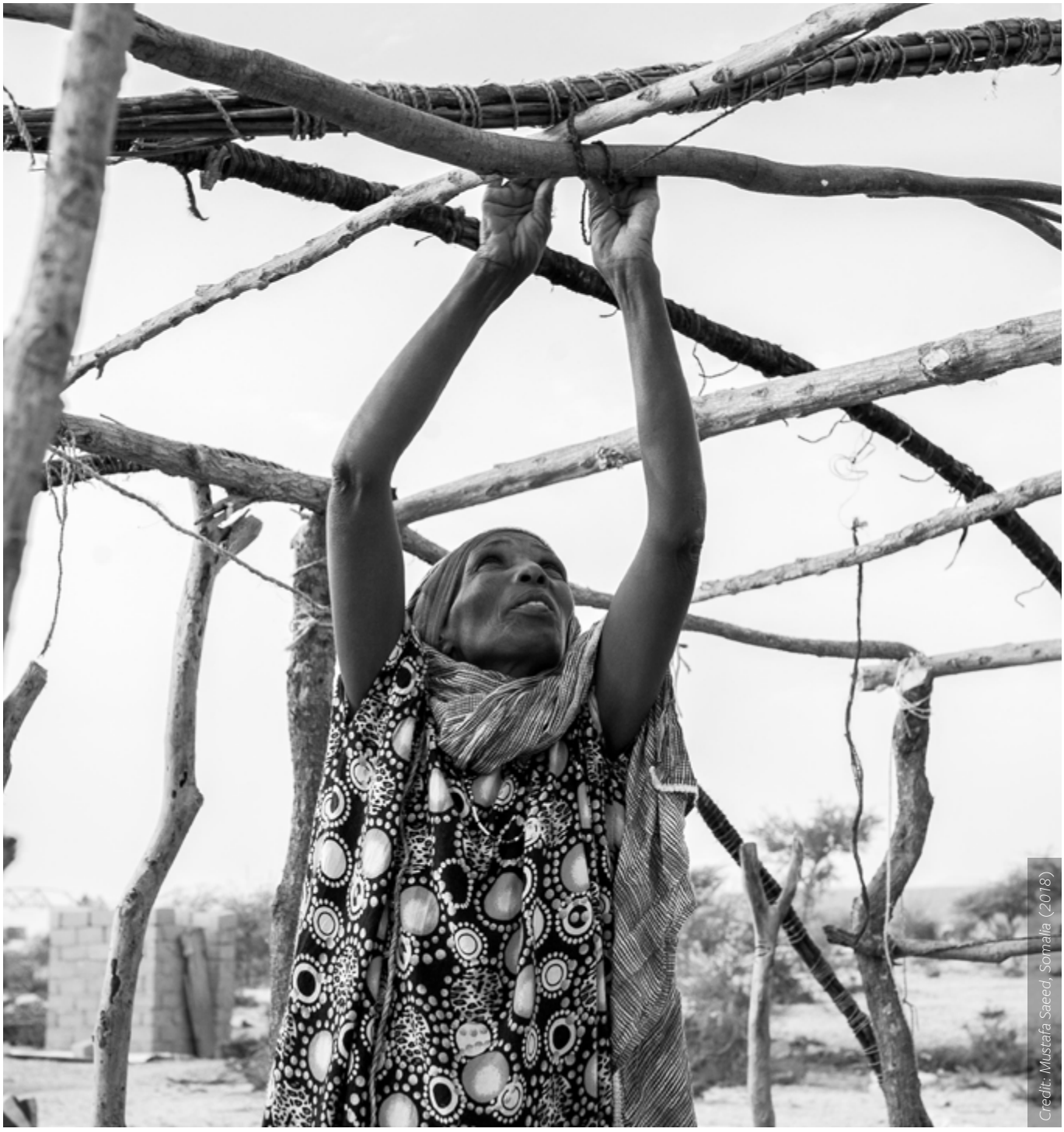
Annex A describes general research risks and limitations that might apply to all chapters, including this one.

Given the sensitive nature of the subject, research should be carried out in contexts where resources exist to support women who participate in the research and where shelter and information, counselling, and legal assistance programming is available. Researchers should identify referral pathways and partnerships with civil society and networks supporting women, including where technologies have been established to remotely gather and analyse data and provide appropriate support (IASC, 2019a). Such technologies include audio computer-assisted self-interviews, which can promote increased self-disclosure, data protection, and confidentiality (Murphy et al., 2019). In addition, partnerships with local researchers will be essential to conducting ethical research in this area, and to understanding the social, cultural, and political context.

Research expertise and skills that are critical to these projects include expertise in shelter programming, gender, local legal systems and norms, intimate partner violence and violence against women, and various types of data. The timing of the research depends on the research design. To understand the impact of programmes, research should start before the programme begins in order to assess changes that can be attributed to programming.

CHAPTER 5

Reconsidering Protection in Self-Recovery Programming



Credit: Mustafa Saeed, Somalia (2018)

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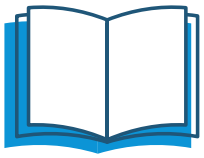
1. BACKGROUND AND RATIONALE

1.1. What are the issues?

It is widely understood in practice that protection is the responsibility of all humanitarian actors engaged in emergencies, including agencies without a specific protection mandate. There are now many different approaches to protection. As a fundamental element of humanitarian response, protection has been thoroughly researched and practiced, with efforts often focusing on the multiple interpretations of the ever-expanding term (Niland et al., 2015). Despite the evolution of the definition of protection, there is a gap in understanding how shelter self-recovery and protection intersect. Protection, self-recovery, and shelter are interlinked; adequate shelter addresses multiple protection concerns, and without adequate shelter and protection, people cannot recover from crisis. This research considers protection concerns and activities relevant for a self-recovery approach to shelter and settlements appropriate for any country prone to emergencies. In this research, understandings of protection traditionally drawn from conflict contexts will be tested in Malawi, in post-disaster situations where self-recovery is more prevalent.

Due to the lack of academic research and practical guidance into appropriate ways to support the self-recovery process, there is an opportunity to further explore the intersection between protection and self-recovery. Self-recovery is the process by which crisis-affected communities rebuild or repair their homes using their own resources (Parrack et al., 2014). Shelter assistance provided by humanitarian agencies rarely reaches 30% of those needing to recover their shelter, so most people self-recover, but often reproducing the same housing vulnerabilities that predated the event (Schofield, et al., 2019). Support for shelter self-recovery is characterised by placing the community's agency and priorities at the centre of humanitarian response, and consists of material, technical or financial assistance (Maynard et al., 2017). In a recent study, self-recovery approaches were considered the most important future area of research in the Shelter and Settlements sector (Opdyke et al., 2021). With self-recovery approaches in their infancy, it is timely to explore how protection is understood in shelter self-recovery and the impact the approach has on protection outcomes. Notably, barriers to good protection outcomes cannot be fully understood without addressing the inextricably linked concepts of human rights and vulnerability.



1.2 What is known already?

Protection and housing

The concept of protection draws from a focus on human rights because protection issues arise in the intersection between the right to housing and other associated rights. The following definition of protection was adopted by the Inter-Agency Standing Committee (1999:4) and is based on the position of the International Committee of the Red Cross:

> *"... all activities aimed at obtaining full respect for the rights of the individual in accordance with the letter and the spirit of the relevant bodies of law (i.e. International Human Rights Law (IHRL), International Humanitarian Law (IHL), International Refugee law (IRL))."*

Humanitarian assistance often adopts a rights-based approach to programming, which recognises that every human has inherent rights for achieving a standard of living validated by international law (Dufvenmark, 2015). The right to adequate housing is enshrined in international law and international human rights instruments, so restoring housing following an emergency helps people realise this right. In this chapter, we understand protection

issues to arise when the right to adequate housing overlaps or intersects with the denial of other rights (OHCHR, 2009; IASC, 1999). Most commonly this includes the right to non-discrimination, which is a free-standing right in international law as well as applying to the exercise of any specific right. Human rights problems such as tenure and property issues, and threats to physical safety, including gender-based violence and exposure to natural hazards, are protection issues related to housing provision. However, the range of potential intersections is much broader. Access to adequate housing has well-documented links to the right to an adequate standard of living, which includes the rights to water, food, and health (Sphere Association, 2018). In addition, the right to adequate housing is likely to impact on other rights including education, employment, and political participation. For example, children living in informal settlements may be refused schooling, forced evictions may result in limited access to livelihood opportunities, and without a registered address people may be unable to vote (Carver, 2018; OHCHR, 2009).

Human rights law is, however, silent on **how** the right to adequate housing is to be realised (Carver, 2018). Protection and human rights are clearly mutually reinforcing and interwoven with shelter programming, which aims to protect vulnerable people who have lost their homes. However, there is little evidence on how support for self-recovery could appropriately address protection issues.

Addressing vulnerability

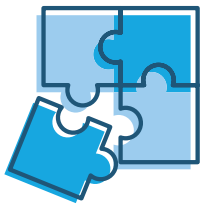
People's capacity to realise their right to adequate housing is not equal and depends on the layers of vulnerability people experience. Vulnerability is born out of structural inequalities, colonialism, and oppression, defined by shifting factors including gender, (dis)ability, age, ethnicity, sexual identity, health, and economic or social status, which determine who is most in need of protection. There is also "growing discomfort" that categories of vulnerability, framed through a western perspective, limit the capacity, strength, and resilience of diverse groups (Marino & Faas, 2020:1). Attitudinal, environmental, or institutional barriers placed on specific groups can hinder participation and restrict access to services.

The ability of humanitarian actors to tackle systemic causes of vulnerability is sometimes limited. For instance, tackling the societal and political inequalities at the root of some vulnerabilities is at odds with the humanitarian principle of neutrality. Families without secure tenure are vulnerable to a range of shelter-related protection concerns. Yet they are often excluded from accessing humanitarian assistance that focusses on those who own their homes. Following the 2015 Nepal earthquakes, the Government of Nepal provided conditional cash grants intended to support the self-reconstruction of safer buildings. However, construction standards and eligibility criteria excluded vulnerable households, particularly those who did not hold secure tenure, from accessing support. Consequently they remained living in unsafe buildings (Schofield et al., 2019; Kennedy & Newby, 2018). Therefore, protection activities have become multilayered and agencies with more flexible political agendas have integrated a range of protection activities into their programmes (Ferris, 2011; DuBois, 2007). Despite the different approaches to and understandings of protection work, Ferris (2011) points out that there is consensus on the basic principle of providing meaningful, safe, and dignified programming. Notably, Ferris (2011:273) questions whether programmes that "consult with beneficiaries ... do not discriminate against particular groups" and whether those that "ensure sustainability" are really "protection" or just good programming. Indeed, these activities can lead to reduced vulnerability to risk and strengthened capacities.

Shelter self-recovery assistance

Adequate shelter is known to address protection concerns by reducing exposure to the elements and providing people a safe, dignified place to live. Self-recovery approaches can address some of these shelter-specific concerns. However, they may escalate others, since there is still little known about how shelter self-recovery programmes impact social infrastructure and community dynamics. Social capital is a pivotal element of protection and recovery, since collective action and inclusive community practices, including non-discrimination and respect for people's inherent dignity, can enhance opportunities for marginalised groups and protect some of the most vulnerable (Aldrich, 2019).

The self-recovery approach relies on people having the capacity to engage in their own recovery and can facilitate an enabling environment for them to do so. The self-recovery project post-Typhoon Haiyan focused on empowering communities to take control of their own recovery. It facilitated an enabling environment for the continuation of the strong, pre-existing community spirit or community cohesion—*Bayanihan* (CARE International UK, 2015). However, the nuances between community infrastructures, social capital, and self-recovery are poorly understood, particularly in urban contexts (Twigg et al., 2017). If vulnerabilities and community dynamics are not understood with respect to the context, the approach could be damaging to already marginalised groups whose capacity to recover is restricted due to exclusion from wider social networks. Moreover, using set vulnerability criteria that reflect different realities may miss under-represented groups or negatively impact dynamics in the wider community by undermining social cohesion. Shelter practitioners must, therefore, consider factors of exclusion when implementing a self-recovery approach.



1.3. What evidence is missing?

Shelter-specific protection and inclusion guidance for humanitarian practitioners reinforces the cross-sectoral impact of housing on protection issues. Examples include the IFRC's *All Under One Roof report* (IFRC, 2015) and CARE's *Gender and Shelter Good Programming Guidelines* (2016). Good housing can provide meaningful and safe occupation for people with disabilities and older people, decrease the risk of housing-related health issues and promote social inclusion by removing wider socioeconomic barriers. However, the impact of shelter and settlement assistance programmes on these issues is less well-known. A review considering the wider contributions of shelter assistance found "weak" evidence of impacts on gender and society and "strong" evidence of impacts on mental and physical well-being (InterAction, 2020); all are relevant to protection. There is a need for further evidence of the impacts of shelter assistance, particularly self-recovery approaches, on shelter-related protection concerns. Evidence of how barriers to good protection outcomes can be mitigated or ameliorated by support for self-recovery remains weak.

Current research into self-recovery is based primarily on data from communities supported by self-recovery programmes (Schofield & Miranda Morel, 2017). Limited research has focused on the wider population who recover without any external assistance (for example, Hendriks & Opdyke's work on knowledge adoption (2020)). To better understand barriers to and enablers of good protection outcomes for shelter self-recovery, more research should be conducted with this wider population. This will demonstrate the impact of self-recovery in varied contexts while valuing community perceptions.

The first evidence synthesis on the effectiveness and efficiency of self-recovery programmes notes that interventions that support self-recovery can have positive effects on dignity, self-reliance, and perceptions of safety and security (Maynard et al., 2017). Critically, however,

the evidence suggests that the "standard package of assistance" may not meet the needs of vulnerable households and could place them at further disadvantage if not adequately assessed at the beginning of a response. Due to the context-specific nature of self-recovery programmes and the lack of available data, trends in the effectiveness of self-recovery programmes are currently difficult to infer. Further research and a broader review of documents focused on the process of implementing self-recovery projects and the impact on vulnerable households would be valuable (Maynard et al., 2017).

1.4. What questions need to be answered?

It is challenging for humanitarian agencies to support vulnerable people to self-recover and prioritise protection activities while also playing the role of facilitator. This challenge requires further exploration as self-recovery approaches advance. Therefore, this research aims to conceptualise protection concerns and response activities specific to shelter self-recovery programmes.

The primary research question is:

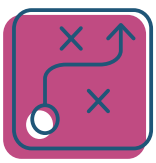
> ***What are the enablers and barriers to good protection outcomes in shelter self-recovery, and how can the enablers be strengthened and barriers mitigated?***

This is supported by four subquestions:

1. ***What are the impacts of shelter self-recovery assistance on shelter-related protection concerns?***
2. ***How do communities understand and manage their shelter-related protection concerns while they self-recover?***
3. ***How does shelter self-recovery impact on social cohesion and protection concerns?***
4. ***How do people's shelter and protection priorities change before, during, and after a crisis?***

By answering the research questions, the sector will gain a better understanding of how protection and shelter self-recovery activities align. This will build knowledge on how best to support and facilitate the self-recovery process while effectively responding to shelter-related protection concerns.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The first systematic review on self-recovery found a lack of relevant literature (Maynard et al., 2017). Consequently, this research should focus on primary research. It should use a mixed-methods approach to document the lived experiences of communities and perspectives from the humanitarian and human rights sectors, building a valuable evidence base. Many of the

ideas forming the basis of this proposal are often ambiguous or even cited as "Westernised," including definitions of vulnerability (Marino & Faas, 2020; Bankoff, 2001). This research should move away from these paternalistic models and be co-designed, with the community leading on components such as defining the research methods. This will ensure communities have the opportunity for meaningful and active participation and learning during the research process, appropriate to their protection and shelter recovery priorities. Community perspectives have previously been poorly integrated into global humanitarian policies (Hendriks & Opdyke, 2020). This research should focus on people's lived experience, building evidence from community knowledge, processes, and perspectives to more accurately analyse their reality.

The research requires an intersectional lens which recognises that social groups are not homogenous, and that categorising identities into mutually exclusive groups can lead to marginalisation (Thompson-Hall et al., 2016). Intersectional approaches help to illuminate root causes of vulnerability. By unpacking how different identity characteristics intersect, the experiences of marginalised groups can be emphasised, enabling the development of more inclusive programming and policy (Chaplin et al., 2019). This will lead to a more refined understanding of how protection concerns are identified and managed by different groups, while providing insight into complex community infrastructures. Moreover, an intersectional lens will help the research team acknowledge power dynamics that emerge from the research process, along with their own values and biases to understand how these can influence research.

We recommend that the research be arranged into two phases The first phase will gather data from professionals engaged in protection and humanitarian response to establish current understandings of protection and how this is translated into humanitarian assistance for the recovery of shelter. The second phase will focus on co-developing learning with people affected by crisis.

Phase 1 activities

These should involve technical practitioners, protection and human rights specialists and government officials, and include a country case study:

- Invite protection experts (including those working for local women-led or women's rights focused organisations), and health, WASH, and shelter experts to participate in key informant interviews and online surveys. This will elicit practitioners' protection priorities, best practices, and common approaches to identify and mitigate protection concerns.
- Interview human rights specialists to build a comprehensive picture of how protection is understood as an interconnected practice. This will illuminate the impact of good shelter programming on the right to adequate housing. It will also develop knowledge of how this right can be achieved through self-recovery assistance.
- Use Malawi as a case study to examine the role of human rights actors in protection, including the Malawi Human Rights Commission and local women's rights focused organisations. As well as exploring how human rights considerations informed previous shelter responses, this will broaden understanding of how human rights can influence protection outcomes within self-recovery approaches.
- Invite government officials working in humanitarian response or disaster risk management to participate in interviews. Involving policy makers will provide valuable insight into current strategies and opportunities to influence future preparedness and response planning.

Phase 2 activities

These should involve all or some of the following:

- "Action research" [1] in the immediate aftermath of a disaster.
- Engagement with crisis-affected communities to reflect on a single event.
- Engagement with communities living in an area prone to multiple events.

To understand people's changing protection and shelter-related priorities throughout preparedness and response, research should involve communities who have both received and not received support for self-recovery. This will provide a more complete understanding of the barriers and enablers to self-recovery and the multifaceted protection risks people experience.

Working with local partners and representative organisations will help to identify groups who are often missing from humanitarian activities (Robinson et al., 2020). This might include women-led or women's-rights-focused organisations, older-people's associations, or disability-focused organisations. Involving local partners in the development and implementation of the research will ensure greater inclusivity, helping to build an authentic picture of protection and shelter priorities.

To understand different interpretations of social phenomena and the meanings behind behaviour such as self-recovery and community shelter-related protection strategies, qualitative inquiry will be most applicable for the purposes of this research since it allows for a degree of flexibility. The concept of protection is broad and the self-recovery approach is still advancing. Consequently, the team may need to adjust the research design (for example, interview questions) as knowledge of the multiple interpretations of protection and self-recovery is generated. Qualitative research techniques relevant for this research are participatory methods including storytelling, focus group discussions, timeline mapping, house-to-house visits, and semi-structured interviews.

2.2. Expected outcomes

The research aims to enhance protection strategies in shelter self-recovery programmes to reflect the priorities of the communities involved. It seeks to add value to ongoing research into self-recovery by learning and amplifying communities' existing strategies for managing their shelter-related protection concerns while they are self-recovering with or without support. By exploring the intersections between self-recovery, protection, vulnerability, and human rights and how communities and practitioners interpret these nuances, the research will build a more comprehensive understanding of these complex phenomena.

The co-production of knowledge will encourage humanitarian assistance that is relevant to the communities involved. It will also help shelter practitioners facilitate an enabling recovery environment conducive to people's priorities while responding to shelter-related protection concerns. As a result, communities will receive enhanced self-recovery support. Findings will be co-produced with project partners in the form of reports and peer reviewed articles. Researchers should disseminate findings to the community through local partners. To encourage peer-level scrutiny, findings should be presented at national and regional events,

[1] *Action research is "research that is carried out with the explicit intention of action being taken toward social or organisational change" (People's Knowledge Editorial Collective, 2016: 135). For instance, observing how people respond in the immediate aftermath of a disaster while simultaneously supporting this process, and then using the knowledge generated to build evidence and improve practice.*

and with the wider global community through webinars or presentations at events including Africa and U.K. shelter forums.

Field research should be conducted in a post-disaster setting and will shed light on areas for important future research with respect to conflict settings. Self-recovery is not commonly used with reference to protracted displacement environments, as people's recovery journeys are often restricted and multifaceted. The impact of self-recovery approaches on protection concerns in conflict settings is an under-researched area which will, nevertheless, gain valuable insights from this study.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

The research should be conducted in Malawi, which is particularly vulnerable to climate change and natural hazards and experiences multiple cyclical hazards. It therefore provides an opportunity to conduct research in both urban and rural settings throughout all emergency phases. This will elicit in-depth understanding of the changing shelter-related protection concerns identified by people self-recovering. The methodology is intended to be adaptable for use in different settings, after this initial study is conducted.

The research seeks to deepen understanding into social dynamics and multiple contextual interpretations of phenomena. It is appropriate, therefore, that the research looks extensively at one country rather than a wider selection. Comparative data will be collected from several different communities and contexts within Malawi, so that generalisations can be made to build a theoretical framework.

3.2 Potential partners

Research will be developed through an academic and practitioner partnership. It will be co-led by CARE International UK and CARE Malawi with Oxford Brookes University. Research activities will benefit from this multidisciplinary partnership and will build on the strong relationship between CARE UK and CARE Malawi. CARE Malawi is experienced in responding to national and regional crises and has pre-existing links with local representative organisations, such as women-led and women's-rights-focused organisations and those advocating for the rights of people living with disabilities. This will help the team ensure inclusivity by working with under-represented groups. CARE Malawi also has a strong relationship with the Government of Malawi. Oxford Brookes University is a globally connected institution and will provide networks to local academic and national human rights institutions such as the University of Malawi and the Malawi Human Rights Commission. Oxford Brookes University has experience producing research in the Shelter and Settlements and Human Rights sectors and will bring academic expertise and rigour to this research, enhancing research quality.

CHAPTER 6

Ensuring Participation of Affected Populations in Decision Making

Credit: Miguel Sampler (2016)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

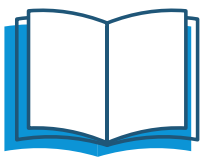
In 1982, UNDRO stated that "the key to success [of humanitarian shelter programmes] ultimately lies in the participation of the local community" (UNDRO, 1982:55). Yet, after the Indian Ocean earthquake and tsunami in 2004, Kennedy et al. found that humanitarian programmes which approach "settlement and shelter as processes involving the people who will use them" were still rarely implemented on the ground (Kennedy et al., 2008: 28). More recently, a survey of humanitarian shelter and settlement practitioners identified the "participation of affected populations in decision-making" as one of the most important topics for future research (Opdyke et al., 2021).

Participation has been a recurring principle in humanitarian standards and guidance. In 1994 "full community participation" in the "design, management and implementation" of humanitarian programmes became one of the ten principles identified in *The Code of Conduct for The International Red Cross and Red Crescent Movement and NGOs in Disaster Relief* (ICRC, 1994:4). A similar core standard also appeared in the *Humanitarian Charter and Minimum Standards in Disaster Response* (Sphere Project, 2004). Several tools have also been developed to increase the participation of affected populations. These include:

- Community Action Planning (CAP) (Hamdi, 1995; Goethert & Hamdi, 1988).
- Vulnerability and Capacity Assessment (VCA) (IFRC, 2006).
- Participatory Approach to Safe Shelter Awareness (PASSA) (IFRC, 2011).

In practice, humanitarian shelter and settlement agencies have also favoured approaches which attempt to integrate higher levels of participation. These include owner-driven or people-centred reconstruction (Jha et al., 2010; Lyons & Schilderman, 2010) and programmes supporting shelter self-recovery (Flinn et al., 2017; Maynard et al., 2017; Parrack et al., 2014). While both approaches rely on affected households rebuilding their own homes—either directly or using local builders—problems can still arise regarding the level of participation. For instance, Harriss et al. (2019) note that "beneficiaries of owner-driven recovery programmes may have limited opportunities for choice and may not be in charge of many aspects of the initiative." They argue that shelter programmes can only be defined as supporting shelter self-recovery when affected populations are "active decision makers ... [and] in charge of the process" (Harriss et al., 2019:313).

Despite repeated emphasis on the importance of participation in humanitarian policy and attempts to integrate it into practice, successful participation still proves problematic, particularly in relation to decision making. This research therefore seeks to explore how to improve the participation of those affected by crises in decision making.



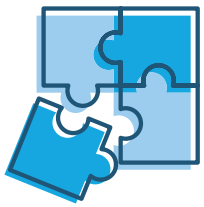
1.2 What is known already?

Participation is a widely used term within academia and practice, but there has been extensive debate as to the scope of its meaning. Through an in-depth analysis of the models, meanings, and practices of participation, Cornwall (2008) suggests that participation has become an "infinitely malleable concept ... used to evoke—and to signify—almost anything that involves people." Further, it is suggested that "so many claims to 'doing participation' are now made that the term has become mired in a morass of competing referents" (Cornwall, 2008). Most of these popular versions of participation have emerged since Arnstein's Ladder

of Participation in 1969, which first described the ranges of community participation as existing somewhere between "manipulation" to "citizen power" (Arnstein, 1969). Since then, Pretty (1995), White (1996), and Choguill (1996) have also expanded on the ladders of participation, with suggestions of differing end-points to the spectrum and inclusion of stakeholder interests. In 1993, the OECD/DAC defined participatory development as "a process by which people take an active and influential hand in shaping decisions that affect their lives" (OECD/G.D., 1993 in Rudqvist & Woodford-Berger, 1996:12).

The idea of linking participation with decision making has been raised as having significant value (Harriss et al., 2019; Cornwall, 2008).This value has also been identified through several case study reviews. Of 168 Shelter Projects case studies[1], over half referenced community involvement and mobilisation as a strength, or lack thereof as a weakness, often linking these strengths and weaknesses to beneficiary choice and input (George, 2018). In a review of case studies of area-based approaches in urban settings it was found that projects had an improved chance of success if they were "people-centred and include[d] meaningful, early and ongoing engagement with all impacted population groups in the target area" (Parker & Maynard, 2019:10). The incorporation of participation in decision making in self-recovery programmes has also been explored by Maynard & Parker (2018), who suggest that self-recovery does not have to mean self-building. Instead, supporting shelter self-recovery involves helping households to make and implement key decisions about their housing recovery process. However, Cornwall (2008) suggests the type of participation most frequently found in development projects initiated by external agents is instead "functional participation." Despite participatory approaches being originally introduced to development settings as an alternative to "top-down, technocratic, blueprint planning of state-led modernization" (Hickey & Mohan, 2004:11), Cornwall finds that "people participate to meet project objectives more effectively and to reduce costs, [but] after the main decisions have been made by external agents" (Cornwall, 2008).

Participatory methods have been subject to a number of other significant critiques (Hickey & Mohan, 2004; Stiefel & Wolfe, 1994; Chambers, 1983), peaking with the publication of *Participation: The New Tyranny?* (Cooke & Kothari, 2001). Cooke and Kothari (2001) argue that there are three types of tyrannies associated with participatory development: tyranny of decision making and control; tyranny of the group; and tyranny of method. Key themes emerging from this work are the naivety of assumptions, empowerment as a smokescreen for managerial effectiveness, and the misunderstanding of power relations. Further to this, additional claims have been made that mainstreaming of participation has reduced its aim of empowerment, instead becoming a technical method for improving project management (Cornwall, 2008; Hickey & Mohan, 2004; Cleaver, 1999; Rahman, 1995). Additionally, the "obsession with the 'local'" (Hickey & Mohan, 2004) has led to a lack of recognition of "wider structures of injustice and oppression" (Mohan & Stokke, 2000 in Hickey & Mohan, 2004). These critiques signify the importance of evaluating different methods of participation, particularly in identifying tokenistic approaches.



1.3. What evidence is missing?

While significant historical research into participation within development programmes has been published, including extensive critiques, humanitarian programming has received less attention until recent years. Over the past decade, several initiatives have raised awareness of the importance of effective communication and community engagement (CCE), including

[1] https://shelterprojects.org/

the Communicating with Disaster-Affected Communities (CDAC) network established in 2009 (CDAC Network, 2016), and the 2010-12 "infoasaid" project (Chapelier & Shah, 2013). There have also been several important multi-agency commitments to a "participation revolution" (IASC, 2016b:10) through people-centred approaches that involve communities in decisions which affect them. These include:

- The *Core Humanitarian Standard on Quality and Accountability* (CHS Alliance, 2014).
- The Grand Bargain commitments following the World Humanitarian Summit (IASC, 2016b).
- The IASC commitments on protection from sexual abuse (IASC, 2017).
- The latest revision of the *Humanitarian Charter and Minimum Standards in Disaster Response* (Sphere Association, 2018).

An increasing focus on localisation has also echoed the rising recognition for participation, with the World Humanitarian Summit calling for humanitarian action to be "as local as possible, as international as necessary" (U.N. Secretary-General, 2016:30). The Humanitarian Policy Group & ICVA (2016:2) suggest that "a locally-led response has the advantage of better access and deeper networks with affected people, a better understanding of the history and cultural and geopolitical specificities of the area and—as local actors are often themselves affected—a personal understanding of what needs to be done" (HPG & ICVA, 2016:2).

Despite all these initiatives and commitments, a recent review of collective approaches to CCE found that "the humanitarian system is [still] not accountable at the collective level to the communities it serves" (Holloway et al., 2020: 9). It has also been noted that the formal humanitarian system's "power dynamics, culture, financing and incentive structures create compelling reasons to remain closed and centralised" and as a consequence, "localisation is unlikely to result in the empowerment of local actors" (HPG & ICVA, 2016:5). Holloway et al. argue that "moving towards more community-led responses to humanitarian crises where decision-making is in the hands of those affected will ultimately solve part of the challenge of accountability."

There is an opportunity therefore, for a similar comprehensive review of approaches to participation in the recovery of shelter and settlements during crises, and particularly in relation to opportunities for those affected by crises to make decisions about their recovery. Research is required which fully investigates the barriers to the inclusion of participation in decision making and identifies opportunities for future improvements (Opdyke et al., 2020). A comprehensive study and evaluation will also identify opportunities to develop the "novel approaches needed in order to ... promote participation and inclusion"(Serdaroglu & Moore, 2018), as identified in the *Global Shelter Cluster strategy for 2018-2022*.

1.4. What questions need to be answered?

The aim of this research is to investigate the participation of affected populations in decision making in shelter and settlements practice and provide recommendations for improvement.

The primary research question is:

How can participation of affected populations in decision making be improved?

2. RESEARCH METHODOLOGY AND OUTCOMES

2.1. Methodology

The study should adopt a participatory action research (PAR) approach (Kindon, 2010) for both the desktop study and the fieldwork in Lebanon. PAR is intended to decrease power imbalances between the researcher and participants, involving participants in the co-design of the research process itself and re-defining participants as co-researchers. This helps to ensure investigative tools are appropriate for participants. It also brings together multiple perspectives, creating a balanced dialogue between researchers, practitioners, and members of the affected population.

The project should start by establishing technical advisory groups—both at the national and global level—to participate in the research process and dissemination of results. The National Technical Advisory Group will include members of the affected population, Lebanese NGOs and universities, and local shelter practitioners. The Global Technical Advisory Group will include practitioners, academics, and donors from around the world with a keen interest in the subject. These groups will participate in the research by providing guidance and feedback at key stages. For example, reviewing and refining the research aims, objectives, and methodology; suggesting documents and tools for inclusion in the desktop study; reviewing and refining the fieldwork methodology; and collaborating in the data collection, analysis, and dissemination of results.

Figure 6.1 illustrates the three research phases.

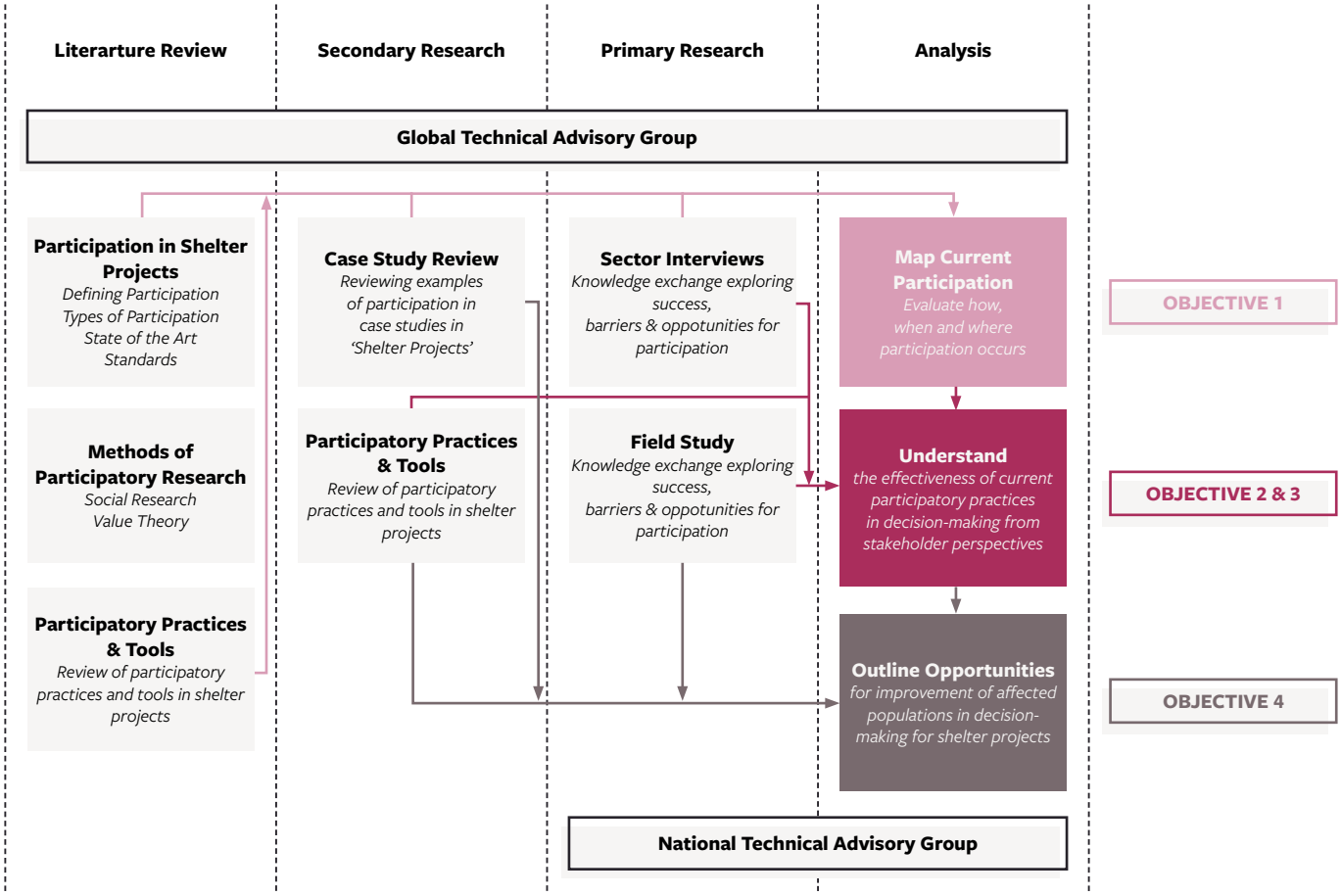


Figure 6.1: Research Design and Objectives

Desktop research

The desktop research should include:

- A scoping study, following the approach of Arksey & O'Malley (2005). It should clarify key concepts such as: definitions, types, and critiques of participation; relevant humanitarian policies and standards; methods of participatory research; and current approaches to participation in practice.
- A review of tools for participation. Existing tools (such as VCA, PASSA, CAP) should be collected, categorised, and analysed to examine when, where, and how they are used within humanitarian shelter and settlements programming, alongside their relative strengths, weaknesses, and areas for improvement.
- A collective case study, following the approach of Mills et al. (2010). The purpose of this is to identify and investigate common issues or themes regarding the participation of affected populations in decision making and provide an overview of the current strengths, weaknesses, challenges, and opportunities from the perspective of humanitarian shelter and settlement practitioners.
- Semi-structured key informant interviews with stakeholders across the Shelter and Settlements sector. These will further investigate the perceived level of participation of affected populations in decision making, drawing on interviewees' experiences. This will be compared with the actual level of participation experienced by those affected by crises, explained below. Questions will be designed with the technical advisory groups and reflect topics of interest identified in the collective case study. Interviewees will be identified via snowball sampling, using the Global Shelter Cluster as a starting point.

Fieldwork

An in-depth field study will be undertaken across neighbourhoods in the district of Tripoli, Lebanon to evaluate the **actual** aspects of participation in relation to **perceived** aspects of participation, and to help understand the perspective of affected populations at a local level. The field study will apply PAR in three iterative phases: discovery; develop; and analyse and adapt.

Initially, the discovery phase will identify specific locations for the research and invite local humanitarian shelter practitioners and community members as co-researchers. Engagement should include a series of workshops and interviews. The initial workshop should discuss the study objectives, key themes and concepts, and planning the data collection process. All co-researchers should be invited to vote on the priority areas of focus. Additional workshops will identify existing participatory practices and train co-researchers.

The development phase should begin with an initial workshop to develop ideas, tools, and methods for investigating participation. These could include participatory discussion groups, semi-structured interviews, and key informant interviews. Tools such as mapping and storytelling, free listing, and ranking could be considered as unique visual and oral methods to assist in inclusive and interactive exercises. The method developed by the co-researchers should then be implemented to answer the research question. The development phase may also increase information for investigation, such as identifying previously unknown participatory methods.

The analysis and adaptation phase should begin half-way through development, with a reflection workshop and power analysis of the process. This is to ensure that the investigative process has remained participatory and provides a method for mid-point feedback. The process should then be adapted to include recommendations from this workshop. Following the conclusion of the development phase, data analysis should be done as a collective activity

with co-researchers. The analysis methods will be developed in consultation with both the Technical Advisory Groups and co-researchers. Anticipated analysis methods include focused coding of data from case studies, coding of interviews, and cognitive mapping (Hansen & Andreasen, 2000) of participation in decision making.

A final action analysis workshop should be undertaken to prioritise the collective findings for dissemination and a list of recommendations should be collated. Results will be disseminated through a variety of methods. These may include a good practice guide for participation in decision making published in locations such as the Humanitarian Library, IEC Compendium, and Shelter Cluster website. Other outputs could include policy notes, academic papers, interactive workshops, short videos, and infographics. Results will be translated into Arabic and presented back to communities visually too, through local shelter hubs, local grassroot networks, and global meetings.

2.2. Expected outcomes

- A map of current practices of participation of affected populations in decision making in humanitarian shelter and settlements practice including how, when, and where participation currently occurs.
- An evaluation of current participatory practices in decision making by understanding opportunities, barriers, and gaps from the perspectives of affected communities and humanitarian actors.
- An understanding of areas and methods for improving the participation of affected populations in decision making.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

The precise location of the field work in Lebanon will be determined in coordination with the National Technical Advisory Group. An initial suggestion is neighbourhoods in the district of Tripoli. However, this will depend on when this research is undertaken. The location should be an urban area with a mix of populations, where shelter and settlements recovery is taking place, and decision making is ongoing.

Lebanon provides a pertinent context for the field research. Tripoli city has a concentration of diverse, vulnerable, urban populations. This setting provides a challenging environment for housing communities with complex needs and systemic inequality. Participation from communities in decision making is therefore vital in creating an enabling environment for the recovery of shelter in these areas.

Social cohesion is at the core of mitigating conflict between communities in Tripoli, especially at a time of scarce resources, poor job opportunities, and rising humanitarian needs. Social cohesion can be improved by encouraging participatory decision making to jointly overcome challenges that are common to different groups in a community, for example host communities and refugees. Refugees especially do not have a formal platform to be heard.

Extra effort is therefore needed to find ways to make sure support to the recovery of shelter is aligned with their lived experiences, by listening and facilitating interaction of affected populations and humanitarian shelter actors. Enhanced participation in decision making could also be beneficial to improving power dynamics between the sector and affected populations.

Marginalised populations in Lebanese society are not accustomed to having access to forums for collective decision making about their own lives and environment. There are very few mechanisms encouraging participation in local governance structures. Decision making across population groups is challenging and rare, especially in the more conservative communities. For instance, women can be excluded from shelter and housing because it is seen as the concern of men, meaning women's experiences in housing are not heard. Shelter can be a divisive topic and the sector needs effective tools to discuss solutions with diverse groups and highlight inequalities.

Lebanon has a vast resource of humanitarian and development practitioners with a plethora of experienced, motivated, and professional NGOs, CBOs, and grassroots organisations. However, there are limited documented examples of best practice of participation in decision making in this context. CARE International implemented a neighbourhood approach project in Tripoli (Campbell, 2020) where community committees informed planning through PASSA activities, as well as a PAR-led programme looking at reducing PSEA in shelter distributions (Potts, et al., 2020). The humanitarian architecture is dominated by larger U.N. bodies and INGOs, and the humanitarian coordination itself is not representative of local organisations. Participation is limited due to exclusivity of technical committees and the approach of the shelter working group, which leans to sharing pre-made decisions and distributing internally produced operating procedures.

Following this initial research programme, additional field studies could be undertaken to validate and test findings from Lebanon. CARE International has over 90 country offices globally, offering a wide range of contexts for future research.

3.2 Potential partners

CARE International Lebanon (CIL) has experience in partnering with local organisations, implementing shelter programming, and using PAR in urban humanitarian settings.

CIL has a wealth of learning from an extensive four-year neighbourhood approach project in urban Tripoli focused on participatory approaches to address shelter, settlement, and protection needs. Care International UK hosts CARE's Global Shelter Team, which offers comprehensive practical experience of participatory work in humanitarian settings. Additionally, the research team provides learning and guidance on PAR and shelter self-recovery. The Sustainable Shelter Group is based within the Centre for the Study of Global Human Movement at the University of Cambridge. It can provide researchers with academic guidance as well as provide architectural, engineering, or social science perspectives and expertise on the concepts outlined.

CHAPTER 7

Rethinking Public Space Through Design Ethnography

Credit: Sankalpa Acharya/CARE India (2015)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

While the return to their places of origin is often the preferred solution for many crisis-displaced people (United Nations High Commissioner for Refugees - UNHCR, 2017a), the average time of displacement has persistently increased over the years (Sphere Standards, 2018). According to UNHCR (2017a), more than half of the displaced population spends at least four years in humanitarian settlements. The permanency of these settlements asks for long-term solutions regarding not only adequate accommodation and facilities, but also the inclusion of public spaces aiming at the development of communities at all levels. Thus, it is fundamental for planners to understand the existing and potential interactions between host and displaced communities within and around humanitarian settlements.

Empirical evidence suggests that the relevance of public spaces in humanitarian settlements is frequently overlooked by planners and urban designers who, owing to the urgency of the situation, focus their attention on life-saving infrastructures and the provision of shelter (Global Shelter Cluster, 2018 & 2018a). The permanent character of most of such settlements, however, suggests that other dimensions of urban development should be considered, with public space possibly playing a key role in building livelihoods, fostering identity, and allowing social interaction.

The definition of public space and its role in social development have been discussed widely over time and across disciplines. For Jacobs (1961) public spaces are the manifestation of a community, understood not only as a group of people but as the diverse and layered complexities that shape the identity of a place. A public space can be a "key vector into cityness" and grounded democracy (Sassen, 2008: 85), created "through the practices and the usages of people" (Sassen, 2008). Carmona (2018) states that planning and designing generic public spaces often misses what gives spaces their identity: the diversity, differences, and activities of the community using these spaces. Thus, the task of designing public spaces for humanitarian settlements becomes especially challenging, due to the shifting nature of such contexts, the mobility of displaced groups, and the overlapping of host and (sometimes multiple) displaced communities.

A full understanding of social interactions in space requires an ethnographic perspective.

1.2 What is known already?

In the first stages of displacement, affected communities are likely to organise themselves in groups generally based on ethnicity or regionality. Host communities might encourage them to abandon their old lifestyles and cultures and replace them with local practices and identities (Blunt & Dowling, 2006) or might be deliberately hostile and marginalise the new groups from any social activity. Host communities also experience the consequences of a displacement crisis, as they might need to share their (sometimes already insufficient) public and private space and facilities, including health centres or schools; or they might act as a host family (Sphere Association, 2018). Yet, in many cases, governments do not always grant displaced communities access to existing services; it is notably difficult to prevail upon these governments to make these services formally accessible to all. There might also be real or perceived competition against the displaced people in terms of access to jobs, livelihood, and resources. Thus, long-term communities also need to adjust to the new socioeconomic and cultural conditions introduced by displaced people, to avoid a growing feeling of resentment (Kale et al., 2019).

As argued by Kale et al. (2019:3) one of the aims of resettlement is "to enable [the displaced population] to mediate between past, present, and future experiences, needs, and desires so that they can maintain valued aspects of their identity." Several approaches to displaced-friendly planning, including the creation of specific livelihood opportunities, have been suggested and tested in the past (Yuka Terada et al., 2017). Yet, other aspects of social life, such as identity, attachment, and homeliness—and the role of space in their definition—have been less considered in settlement planning.

From the seminal work of Agier (2002), there has been substantial agreement on the relevance, in emergency settlements, of ethnographic research methods—direct and photographic observation, interviews, archival work on documents, and artefacts—with the aim of understanding a specific social or cultural group. However, ethnographic approaches are often introduced retrospectively, rather than being part of a forward planning process from the onset of an emergency. Acknowledging a gap between the literature on planning and design of humanitarian settlements (Jahre, Kembro & Altay, 2018; Jacobs, 2017; Chamma & Mendoza Arroyo, 2016), and the literature on ethnographic research in such environments (Poole, 2018; Fresia, 2015; Nielsen, 2014; Agier, 2002), we propose the use of design ethnography to help reduce the temporal and planning gap between the emergency (humanitarian) and middle- to long-term (development) stages, as part of the process of researching and designing humanitarian settlements and their public spaces.

Design ethnography can help practitioners incorporate such social insights as an input for the design of public spaces. Often used in the realm of product design (Goffin et al. 2010), design ethnography is a type of research focused on collecting information about problem-specific needs (of a certain user, group, or community). It allows the practitioner to build empathy and to understand the different actors and the specificities of their context (Salvador et al., 1999). It is also a particular way of articulating design research, whereby the reality of a built environment (in this case a settlement's public space) is seen as a project, rather than as an object (Findeli 2014), in its transformative potential. As such, practitioners are able not only to diagnose what happens in a certain space, but to explore and envision the full potentials of such space.

1.3. What questions need to be answered?

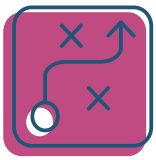
The primary research question is:

What role do public spaces play in fostering cross-group interaction in humanitarian settlements?

This is supported by two subquestions:

1. ***What spaces can be understood as public ones, within humanitarian settlements?***
2. ***How could (the design of) public spaces within humanitarian settlements be conducive to the socioeconomic empowerment of their users?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The time dimension is particularly relevant and crucial for our research proposition, that looks at design operations often happening in short timeframes. In ethnography, there needs to be a consistency in observing behaviours and patterns—such as interactions amongst individuals and households, or between individuals or groups—and material research objects (Leclair-Paquet 2020; Falzon 2009), including space. In the case of design ethnography, the immersive methods of traditional ethnography are approximated (Leclair-Paquet 2020, Hanington and Martin 2017) in terms of time, with such dimensions shrinking to a few weeks of in situ behavioural observation. This research proposes a series of longitudinal explorations, happening periodically during relatively short timeframes.

As for the spatial dimension of our investigation, following Carmona (2018), we consider public space to range from informal street corners to grand civic set pieces—where the smaller public spaces might simply be used to rest, hang out, play, or any other kind of small scale, in-between, informal activity. This perspective helps us to move away from a narrow understanding of public spaces, and to include in our investigation:

- Spaces used for collective activities by groups of households.
- Spaces along a mobility infrastructure.
- Spaces at the threshold between public and private realms, for instance porches, verandas, and front-yards.
- Apparently leftover spaces between two or more housing units, such as service corridors that become the place of exchanges (or clashes) amongst households.

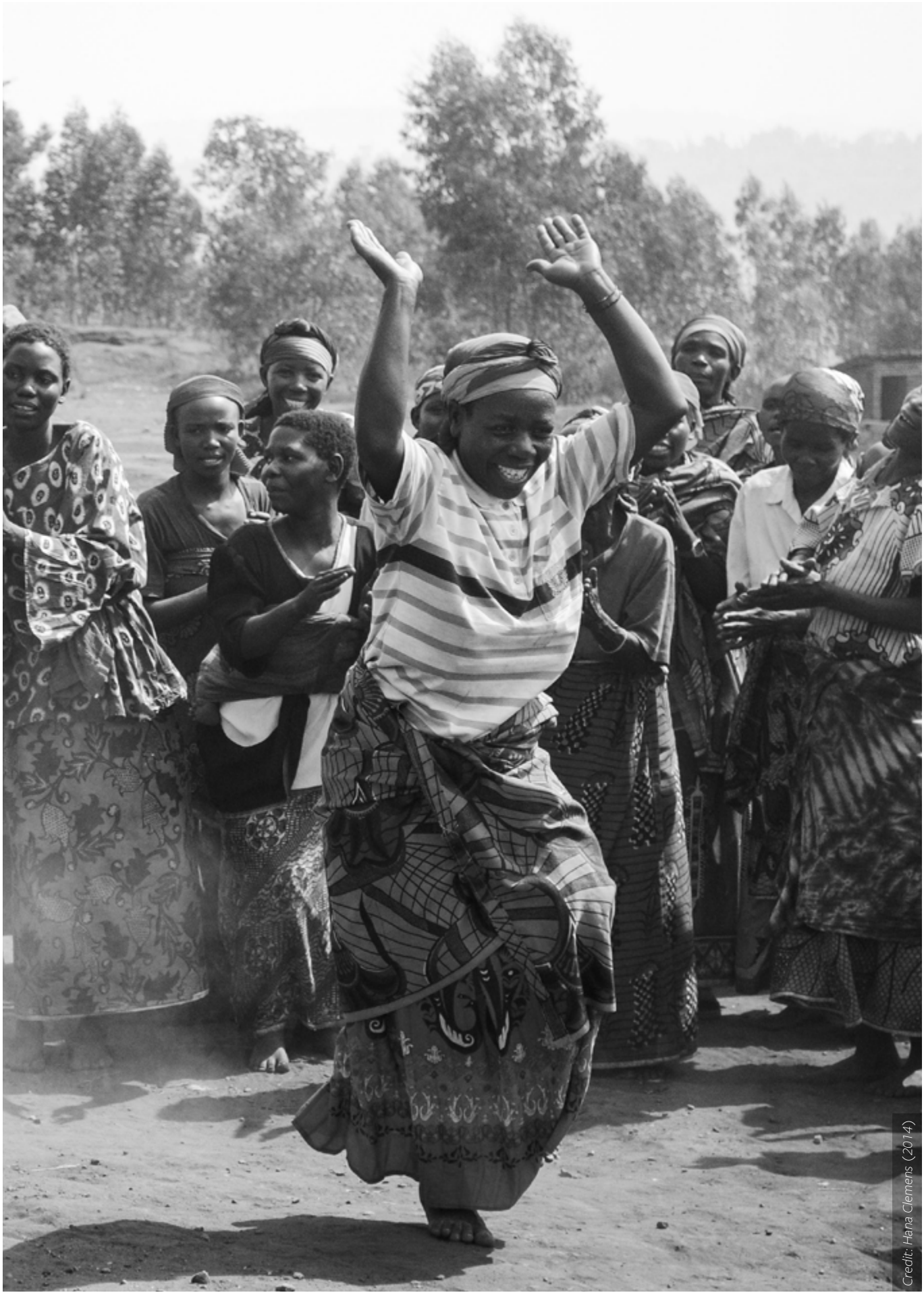
Additionally, while most literature concerned with ethnographic and participatory approaches to the design of settlements has focused on shelter design (Albadra et al. 2020; Aburamadan & Trillo 2019), researchers have often missed the relevance of household and private-space-related dynamics (Dabaj & Talocci, 2019). Below, therefore, we propose a cross-scalar investigation, moving from the settlement to the household, and passing through the scale of major and minor public or semi-public spaces.

We propose to work on two different contexts (the Kutupalong Camp for the displaced Rohingya community in Cox's Bazar, Bangladesh, and the Beldangi Refugee Camps in Damak, Nepal), building on a relational and comparative approach (Goldberg, 2009; Robinson, 2016). In so doing, rather than narrowly comparing similarities and differences, we aim to relate the two cases as a platform for (re)conceptualising the understanding of public space within humanitarian settlements. Importantly, both contexts are chosen because of the capacity of potential local partners, with whom research questions and objectives could be refined in accordance with their agendas (see for instance Raghuram & Madge, 2006). In both contexts, public spaces assume peculiar characteristics that we propose to explore longitudinally (for instance for two weeks every three months, according to the capacity of the local partner), across multiple scales and dimensions such as patterns of use, socioeconomic profiling at the household level, and collective agencies, imaginations, identities. Importantly, all such dimensions are to be investigated in a designerly fashion (Findeli, 2014). That is, understanding the reality of the two settlements as projects, in their trajectory of transformation, rather than as objects.

As for use and movement patterns, extensive ethnographic observation through the use of pictures from the ground and from above (drones) would be key, corroborated by direct observation through the eyes of the researcher and practitioner. While drone photography is helpful to understand how the layout and use of public spaces change through time (with a particular focus on the arrangement of economic activities for instance), we state here the necessity of using in-depth photographic observation from the ground, building on the approach of the Community Architects Network (CAN, 2013), to identify the elements and users populating public spaces. The use of chairs, stalls, cooking tools, minor elements of decoration, shading artefacts, and so on, can all help define how spaces work. Doing this longitudinally—that is, taking the same pictures with the same field of view and standpoint in different moments in time—would be instrumental to draw conclusions on the patterns of change and, possibly, upgrading of a specific public space.

As for socioeconomic profiling, the use of semi-structured interviews, rather than questionnaires, would help to avoid a solely quantitative/statistical approach to the understanding of livelihoods and income generation, in contexts where some transactions are not necessarily money-based, but rely on forms of barter through service and product provision. Sampling households through data saturation criteria (Mason, 2010) and interviewing the same households across time, could again help to identify patterns of change. The interviews would reveal which public spaces households use, and their social networks. Should the interview take place inside a housing unit, the researcher/practitioner should sketch (or photograph, if this is ethically sensible and permitted) the unit's layout too, acknowledging the direct interrelation between patterns of use of private and public spaces in humanitarian settlements, whereby for instance the high level of encroachment of a unit could lead to a more intense use of public spaces, such as the space in front of the road. The use of participatory photography through participant-generated images would also be relevant, identifying, through the eyes of the participants, those spaces that are important in their everyday life (Alburo-Cañete, 2020).

As for collective agencies and imaginations, we aim to organise a series of periodical design research workshops. Drawing from Moser & McIlwaine (1999), collective activities such as focus groups and, in this case, workshops are fundamental in determining the public dimension of transformation of a certain urban environment. The statements pronounced during an interview might not be repeated in the same manner by the same subject during a collective event. This means that collective activities might contribute to revealing the politics and power relations (and also conflict and alliances) between members of a supposedly homogenous group. At the same time, a collective research activity contributes to understanding how a collective, shared vision over the future transformation might take shape. For instance, using a three-dimensional model of a specific public space as the main investigative tool in a design research workshop would lead selected representatives of a number of households to identify current issues and potential for transformation, with the facilitation of the researcher.



Credit: Hana Clemens (2014)

3. RESEARCH CONTEXTS

3.1. Potential contexts

Two locations provide the opportunity to explore these approaches: Kutupalong in Cox's Bazaar, Bangladesh and Beldangi settlement in Damak, Nepal. Despite Kutupalong being the largest and most densely populated displaced settlement in the world, provision for public space is scarce and unappealing for social interactions. While density is an issue, it also provides an opportunity to explore the impact of public spaces in such a diverse and complex context. In Beldangi settlement, supportive relationships between refugees and Nepali citizens have emerged over time, but although they can live peacefully, they are not unified. Consequently, the existing public space reflects and embodies such social and economic dynamics.

Kutupalong settlement for displaced Rohingya community in Cox's Bazar, Bangladesh

Since August 2017, around 744,000 Rohingya refugees from Myanmar have fled to Bangladesh, with a majority of women and girls (52% of the total) and children (55% are children under 18) (Toma et al., 2018). This Rohingya refugee crisis is among the largest and fastest movements of people in recent history, overwhelming the existing response capacity and adding an immense strain on infrastructure, services, resources, and the local environment. Initially, they were housed in settlements built and managed by the International Organization for Migration (IOM) and UNHCR. However, by 2018 there was a sudden increase in the number of incoming refugees and new, spontaneous settlements sprouted overnight. This unprecedented growth of the displaced population raised concerns over the lack of adequate shelter, water and sanitation, access to basic services, and safety for women and girls.

The Kutupalong refugee settlement was built adjacent to the existing settlements of the host Bangladeshi community and the 20 Rohingya settlements that sprung up informally after an earlier influx of Rohingya people in 1991. From 2017, the Kutupalong settlement has grown to become the largest of its kind in the world, with more than 600,000 people living in an area of just 13 square kilometres, stretching infrastructure and services to their limits. The settlement is crossed by a warren of alleys that reveals its unplanned nature and organic growth over time. Another 300,000 Rohingya refugees live in satellite settlements on the bank of the Naf River which divides Bangladesh and Myanmar. Over the years, the functional spaces within the camp have become relatively organised: main roads running through the site are used for heavy vehicles transporting construction materials, and retail districts have emerged, where Rohingya shopkeepers sell basic supplies and other items from Cox's Bazar.

Kutupalong has been in the spotlight owing to its size and complexity, and several innovative projects are being piloted on it, such as building safer shelters for women and children, led by organisations including CARE International and learning and resource centres for both displaced and host communities. However, not much attention has been given to incorporating or upgrading public spaces useful for both displaced and host populations, with the latter living in deplorable situations for over three decades. Partnering with local agencies working for CARE International could potentially allow for the development of a design ethnography project, as they already incorporate participatory processes for shelter design and have partnered with local NGOs during previous emergency stages (Laurie, 2019).

The proposed research could contribute significantly to map out the uses given by different Rohingya communities at different stages in the process of settling and engaging with the host community. A second potential partner is BRAC, a Bangladesh-based development

organisation which has worked with UNHCR in Kutupalong camp 4 extension to make it environmentally sustainable and more space-efficient (Milko & Hammond, 2019).

Beldangi settlement in Damak, Nepal

The Beldangi settlement was set up when refugees from Bhutan started arriving to Damak in 1991. During its peak in 2006, 120,000 people lived here in 17,000 huts. For the next 30 years, the majority of the population has been resettled to other countries, drastically reducing its population to approximately 7,000 refugees currently living in the settlement. Nepal allowed the refugees to stay in settlements along its eastern border after being expelled from Bhutan due to their Nepali origin. During the 1990s, seven UNHCR camps were created in eastern Nepal: Beldangi I, Beldangi II, Beldangi II extension, Goldhap, Khudunabari, Timai, and Sanischare, all with a high population density. However, over 95,000 of the approximately 120,000 refugees who fled from Bhutan to Nepal in the early 1990s have already been resettled in another country, mostly in the United States. In 2014, due to the shrinking number of settlement dwellers, the UNHCR planned to merge Goldhap and Beldangi and to close some others, relocating residents to settlements near major highways and aid organisations' offices in Damak.

Within the settlements, people live in bamboo shelters in close proximity and share latrines and other facilities. The Bhutanese population are still to some degree considered outsiders and, due to scarce resources, there have been continuous tensions between the two groups. Furthermore, although the Bhutanese community is restricted from employment and is expected to live on UNHCR-provided aid, the displaced communities rely on various sources of informal economic activities to earn a living. For example, an informal market has been established on the road at the entrance of the settlement where two communities have an opportunity for interaction.

3.2 Potential partners

While numerous community organisations work within the settlement, the role of public space has not been given much attention. Considering the long-term displacement of the population and the changing population density, the way spaces have been used over time would be an interesting aspect to explore for the purpose of this research. Researchers could partner with UNHCR's Damak office[1] and IOM in Damak[2], both of which have a good understanding of the settlements and have been working with the community from the outset of the crisis in 1991.

[1] *Please refer to www.unhcr.org/uk/nepal.html*

[2] *Please refer to www.nepal.iom.int*

CHAPTER 8

Adopting an Environmental Health Lens in Practice

Credit: Md Rafayat Haque Khan (2016)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Modifiable environmental factors, including air, water, and soil pollution, cause 24% of global deaths (Prüss-Ustün et al., 2016); many of these deaths occur in low- and middle-income countries, which are also the most likely to be affected by disaster. Housing is traditionally the third pillar of public health alongside water and sanitation. "Housing" is usually referred to as "shelter" within the humanitarian sector but Opdyke et al. (2020) discuss the artificial divide between the two terms, which, they say, inhibits learning between sectors.

Shelter and wider settlement characteristics have direct and indirect impacts on health. Many deaths can be avoided by improvements to homes and their surrounding neighbourhoods (WHO, 2018). Household air pollution, poor water and sanitation facilities, overcrowding, incursion by pests, excess heat and cold, earth floors, and shared space with animals are some of the specific housing features linked to conditions that kill millions per year. Health outcomes that can be attributed to housing risk factors include vector-borne diseases (such as malaria), diarrhoea, acute respiratory infection, cardiovascular disorders, and malnutrition.

The sum of mortality and morbidity is referred to as the "burden of disease," quantified as disability-adjusted life years (DALYs). DALYs are a standardised metric that allow for direct comparisons of disease burdens of different diseases across countries, between different populations, and over time. One DALY represents one lost year of healthy life (Roser & Richie, 2016).

The burden of disease linked to housing characteristics varies significantly geographically (The Lancet, 2021) but particularly falls on women and girls, older people, and those living with disabilities. Housing quality and stress of physical health, tenure security, and overcrowding also have impacts on mental health; this important issue is outside the scope of this chapter yet also requires further research.

The importance of shelter for health is overlooked in humanitarian responses. For example, shelter was not included as a contextual factor in the *Humanitarian Health Evidence Review* (Blanchet et al., 2015). Research conducted for the Strategic Advisory Group of the Global Shelter Cluster identifies shelter programming's impact on health as one of its priority research themes (Parrack, 2020). The Shelter and Settlements sector has historically given more attention to rebuilding that can withstand natural hazards than to addressing endemic diseases and health conditions exacerbated by crisis. Average annual deaths attributed to diarrhoea (1.5 million), malaria (643,000), and lower respiratory infections (2.5 million) (for example, IHME, 2020) are many times greater than the average 60,000 people per year killed by natural hazard-related disasters (Ritchie, 2018). This chapter argues that if shelter actors adopt an environmental health lens, their practice will better address the health outcomes of inadequate shelter. Enabling better health to be an outcome of the sheltering process will also contribute to a bridge between emergency response and long-term recovery.

What is an environmental health lens?

Environmental health is the branch of public health that is concerned with all aspects of the natural and built environment that affect human health. Rather than being a formal procedure or tool, an environmental health lens is a new framing of shelter programming that mainstreams environmental health. This aligns with demands for more holistic shelter practices (Sanderson, 2018). By addressing the determinants of health related to housing, shelter practitioners, ideally working in collaboration with other humanitarian sectors (Saavedra & Knox-Clarke, 2015), can improve the well-being of crisis-affected households.

The adoption of an environmental health lens prompts practitioners to include healthy shelter and settlement considerations in every stage of a project cycle. It requires practitioners to harness knowledge and skills to seek out, evaluate, and use environmental health information to make informed choices that reduce health risks, improve quality of life, and protect the environment. An environmental health lens is informed by the environmental burden of disease in any given context. The environmental burden of disease estimates what proportion of health outcomes are caused by environmental factors, as opposed to other causes such as genetic and behavioural factors, usually using DALYs.

Some shelter responses are already adopting an environmental health lens. For example, local NGO staff, Dyna Khonde and Madalitso Jere of CRS Malawi and Mandinda Zungu of Blantyre CADECOM, Malawi are piloting the inclusion of healthy shelter interventions in their ongoing post-flood shelter/WASH program in Nsanje district in Malawi (Figure 8.1). This response is supported by government stakeholders and has been guided by an environmental health lens. Some of the innovations being promoted are:

- Using wire mesh in window openings to exclude mosquitoes in efforts to prevent malaria.
- Using damp-proof membrane between foundation and walls to reduce fungal growth.
- Smearing of floors and walls of traditional houses with mud to prevent incursion of insects.
- Creating window openings that improve ventilation to prevent respiratory infections and avoid darkness that can promote growth of microorganisms, especially when coupled with dampness.
- Recommending minimum distance from pit latrines to shelters and kitchens to reduce vectors that can cause diarrhoea.

Figure 8.1: Shelter intervention in Malawi.

1.2 What is known already?

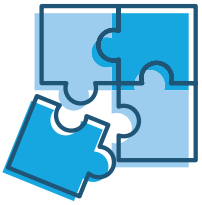
Adequate housing is a basic human right (U.N., 1948) and "inadequate housing can have repercussions on the right to health" (UN-Habitat, 2014a:9). What is "adequate" humanitarian shelter in different contexts, and how that links to eventual adequate housing is less clear. Research into the impacts of house characteristics on exposure to, and incidence of, specific health conditions has mainly been carried out in development settings (for example, Nix et al., 2020; Tusting et al., 2020; von Seidlein et al., 2019; Bardhan et al., 2018) or in the Global North (for example, Roys et al., 2016; Hamilton et al., 2015). While there is some good evidence of the links between poor housing and health (but fewer causal links), clear evidence on the impacts of improved housing on health is harder to find, even in high-income settings (Ige et al., 2019). Networks interested in healthy homes exist to share information (for example, the Inter-American Network of Healthy Habitats) and initiatives such as the Health Through Housing Coalition are working to facilitate a digital platform creating multidisciplinary partnerships to implement projects and collect data about the relationship between health and the built environment (ARCHIVE, 2021).

The Sphere Handbook (Sphere Association, 2018) recognises that shelter is necessary for the promotion of health, along with livelihoods, security, and dignity. However, there is little guidance on how sheltering can reduce the prevalence of housing-related health issues. *The Sphere Handbook* states repeatedly that connections between sectors (such as shelter and health) should be made when planning responses, but relevant standards or indicators for healthy shelters are not given. Knowledge about links between shelter characteristics (like crowding and ventilation) and morbidity (like respiratory illness) during and after emergencies is currently limited, although growing (for example, Albadra et al., 2020).

1.3 What evidence is missing?

Shelter practitioners currently lack the knowledge, means, and capacity to measure or address causal links between shelter characteristics and health or to include health outcomes in monitoring and evaluation. At field level, there is limited capacity to identify which specific interventions can have the greatest impact on health in a particular context. One of the barriers to shelter practitioners widening their programming objectives to include health outcomes is the lack of clear evidence on impacts (InterAction, 2020). Building evidence of long-term outcomes of humanitarian responses is particularly challenging (Blanchet et al., 2018). Yet, with a recognition of the shelter process being an important element of recovery (Parrack et al., 2014), there is a need to generate evidence of immediate and long-term impacts of shelter on health. Knowledge about affected populations' own priorities and capacities to address their health and shelter needs is also needed.

Filling knowledge gaps on the connections between shelter and health required to improve humanitarian practice is complex, hence the need for a map which outlines the evidence gaps and opportunities at global, organisational and local (operational) levels. Knowledge from different disciplines and sectors must be synthesised: shelter practitioners and researchers must learn from humanitarian health, public and environmental health, and WASH experts, from those who are already researching the connections between housing and health in a range of settings, and from households in those settings. Studies from the development sector, including informal contexts, are particularly relevant.



1.4. What questions need to be answered?

Shelter practitioners need to understand the environmental burden of disease in any given context. They need to know the relative importance of housing-related health issues, possible housing improvements, and the ease and cost of implementing them (Webb et al., 2020). One recommendation of the first Shelter and Health Learning Day in May 2020 was for the formation of a "priority list of health-related standards or indicators that can enable shelter practitioners to incorporate health in all parts of the project cycle". The co-development of an environmental health lens by development and health actors will address gaps in knowledge, improve decision making in practice, and enable evidence-based advocacy for future shelter interventions that are both safe and healthy.

The outcomes of this research will enable shelter practitioners to make positive first steps in tackling the health impacts of poor housing in humanitarian contexts, improving wider environmental health, and producing co-benefits (Jensen et al., 2013) of healthier homes.

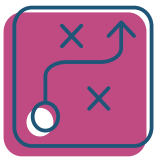
The primary research question is:

What are the opportunities for, barriers to, and enablers for adopting an environmental health lens in shelter programming?

This is supported by three subquestions:

1. ***How can shelter practitioners apply an environmental health lens, given contextual operational realities, and what new knowledge needs to be generated?***
2. ***To what extent do households in hazard- or crisis-prone locations use their own environmental health lens or apply knowledge about the links between shelter and health?***
3. ***How can shelter practitioners evidence the effectiveness of an environmental health lens to donors?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The first phase of research should synthesise existing knowledge and identify partners that can guide environmental health considerations in humanitarian shelter practice. This will support advocacy for the adoption of an environmental health lens by shelter practitioners and their donors and start the process of evidence-based programming.

The second phase of research should examine how an environmental health lens can be applied in practice. This should include the development of methodologies that use an environmental health lens in each stage of the project cycle: needs assessments and context analyses, implementation, and monitoring and evaluation.

Phase 1 research activities should include:

- Feasibility study on adapting existing methodologies to quantify the cost of poor-quality housing and the environmental burden of disease for use in different humanitarian contexts.
- Scoping review of academic and grey literature on shelter and health conditions, including the benefits of healthy homes. This could include humanitarian repositories and databases (such as ALNAP, the Humanitarian Library, Shelter Projects) and academic databases (such as PubMed, Web of Science). It should collect existing sources and tools already used routinely by health and WASH sectors, which could inform shelter programming (such as open-access data on health risks in specific areas).
- Semi-structured interviews with key informants with shelter, health, and WASH experience within humanitarian organisations based in the Global North (including their country office staff) and the Global South. Telephone or online interviews will reveal ways in which environmental health and health questions are currently included in needs assessments, context analyses, and implementation. They will also reveal opportunities and barriers to greater collaboration and coordination between the sectors at organisational and operational levels.
- Survey to elicit the shelter practitioners' priorities for information and guidance about including health outcomes in programming.

Phase 2 research activities should include:

- A country analysis, consisting of stakeholder mapping and key informant interviews at national and local scales. This will find out which actors are needed to inform and direct environmental health outcomes in future shelter programming. Access to interviewees (national and local government and non-government actors) will be made using a snowball technique.
- A cross-sectional, observational study of health conditions (for example of children 0-10 years) and shelter characteristics in a specific disaster-prone setting.[1] If the context allows, researchers should compare houses that have received previous shelter assistance and those that have not. The study should assess health via self-report of specific conditions (such as respiratory infection, diarrhoea, and malaria). It should include a survey of housing characteristics (including size, ventilation, screening) and a review of household socioeconomic data. Precise methodology should be co-designed with experts from relevant disciplines, to improve understanding of relationships between different housing characteristics and the prevalence of diseases. Although causal links will not be possible to establish, findings will support advocacy for future shelter interventions using an environmental health lens and will create a baseline for any future interventions.
- A small-scale study in a disaster-prone region where people have experienced displacement and humanitarian shelter assistance. This should allow researchers to understand the opportunities and barriers for affected households in using their own environmental health lens and in adopting any healthy shelter messaging. Learning from homemakers themselves will necessitate community-led research using qualitative methods such as focus group discussions, semi-structured interviews, and timeline mapping. Marginalised groups such as older people and those living with a variety of disabilities should be included. The interview and discussion questions should uncover people's knowledge, priorities, and decision-making processes around their health and housing.

[1] *One approach to this sort of relationship study was trialled in Moria refugee camp in 2019. It concluded that similar studies are likely to be hampered by lack of access to health data, hence the recommendation here for the study to use self-reporting of disease.* https://www.bretrust.org.uk/knowledgehub/the-cost-of-poor-camp-design-on-refugee-health/

2.2. Expected outcomes

The successful adoption of an environmental health lens in shelter programming is a long-term aspiration; it involves several interlinked activities and will require coordination and championing by the Global Shelter Cluster and its members. Improved knowledge of the downstream environmental burden of disease that stems from inadequate shelter provision will be an important advocacy tool for future policy change.

The literature review, key informant interviews, stakeholder mapping, and field research activities in specific contexts should inform the development of a working guidance document for shelter practitioners. The phased development of knowledge of healthy shelter options, adaptable for use in different contexts, will enable shelter practitioners to make informed decisions when designing, implementing, and monitoring projects.

Researchers should develop indicators to evaluate health impacts related to shelter. Findings should inform the design of later studies to establish long-term impacts (including health outcomes and co-benefits) of specific housing typologies, materials, and communication strategies. Assessing changes in health parameters over time following shelter interventions using randomised controlled trials would be desirable. However, these are time consuming and expensive; good quality evidence can be gathered by less resource-heavy means. Focusing on householders' experiences and priorities will create valuable surrogate measures and will enable shelter programmes to address these issues more effectively. Healthy shelter interventions can be evaluated as projects start to include health outcomes in their success metrics, alongside cost-benefit analyses.

3. RESEARCH CONTEXTS

3.1. Potential contexts

The case study and stakeholder mapping should be conducted in a disaster-prone country which has an active or dormant shelter cluster, such as Malawi. The small-scale investigation into households' knowledge and attitudes towards shelter and health should be conducted in the same context.

3.2 Potential partners

A proposed inter-cluster Environmental Health Working Group could facilitate collaboration between sectors at the global policy level, encourage multiple studies investigating shelter and health, and disseminate their findings such that they guide future practice. Improved communication between the health, WASH and shelter clusters will enable experts to establish what data is currently collected and what information would be most useful to share.

For the indicative research activities identified, partnerships between academic institutions (with the capacity to conduct long-term, in-depth studies) and humanitarian organisations with implementation experience and networks of country offices are critical for high quality evidence building. This can be subsequently tested and replicated in different contexts. Practitioner INGOs and local NGOs will enable access to research settings and communities. Co-production of research priorities and methodologies is vital to frame research within national and local contexts and to build capacities. Researchers and practitioners from the Global North will help to facilitate this process through their greater access to funding

mechanisms and provision of technical support, yet they must not be extractive. Research collaborations between local NGOs and academic institutions have a greater capacity to engage in long-term studies and will drive the prioritisation of action points in any given context. The researchers should synthesise knowledge generated in these local contexts, developing generalisable findings that will inform global practice.

Phase 1 activities

The feasibility study could be conducted by the BRE Trust, working in collaboration with organisations with operational experience, such as Catholic Relief Services (CRS), with whom it has an ongoing relationship.

The literature review, interviews, and survey could be conducted by an academic institution such as the Centre for Development and Emergency Practice (CENDEP) at Oxford Brookes University. CENDEP has experience working at the interface between academic enquiry and operational practice in humanitarian shelter.

Phase 2 activities

The observational health study should be co-designed with a health research organisation with global reach and reputation, such as London School of Hygiene and Tropical Medicine (LSHTM,) and a Global South university with expertise in clinical studies, such as the Infectious Diseases Research Collaboration (IDRC) at Makerere University, Uganda. There are many research partnerships in the health sector that shelter researchers could join. For example, IDRC and LSHTM have collaborated in many studies in Uganda; this shelter and health research can be facilitated by INGOs and NGOs working with refugees there, such as CRS and CARE Uganda. Social scientists at Makerere University, working with CENDEP, could co-develop the research activities to incorporate the lived experience of the refugees.

Potential research partners such as CARE International, CARE Malawi, and CENDEP already have contacts with local Malawi NGOs. This network could be used to access key informants; local actors with health, public health, and shelter experience.

The existing partnerships between CENDEP, CARE, and CRS enable access to households that have previously been included in shelter responses. Local social science researchers should co-design the research.

Given the time needed to forge strong partnerships between academic and operational organisations, and those with expertise in both health and shelter, research will need to take place in a context where practitioner country offices already have links with local universities.

3.3. Risks and limitations, mitigation measures

Annex A describes general research risks and limitations. Guidance on the practical methodologies and ethics of health research in emergencies will be followed (for example, Smith & Blanchet, 2019).

CHAPTER 9

Measuring the Environmental Footprint of Shelter Options

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

The way humanitarian shelter is provided can have immediate and long-term negative impacts on the environment. For instance, using fired bricks can yield strong and secure shelters. However, extracting soil to make bricks, and air pollution from brick firing can significantly harm the local environment and people living nearby (Dar, 2011). Failing to consider the environmental impacts of a humanitarian response undermines recovery and resilience to future disasters. Meeting the do-no-harm principle of humanitarian action (Wallace, 2015) is not possible unless the immediate and long-term environmental impacts of humanitarian operations, particularly shelter assistance, are considered at local and global levels.

Understanding the environmental impact of humanitarian shelter assistance requires consideration of a range of operational factors including types of shelter assistance, materials and waste management, construction methods and approaches, and the usable life of shelters and non-food items. In non-humanitarian construction, an environmental impact assessment (EIA) or similar type of environmental review is often required for any development of a significant scale. The EIA process identifies significant negative environmental impacts and, where possible, measures to manage or offset these. Depending on the nature of the issues identified, the time required to complete an EIA may not be feasible for urgent humanitarian operations. In many cases, there is an exception for EIA-related laws or regulations which allows humanitarian operations to proceed without an EIA because of their life saving nature.

At the same time, the value of identifying possible environmental issues associated with humanitarian shelter has been recognised since at least the time of the 2004 South Asia tsunami, when an environmental shelter checklist was developed (Kelly, 2008). Most recently, the Nexus Environmental Assessment Tool (NEAT +) software includes shelter as one of the sectors covered.[1]

However, such tools largely use an observation-based qualitative process to identify environmental issues, trading precision and detail off against timeliness. *The Sphere Handbook* indicator on low-carbon emission construction materials and procurement methods (Sphere Association, 2018:271) defines a requirement to measure carbon emissions for different shelter assistance options in a way which fits the humanitarian operational context. Assessing the possible carbon emissions of sheltering options does not make for a complete assessment of environmental impacts. It would, however, improve understanding of environmental issues related to sheltering options, and provide input into tools such as NEAT+ and organisational decision making on trade-offs in terms of environmental impacts.

Life cycle analysis (LCA) is a useful methodology for quantifying the carbon emissions of shelter practices and can be used to help compare shelter options. While LCA is not limited to measuring carbon dioxide equivalent emissions (CO_2 eq.), these are a good starting proxy for a quantitative approach to measuring the environmental footprint of humanitarian actions in shelter and settlement practice (Kalbar et al., 2017). Using CO_2 eq. by no means covers the complex issue of environmental impact, as there are many other impacts related to humanitarian shelter and settlement practices, but it provides a metric that can inform humanitarian decision making on a variety of environmental issues. Unfortunately, there are currently no tools which can be easily used in the humanitarian response context to assess the carbon emissions of humanitarian shelter or non-food item options.

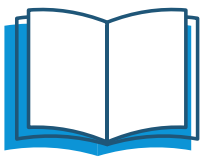
Addressing this gap requires a designed-for-purpose tool and supporting data and guidance that will enable humanitarian shelter providers to quickly define and compare the carbon

emissions associated with different shelter and non-food item options. A key aspect of being designed-for-purpose is using a "good enough" approach, where the focus is on using information and analysis which are sufficient to support decisions under the conditions faced in a humanitarian response (ACAPS, 2014). A designed-for-purpose carbon emission assessment tool could be used in preparedness planning as well, providing opportunities to consider sheltering options which may not be feasible in the immediate crisis response, due to a lack of time, technical information, or awareness of options.

BRE Trust, the Global Shelter Cluster Environment Community of Practice, and WWF are currently developing a simplified LCA methodology based on components of shelter options that will use CO_2 equivalent emissions as a metric for assessment. It will allow for the comparison of different shelter solutions in terms of their environmental impact for their entire life cycle[2]. A tool such as this permits an immediate comparison of different shelter options.

The construction industry has been considering the environmental impacts of construction design and materials for some time. Research is needed to understand how to apply that experience to the demanding conditions faced in providing humanitarian shelter. Perhaps most relevant to the shelter and settlement sector are the methods which the construction industry has used to weigh environmental concerns with other important factors in building, such as cost, time, and the capability of a building to meet the needs of its occupiers. A balanced scorecard approach can weigh environmental impact against other relevant issues in terms of its importance to project outcomes (Atkinson, Yates & Wyatt, 2009:22). That allows humanitarian actors to make informed decisions about shelter materials and construction methods that will have short- and long-term implications for the (environmental) sustainability of affected communities. This type of approach will allow for practitioners to prioritise environmental metrics in shelter options and make decisions that will best suit the needs of a given operation.

Understanding that not all issues are of equal significance in construction, a balanced scorecard approach assigns a weighted importance to each issue that accounts for a different number of "credits" that would lead to a sustainability scoring. This is one way of contextualising the metric of CO_2 eq. emissions in terms of its relationship to other shelter impacts and allows for metrics determined by LCA methodologies to be incorporated into decision making alongside other environmental, economic, and social sustainability factors. It is not enough to simply be able to measure the CO_2 eq. emissions of a specific shelter option, practitioners must then be able to make informed decisions about how to mitigate against the various potential environmental impacts of shelter and settlement interventions, and a balanced scorecard approach can support that.



1.2 What is known already?

Research indicates increasing institutional interest in addressing the short- and long-term environmental impacts of humanitarian operations (Brugge et al., 2020). The difficulty in incorporating environmental concerns into humanitarian decision making is that it is a secondary priority to the lifesaving and life supporting goals of humanitarian action.

However, the importance of ensuring that no harm is done to affected populations through humanitarian assistance means that global environmental impacts must be assessed and minimised by humanitarian actors wherever possible. Once a suitable metric has been identified by which environmental impact can be measured, it can be incorporated into decision making at all stages of shelter and settlement action: procurement, design, construction, and operation through to end-of-life.

In the construction industry, reducing environmental impact is most effective when environmental sustainability principles are embedded throughout the project (Cinquemani & Prior, 2010). By mainstreaming environmental considerations throughout the design, construction, and operation process, industry leaders have decreased the costs of environmentally beneficial practices while maximising their impact (Dobson et al., 2013).

Methodologies used to conduct a project LCA consider various environmental impacts, including embodied carbon emissions, embodied energy, ecotoxicity, and resource extraction. LCA tools used by the construction industry for assessing environmental impacts can be broadly divided into three categories:

- Basic product comparison tools, which help users to make science-based, informed decisions on the life cycle impacts of any product.
- Whole-building design decision support tools, which are used to assess the life cycle of buildings or infrastructure projects.
- Whole-building assessment frameworks or systems, which assess sustainability, incorporating LCA (Tam & Le, 2019; Ortiz, Castells & Sonnemann 2009; Haapio & Viitaniemi 2008;).

These methodologies are well developed and integrated into the building cycle in more traditional building contexts. Whereas whole-building assessments and frameworks can be complex, basic comparative tools can be useful in shelter and settlement operations by providing quantitative data to feed into environmental decision making.

Research into LCA in humanitarian shelter has been limited. Shelter Centre meetings have included discussions about assessing the embodied carbon (LETI, 2020) in humanitarian shelter options, but no specific assessment process has been developed.

The Green Recovery and Reconstruction Training Toolkit (WWF & American Red Cross, 2010) incorporates comprehensive guidance on environmentally responsible disaster reconstruction, with a focus on shelter and settlements. While it does not provide specific guidance on LCA, the conceptual approach and technical materials in the toolkit provide a framework that could support the integration of LCA results into the humanitarian shelter and settlements assistance process.

Chan (2014) used an LCA process as well as data sets developed for the United Kingdom to assess the CO_2 eq. emissions for emergency and transitional shelter used in Haiti following the 2010 earthquake. The study noted that an LCA process and the data sets developed for the United Kingdom did not fully represent conditions in Haiti, but nevertheless represented a "good enough" (ACAPS, 2014) approach for comparison in field action. Kuittinen (2016) used the LCA process to consider different construction options in a humanitarian context and Kuittinen & Winter (2015) have argued for the use of LCA in the humanitarian context. However, they highlight the need for appropriate data sets and approaches which incorporate all aspects of a building's life cycle in calculating LCA results, suggesting that LCA can benefit operational outcomes when incorporated into decision making alongside other sustainability considerations. Other research on LCA for humanitarian shelters compares different shelter designs but focuses on cradle-to-gate impact (Matard et al., 2019) or shelter design (Escamillan & Habert, 2015).

UNHCR is attempting to prioritise environmental, economic, and social sustainability considerations in shelter decisions using a Life Cycle Sustainability Assessment process to understand holistic sustainability considerations of their typical shelter options[3]. On an organisational level, this kind of methodology represents a best-case scenario for assessing shelter impacts, but for the wider sector such detailed data is likely less readily available.

Therefore, the development of "good enough" proxies to measure impact, such as CO_2 eq. emissions, is an important first step to incorporate life cycle sustainability into operations. Coupled with a balanced scorecard approach, this will inform decision making at all stages of shelter and settlement operations to mitigate negative environmental impacts.

The limited research available indicates that LCA can help to identify humanitarian shelter options with reduced environmental impact. However, several barriers to mainstreaming environmental considerations in building practices remain (The City UK & Imperial College Business School, 2019). For the humanitarian sector, challenges include adapting the LCA processes to the data-scarce, time-compressed, resource-limited (and often conflict-framed) humanitarian response environment. The LCA process can be incredibly detailed and may be unnecessary or impossible in humanitarian shelter and settlement operations with time and resource constraints.

However, in the near term, establishing a viable process to assess the environmental impact beyond what is currently measured (for example, local environmental concerns such as sustainable sourcing of materials, potential for degradation of local land) will improve decision making and help ensure the do-no-harm principle is met (Wallace, 2015). To ensure actors can approach some of these issues from a more informed perspective, a simple methodology, with a comparative metric, should be developed that can be applied across contexts and with less raw data to draw from. Using simple comparative LCA analysis to provide a quantifiable metric for environmental impact, practitioners can then make more informed decisions on shelter options.

1.3. What questions need to be answered?

The primary research question is:

Can quantitative analysis of a shelter's life cycle impact lead to more effective and efficient assistance?

This is supported by four subquestions:

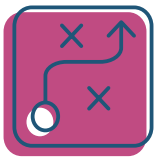
1. ***Can LCA or related methodologies measure the environmental impact of humanitarian shelter and settlement programming with a clear and quantifiable result?***
2. ***What approaches to developing an LCA analysis produce clear, replicable, and evidence-based assessments of the relative carbon footprint (as CO_2 equivalents) of different shelter and settlement options?***
3. ***How can CO_2 equivalents be utilised in decision making, comparing different shelter options throughout their life cycle at field level in terms of their environmental impact?***
4. ***How can shelter practitioners balance environmental considerations with other priorities in shelter action, and can a balanced scorecard approach to LCA methodology encourage more holistic decision-making capacity for practitioners?***

[1] www.eecentre.org/resources/neat/

[2] www.bretrust.org.uk/knowledgehub/lca-for-the-humanitarian-sector/

[3] Ammar Al-Mahdawi, Senior Technical Shelter Officer, UNHCR. 26/11/2020, personal communication.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The proposed focus on measuring CO_2 eq. impact of shelter materials is a significant new step to measuring environmental impact of shelter and settlement operations. We must first establish a robust methodology and measurement system for comparing different solutions in terms of their CO_2 eq. impact and use that to prioritise decision making in specific contexts. We can then broaden the scope in future research to incorporate more complex questions such as settlement planning.

To quantify impact and compare shelter solutions, we argue that CO_2 eq. is a good metric to use. Once the CO_2 eq. emissions of a shelter or settlement can be calculated, this information can be fed into decision making during procurement, design, and construction. LCA can be applied at various stages of humanitarian shelter and settlement operations to reduce the negative environmental impact of intervention. There are a series of research and development steps required to ensure that the incorporation of environmental considerations into shelter action can improve outcomes at a project level. These are:

1. Develop the capacity within organisations to quantify the carbon equivalent impact of their shelter and settlement methodologies, in order to satisfy the Sphere requirement that a higher percentage of shelters use "low-carbon materials," using an LCA approach.
2. Develop a balanced scorecard approach to enable practitioners to weight the relevance of specific environmental considerations against other social and economic sustainability concerns.
3. Incorporate this adapted balanced scorecard approach weighting into a decision-making framework that can improve long-term outcomes in shelter and settlement operations.

Greater understanding of the relative importance of different environmental issues is key to ensuring practitioners can quickly make informed choices on shelter materials. Local challenges may pose more immediate threats to life and livelihoods than long-term carbon considerations (Faivre et al., 2018). Therefore, it is important to establish what is feasible for practitioners to consider in their operations. For instance, the amount of embodied carbon in a given material might be considered less important than the potential human toxicity scoring of that same material. Once life cycle impact can be effectively measured, the importance of this can be weighed against other shelter impacts. This will inform decision making in field operations, taking into account factors such as cost, time, resource limitations, cultural factors, and other objectives.

To successfully use this approach in humanitarian action, practitioners and researchers must first identify the most relevant environmental sustainability considerations throughout a shelter's life cycle, and then develop comparative metrics to weight the importance of these for a given project. Some of these considerations can be adapted from pre-existing frameworks in non-humanitarian construction, and others will have to be identified as unique humanitarian priorities.

Developing a system to prioritise different shelter-related environmental considerations can be achieved through several steps.

A literature review

This should examine current academic and operational knowledge gaps in shelter and settlement environmental impacts and decision-making processes. It will establish where new research needs to take place or be adapted from non-humanitarian settings and, in turn, will inform environmental mainstreaming policies and help to identify the steps required for successfully developing a balanced scorecard approach.

Local context-specific surveys

These should include rapid environmental assessments, community interviews, and data collection on local material procurement. These can be undertaken at the project level where resourcing is available, and if results are shared amongst practitioners and researchers, information can be synthesised to enable regional decision making.

Longitudinal studies

These will develop an understanding of the full life cycle impact of shelter from sourcing to removal. Much more information is required about the operational and end-of-life impacts of different shelter options, and this can be achieved by conducting research in affected communities across time and stages of recovery.

Wider collaboration with sustainability professionals

Collaboration encourages practitioners to adapt existing methodologies to humanitarian contexts, and develop training for humanitarian practitioners to incorporate sustainability principles into action.

The development of a framework

This will support prioritisation of shelter-related issues in decision making. This will consist of identifying all relevant shelter impacts and outcomes that can be influenced by the actions of shelter practitioners and weighting their importance as they pertain to a specific response or operation. This framework will form the basis of a shelter-specific balanced scorecard approach and will be informed by the input from the research undertaken in the points above.

2.2. Expected outcomes

This combination of on-the-ground data collection and expert input into environmental sustainability methodologies from a wider perspective can help to develop a priority list for practitioners. It could form the basis of a balanced scorecard approach to addressing environmental issues in the immediate response contexts while considering global challenges. The incorporation of LCA methodologies into this can help ensure that monitoring of long-term environmental outcomes is more robust. A detailed balanced scorecard approach for environmental impact would be the ultimate goal of the integration of LCA methodology into shelter and settlement practice.

This approach, if successful, could be applied to various challenges for shelter and settlement practitioners. For example, it could address issues related to site planning, community-based reconstruction, and more complex, developmental contexts.

3. RESEARCH CONTEXTS

It is unlikely that LCA-related material databases in complex humanitarian situations will be as robust as those used in other contexts. However, given the right methods and the capacity to share information across organisations and sectors, databases could be developed to give practitioners the capacity to quickly quantify the expected environmental impact of a given solution. Regionally specific databases currently in development include WWF's Building Materials Environment Guide (BMEG) for Nepal, (WWF, 2016) and Australia's Environmental Performance in Construction (EPiC) database (Crawford, Stephan & Prideaux, 2019). These will be valuable resources in building up robust measurements of carbon footprints of settlements.

For the purposes of field action, the development of easy-to-use tools and frameworks that address issues raised in the Sphere standards is sufficient to improve shelter operation. The more complex research agendas laid out here can feed into action, with the caveat that if LCA is done with less-than-ideal data, this still improves practice and meets "good enough" principles to improve outcomes.

Humanitarian attention to environmental issues is increasing, as environmental mainstreaming and policies gain traction in many different organisations (Brugge et al., 2020). As capacity builds, this can continue to feed into field-level action, and may also open opportunities for further funding, particularly as donor focus shifts towards environmental sustainability (D.G. ECHO, 2020; van Kempen et al., 2017).

Developing a capacity to quantify the CO_2 eq. emissions through the LCA of different shelter and settlement solutions and integrating this information into field-level decisions can ensure that environmental targets are met and provide useful evidence of that for donors. Applying LCA and CO_2 eq. emissions considerations throughout the shelter process will enable humanitarians to demonstrate that they are being environmentally responsible, resource efficient, and contributing to the global push to reduce our carbon footprint across all activities. It is important that the measurement of life cycle environmental impact of materials and methods does not become a box-ticking exercise for organisations, and so embedding metrics into a decision-making framework can help to ensure long-term outcomes of projects can improve.

CHAPTER 10

Supporting the Recovery of Home-Based Enterprises

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

The recovery of livelihoods and shelter are interdependent. Recuperating shelter contributes to household economic activity and wider economic recovery as it enables households to restart livelihood activities, such as participating in the labour market (Sheppard & Hill, 2005; Setchell, 2001). For many households in low and middle income countries "a home is also a workplace" (Aysan & Davis, 1992). This can include running a small business from in or around the home—known as home-based enterprises (HBEs). Sheppard & Hill (2005:10) argue that HBEs are "the single most important income source for the populations most affected by disaster." They note that the contribution of shelter to HBEs "is often considered the most important way that shelter can support economic development in post-disaster societies" (2005:8). People often adapt temporary shelters or their homes to suit their needs in time, incorporating HBEs (Figure 10.1).

The interdependence and multidisciplinary nature of shelter and livelihoods can challenge humanitarian agencies trying to support households affected by disaster. Humanitarian shelter agencies supporting self-recovery may require households to contribute time, money, and materials to construction, but this can divert resources from livelihood recovery (Global Shelter Cluster, 2019b:A.4; Maynard & Parker, 2018). Alternatively, humanitarian agencies may provide materials, tools, and financial assistance to support household shelter recovery. However, recipients may use those resources to recover their livelihoods instead.

Given the extensive impact the provision of shelter provides, this research will augment humanitarians' perception to show how shelters are a means to strengthen economic agency and livelihoods through the recovery of HBEs. Recognising the critical importance of spaces in and around the shelter to the recovery of HBEs, this research will highlight the pivotal role shelter recovery plays in livelihood recovery—particularly for affected people unable to work outside the home.

Figure 10.1: Modified temporary shelter in Dichato, Chile (2012). The government provided the shelter after the 2010 earthquake and tsunami. The extension accommodates a shop. Credit: Wagemann (2017).

1.2 What is known already?

HBEs often represent the most important income source for households in the Global South (Tipple, 2005). Gough (2010) estimates that globally 20-50% of households in informal urban settlements have HBEs. The exact percentage varies with the socioeconomic situation of the population, neighbourhood age, and extent of services available. In Enugu, Nigeria, 47% of the housing stock in residential districts had an HBE (Onyebueke, 2001). In India, one estimate indicates 37.4 million people have an HBE (WIEGO, 2020).

Tipple (2005) defines HBEs as businesses occurring "in or very close to the home rather than in a commercial or industrial building or area." They may include small shops selling essential goods and food, provision of services such as hairdressing, production of handicrafts, or home-based farming.

HBEs vary in size and use of space. Some use an existing window as a shop front, others use one room or floor of the home, while others use specific rooms or buildings within the house for business (Tipple, 1993). The use of space can vary considerably in single neighbourhoods and over time. For example, in a home in Accra in Ghana, Gough (2010) found seven households running six HBEs while living and working in eight rooms in a compound. A decade later, in the same home, she found eight households running six HBEs in 12 rooms.

In New Delhi, India, Kellett & Tipple (2000) noted that households found it difficult to describe their houses as "homes" or "workshops." This was because of the limited space and their need to use their homes and the objects within them, such as the bed, for a range of domestic and livelihood activities. The study captured the use of space (Figure 10.2), but not the "diurnal and seasonal variations which are fundamental to the effective use of space" (Kellett & Tipple, 2000:208).

HBEs are particularly important for women, as domestic responsibilities or sociocultural norms may restrict them from pursuing livelihoods outside the home. Women may combine HBEs with domestic work and childcare. Gough (2012) cites research in Suriname, South Africa, and Bangladesh that shows that women run 70-90% of HBEs. Tipple et al. (2003) found at least 50% more women work in households with HBEs than those without. Despite the working conditions and poor pay often associated with HBEs, many global supply chains, particularly textiles, rely on female home-based workers (Carr et al., 2000). The role of HBEs in post-crisis recovery and their importance for women is largely unknown. However, after the Indian Ocean tsunami in Aceh, women noted that having a multifunctional home meant they could earn an income by running a HBE alongside domestic and caring tasks during recovery (Sina et al., 2019).

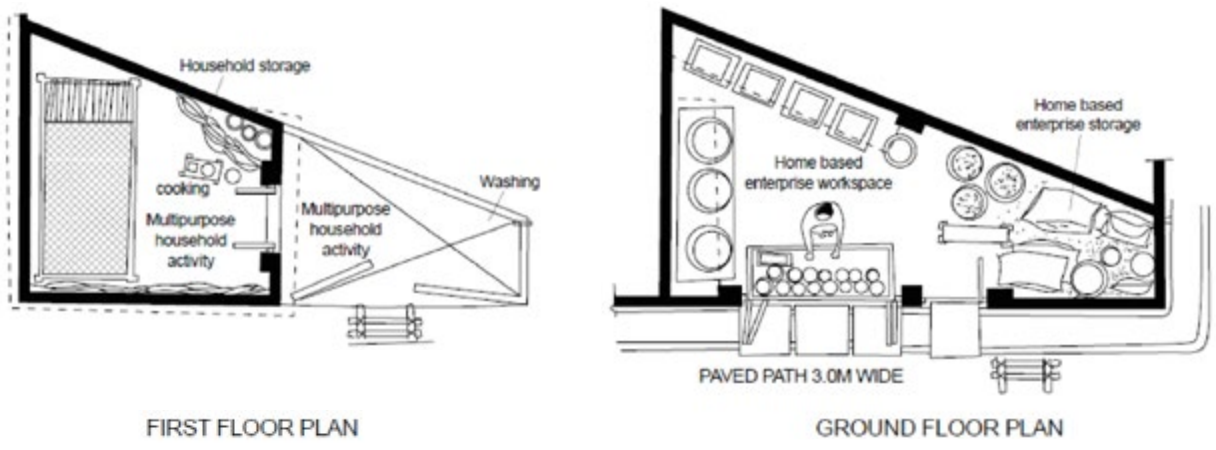
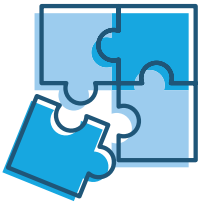


Figure 10.2: Drawing showing use of space in a home for domestic and livelihood activities. Edited after Kellett & Tipple (2000).



1.3 What evidence is missing?

There does not appear to have been substantial academic research on HBEs since the work of Tipple, Coulson & Kellett (1993-2005) and Gough (1996-2012). However, Tyas continues to publish research relating to HBEs and development in Indonesia (Tyas, 2016, 2015, 2009). There appears to be very little academic research on HBEs in humanitarian contexts.

The Sphere Handbook (Sphere Association, 2018) states that work opportunities should be located "close to the shelter" rather than within it. It briefly considers livelihoods as they relate to food security. "Adequate" shelter, defined as the household living space including items necessary to support daily activities, must be "located to provide access to livelihoods opportunities" (Sphere Association, 2018:244). Undoubtedly, the location of shelters can enable or limit the ability of households to access livelihood opportunities, such as farming, fishing, construction work, or trade, outside the home and immediate plot. However, the relationship between shelter and HBE recovery are largely overlooked. There is almost no acknowledgement of HBEs in *The State of Humanitarian Shelter and Settlements* (Global Shelter Cluster, 2018a) or in the *Shelter Projects* series (2008-2017). There are examples of post-disaster shelter reconstruction assisting livelihood recovery (Joakim & Wismer, 2015). Meanwhile, the economic impacts of shelter programming on household livelihoods has been identified by humanitarian practitioners as an important future research topic (Opdyke et al., 2021).

Existing research has investigated factors, including livelihoods, that influence shelter self-recovery in different settings (for example, Twigg et al., 2017). However, understanding how shelter recovery supports HBE recovery, and vice versa, has not yet been the focus of research.

1.4. What initiatives are underway?

Academic-practitioner-community networks working with HBEs, such as Women in Informal Employment: Globalizing and Organizing (WIEGO), typically exist in development settings, with little focus on post-crisis contexts. Projects focussed on HBEs as preparedness activities appear to have limited shelter components. For example, in Colombia the Gestiono el Riesgo, Fortalezco mi Negocio ("I manage the risk, I strengthen my business") livelihoods and disaster risk reduction project includes HBEs. But it does that without mentioning shelter (Fenalco Antioquia, 2020). In Honduras, GOAL supported livelihood development activities in the informal sector, self-employment, and micro or small businesses exposed to shocks, but again without a shelter aspect (Goal Global, 2020).

Both the process of shelter self-recovery and the wider impacts of shelter programming are ongoing research areas for shelter and settlements practice and academia. An ongoing self-recovery project, "Self-recovery from Humanitarian Crisis," is led by Oxford Brookes University with international non-governmental partners. It looks broadly at the wider impacts of shelter on protection, health, and livelihoods. It acknowledges that HBEs are one of several important factors affecting household livelihoods.

Lack of clear evidence in shelter and settlements programming was highlighted in an evidence synthesis (Maynard et al., 2017). This theme was reiterated in a report on wider impacts of shelter and settlements assistance, with impact on livelihoods rated "poor" (InterAction, 2020). While HBEs are not mentioned specifically, they can play a key role in enabling households to improve their homes. Therefore, HBEs can be viewed as an indirect method of supporting recovery, a theme which Opdyke et al. (2021) identified as one of the highest priorities for research.

1.5. What questions need to be answered?

The primary research question is:

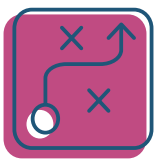
> ***What is the relationship between shelter and HBE recovery after humanitarian crises?***

This is supported by four subquestions:

1. ***What are the characteristics such as size, type, and usage of HBEs before, during, and after crises?***
2. ***How do people prioritise, and do they differentiate between shelter and HBE recovery?***
3. ***What is the importance of HBEs to women and/or vulnerable groups?***
4. ***How can humanitarian shelter and settlements agencies contribute to HBE recovery?***

Investigating these questions will highlight the importance of the home as a workplace, especially for people unable to work outside the home. It will also improve understanding of the relationship between shelter and HBE recovery. Improved knowledge could enable implementing agencies to increase their support for the recovery of both shelter and home-based livelihoods.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

This research should take an exploratory approach using mixed methods to investigate the research questions. Mixed methods combine qualitative and quantitative methods, which supports triangulation, reduces bias, and can develop a stronger understanding of the problem by overcoming the limitations of each method (Creswell, 2014; IFRC, 2011).

A **scoping review** will consider the current evidence base on shelter and HBEs through investigating grey literature and academic sources. Alongside shelter, the review should include publications relating to socioeconomics. Searches should be conducted in multiple languages with the search parameters recorded, following Arksey & O'Malley's methodological framework for scoping reviews (2005).

Field research should underpin the research methodology. The research team should include shelter and livelihoods practitioners and academic researchers. Funding, timescales, representativeness, and research context will inform the scale of research.

Household surveys can provide quantitative data such as shelter typology and demographics. They can also provide socioeconomic information about HBEs, including their economic importance for households and the types of HBEs (such as shop, café). The research should investigate if gender or other vulnerable groups are linked to variables relating to shelter typologies and socioeconomic factors.

Flexible data collection techniques allow respondents to contribute their own narratives around the relationships between shelter and HBEs. These include semi-structured interviews, focus group discussions, observational drawing, and workshops using participatory rapid appraisal. The focus group findings should be disaggregated to facilitate open conversation about the role of HBEs in the community and to understand the perspective of different groups about relationships between shelter and HBE recovery. Observational drawing of the home can include information such as layout and how space is used at different times of the day (see Kellett & Tipple, 2000). It can also examine how it has been adapted or extended over time. Workshops can engage households in the research through activities such as participatory drawing of their homes as they observe them.

Qualitative data, collected through recordings, photographs, drawings, notes, and observation files, should be analysed for recurrent themes, as well as stories and evidence that explains or explores aspects of quantitative data. Qualitative analysis and observational data should be analysed using grounded theory (Strauss & Corbin, 1998). Since there is currently little known about HBEs post-crisis, a grounded theory approach will allow researchers to construct theory from the data once it has been systematically acquired and analysed (Chun Tie et al., 2019). Conversations, topics, and discussions can be studied with NVIVo software through content analysis, coding, and categorisation. The framework for analysing data will evolve during research and should be documented. The analysis should identify unique themes, particularly those relating to specific groups. This will avoid over-generalising data.

2.2. Expected outcomes

The research aims to generate outputs relevant to humanitarian policymakers, practitioners, and researchers. They should include:

- A peer-reviewed article and a working paper on the relationship between shelter and HBE recovery.
- An associated briefing note on key lessons for policy and practice, in English and Spanish.
- A training webinar on the mutual benefits of HBEs to raise awareness, particularly for field-based shelter practitioners.

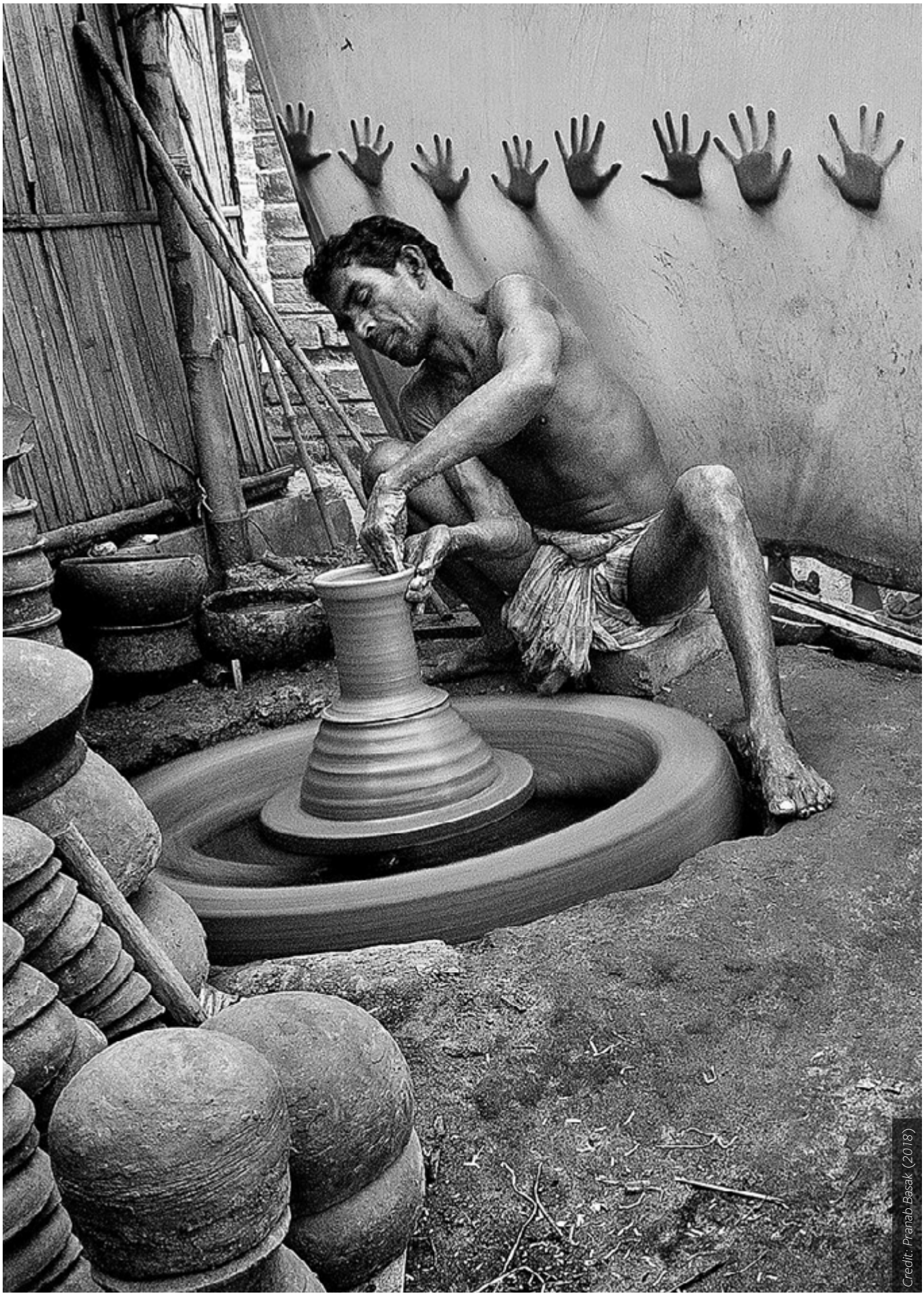
Dissemination through different media, such as a project website, shelter forums, and a dedicated meeting on livelihoods. The research should lead to new research collaborations and improved links with livelihoods practitioners.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

To be relevant to the future of post-crisis recovery of shelter and settlements, the research should focus on urban locations, in countries at risk of repeat crises related to natural hazards and/or those with ongoing complex crises. As Burayidi et al. (2019:3) state, “Urban areas are specially affected by disasters,” due to an increasing concentration of people on vulnerable land prone to disasters, among other reasons.



Credit: Pranab Basak (2018)

For example, the Latin American and Caribbean region (LAC) is the most urbanised in the world (almost 80% in 2012). The growth of medium-size cities and metropolitan areas around the world has created environmental, social, and economic challenges, as well as challenged institutional capacities (UNEP, 2008). Suggested research in locations affected by repeated disasters or ongoing displacements, such as in LAC could broaden evidence of shelter self-recovery and complement work on HBEs in Colombia by Gough (1996) and Gough & Kellett (2001).

3.2 Potential partners

The research requires a partnership between academics and practitioners, and between global and local participants. NGOs will support academic access to research contexts, building on existing NGO programming and established trust within communities. Academic partners will provide expertise on research methodologies, architecture, and planning.

Local academic institutions with existing humanitarian and disaster research capacities can contribute to the research, supporting fieldwork and collaborating on the scoping review.

The research should use staff from CARE, or another NGO, alongside academics based in the U.K. and LAC. Practitioner NGOs support access to research contexts, building on existing NGO programming and ensuring trust is already established within communities. Academic partners, such as the Universidad Diego Portales (School of Architecture) and Universidad Católica de Chile (Center for Sustainable Development) could provide expertise on research methodologies, architecture, and planning. Other potential academic partners include Pontificia Universidad Católica del Perú, Pontificia Universidad Católica del Ecuador, and Universidad de los Andes (Colombia).

CARE International delivers humanitarian assistance and works on long-term development projects in 100 countries through country offices and local partners. The global shelter team comprises staff that provide technical support to country offices and researchers working on shelter self-recovery.

CHAPTER 11

Exploring the Role of Shelter and Livelihoods Recovery

Credit: Aaron Opdyke (2013)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Livelihoods are a means to provide for basic needs. Chambers & Conway (1992) define livelihoods as the capabilities, assets, and activities required to earn a living. We recognise the potential for livelihoods to not only produce income to satisfy basic needs, but also to fulfil intrapersonal needs such as increased agency and dignity. Since livelihoods are often a foundation for the formation of settlements, they are inextricably linked to the social and economic use of dwellings (Flores & Meaney, 2015). It is therefore important to understand two key linkages; the contribution of shelter to more resilient livelihoods, and how stronger livelihoods can support adequate shelter. Better understanding of these linkages is critical for those affected by crises to recover their livelihoods, and for humanitarian organisations to support recovery with more holistic and scalable shelter and settlement assistance. Formal humanitarian shelter assistance rarely reaches more than 30% of households in the first year after a disaster (Morel, 2018; Parrack et al., 2014). Therefore, integrated assistance has the potential to not only extend the reach of shelter outputs but also build resilient communities.

Livelihoods are a core pillar of settlements for those affected by crises. But to date, livelihoods have yet to be fully operationalised and incorporated in the shelter sector of humanitarian programming. The connection between shelter and livelihoods is also important to inform emerging approaches and modalities with economic inputs, such as cash-based and market-based interventions. Humanitarian practice has increasingly emphasised the settlement in which shelter is embedded, which is frequently shaped by local economies. The nature of humanitarian response is also increasingly urban. This signals a shift from support for rural households that have often relied on a narrow breadth of livelihoods, to urban dwellers who take on greater diversity in entrepreneurship and employment. The humanitarian system has also begun to acknowledge and consider the global nature of livelihood networks that support affected populations, such as the role of remittances, which are part of a changing landscape. Cash-based aid interventions are another type of significant livelihood support. They are often in the form of household grants for restarting small businesses or direct financial support to market actors to improve supply chain reliability.

This research seeks to generate evidence on the impact of the correlation between shelter and livelihoods. It will highlight emerging trends and challenges and pose key questions for future research on how livelihood considerations can be incorporated into humanitarian shelter and settlements programming. Practical guidance has been sparse on steps that humanitarian organisations can take to support more integrated assistance. A strong evidence base will better inform broader humanitarian and development discourse on the role of shelter and livelihoods in more sustainable recovery from crises.

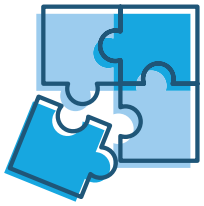
While the humanitarian sector has long acknowledged the anecdotal links between shelter and livelihoods, defining and quantifying these links has been elusive. In a survey of humanitarian shelter and settlement practitioners (Opdyke et al., 2021), the link between shelter and livelihoods was among the top 10 most important research areas identified. These links also appear as a recurring theme in the *State of Humanitarian Shelter and Settlements* report (Global Shelter Cluster, 2018d), which identified important knowledge gaps in the sector. Furthermore, in a recent review of shelter impacts, evidence on the connection between shelter and livelihoods was found to be sparse (InterAction, 2020). These signs point not only to gaps in evidence, but also growing demand to examine the relationship between shelter and livelihoods.

1.2 What is known already?

Livelihoods are often a motivating factor in the choice of settlement locations. Wigle (2008) describes these locations as a type of productivity asset and shelter as a hub from which work can be accessed. In the Syrian conflict, existence of functioning markets was found be one of the strongest predictors of household welfare, including the quality of housing (Howe et al., 2018). The location of livelihood opportunity, in conjunction with time and financial restrictions on travel, greatly impact the possible locations that are appropriate for settlement. Displaced populations face additional barriers to access livelihoods in crises. This is especially so for women, who maintain household duties and often lack financial autonomy. These constraints are often implicit and lack codification in humanitarian practice, yet they play a critical role in determining the success of interventions. Lessons from humanitarian programming have continued to show gaps in understanding the spatial connection between shelter and livelihoods (Opdyke et al., 2017). Shelter support is not only contingent on a household, but also the context of the surrounding settlement.

Livelihoods based on natural resources tie workers to resource-abundant lands and waters, while place attachment based on ecological, cultural, and social bonds creates a reluctance to migrate to less hazard-prone areas (Swapan & Sadeque, 2021). For instance, experience has shown that even when fisherfolks' coastal dwellings are repeatedly damaged or destroyed during storms, they continue to return to the same area of ecological connection to rebuild and continue their livelihoods (Birkmann et al., 2010). However, the way livelihoods should be supported is not always unanimously agreed by those with the power to direct humanitarian assistance. In the Philippines after Typhoon Haiyan in 2013, local officials argued for livelihoods as the main immediate focus of recovery efforts. In contrast, national officials felt that livelihoods could be developed later in recovery timelines (Palagi & Javernick-Will, 2019). This and other examples highlight a gap in our understanding of when and where livelihood support is important to complement shelter assistance and accelerate recovery.

The growing urbanisation of disasters and conflict is also changing the types of livelihood affected by crises. Recognition and engagement with diaspora groups is further broadening the diversity of livelihoods engaged by the humanitarian system. With the practice of remittances, both domestically and across international borders, household income is diversified, stabilised, and maximised. For example, Sikder et al. (2017) found that when households had alternative sources of income, families chose to use remittances, in particular, to make home renovations or investments in a new home. The humanitarian sector has only recently begun to recognise the potential of this type of income in household shelter recovery. This is but one example of a need to understand how livelihood diversity, in particular through evolving work patterns such as digital economies and urban mobility, can support shelter recovery.



1.3 What evidence is missing?

As much as livelihood potential is an important influence on the decision of location, so too does location of settlements direct possibilities for future livelihoods. The land available for the urban poor is often characterised by inaccessibility, industrial pollution, environmental hazards, or tenure insecurity (Ward, 1998), all of which negatively impact sustainable livelihoods. The relationship between poverty and inequitable land settlements is well known (Schleicher et al., 2018; Satterthwaite, 2003). However, further research is needed to measure more precisely how these inequities and their consequences, such as health decline, impact the livelihoods of the urban poor. Access to land and shelter is not enough to support

low-income families—they must also be given access to space in settlements to ensure a more stable and secure livelihood, and access to markets. Urban periphery workers are increasingly susceptible to fluctuations in macro-economic conditions (Wigle, 2008). However, although local informal economies are subject to more volatile conditions, they have also been found to facilitate higher levels of social solidarity and reciprocity, which increase social capital of communities (Kim et al., 2020). The relationship between economic vulnerabilities and social solidarity has been studied in different contexts, but knowledge gaps remain in how humanitarian shelter support enables livelihood opportunities.

The location and safety of housing not only increase ability to participate in livelihoods, but livelihoods are also developed through the process of planning and building housing. Participation in construction markets works to tackle issues of both secure housing and income generation (Smith & Brown, 2019). However, there are often gaps in connecting humanitarian assistance to longer-term recovery (Lie, 2020). There is thus a need to expand on existing evidence by extending the time scales through which these housing markets are understood. Existing financial instruments help reduce the burden on affected households before, during, and after crisis. However, the ability to scale assistance through leveraging informal and community-based cash-flow strategies is yet to be achieved.

1.4. What questions need to be answered?

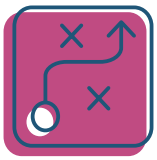
The primary research question is:

> ***How can those affected by crisis be better supported in their shelter and livelihood recovery?***

This is supported by four subquestions:

1. ***How does the diversity and security of livelihoods before, during, and after a crisis affect shelter recovery?***
2. ***How does the provision and type of shelter before, during, and after a crisis affect the diversity and security of livelihoods?***
3. ***How do existing inequalities, such as gender, hinder shelter and livelihood recovery?***
4. ***What temporal and geographic changes occur in source of income and type of livelihoods during recovery, and how do these affect shelter recovery?***
5. ***What are the livelihood obstacles that households encounter when building back post-crisis?***
6. ***What tools do humanitarian actors currently employ to understand the interaction of shelter and livelihoods?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

This research should use a longitudinal mixed-methods approach. It should conceptualise households as embedded units of study in broader settlements and economies, thus bridging the household and settlement scales. We recommend two linked phases to generate evidence to improve how those affected by crisis can be better supported through more effective and inclusive shelter and livelihood strategies. The first phase should include a field study. We suggest two sites in the Philippines, drawing on financial diaries, interviews, and focus groups with households, local and national governments, and NGOs. A second phase should draw on interviews and focus groups with humanitarian practitioners to understand how they view livelihood and shelter linkages, the tools they apply at this interface, and their views on gaps in evidence to action.

Phase 1: Case studies of livelihood and shelter linkages

Researchers should select target municipalities or cities based on distribution of socioeconomic backgrounds and household experiences with different hazards.

We recommend a multi-hazard approach as it will generate more nuanced insights that unpack differing approaches to connect shelter and livelihoods. We suggest a focus on Typhoon Ulysses (2020) in Luzon and the Marawi conflict (2017) in Mindanao.

We recommend using financial diaries as a way to capture household daily cash flows and ways they manage their financial resources. The tool was initially deployed in the context of financial inclusion to understand what types of services poor households value and trust when it comes to financial decisions (Collins et al., 2009; Robinson, 2006; Morduch & Rutherford, 2003). Common financial services available to households in the Philippines include microfinance, microinsurance, and remittances as well as informal services such as loans from within social networks. Data from these diaries will capture information on income and expenditures, intrahousehold transfers, and financial services on a two-weekly basis over a twelve-month period.

We expect financial diaries to unpack formal or informal financial coping mechanisms that families rely on. They will also show the behavioural, cultural, and political factors that influence families as they reconstruct their home post-crisis, including the obstacles that households encounter when building back post-disaster. In this manner, researchers can capture the inflow and outflow of the resources, with respect to the reconstruction and rebuilding practices among disaster-affected households (Turnbull et al., 2015). Each transaction in financial diaries has the potential to reveal insights. Potential information includes the person involved in transactions, the decisions involved, and how external institutions influence them.

This data will generate a settlement-scale view of livelihoods in the selected case sites.

We suggest surveying 400 households in each of the two selected sites as a baseline, from which a final total of 300 households can be selected that have variance across anticipated financial, technical, behavioural, and political factors. Researchers should aim to recruit a balance of households that received initial post-disaster or post-conflict assistance and those that did not. Local field research assistants should collect the household diaries every two weeks, as households progress through early recovery—a critical, yet often understudied

phase. We recommend holding a dedicated workshop at the onset of data collection to train participating households on how to properly record their personal data. By capturing baseline and end-line data, researchers can assess changes over the data collection period. The baseline survey should provide information on the household sample, including their socioeconomic demographics, the nature and details of disasters experienced, description of rebuilding and reconstruction work undertaken in the past, their current physical assets, and other relevant background information. A simplified safe construction checklist tool should be created prior to the baseline, adapted from Shelter Cluster guides, Habitat for Humanity's previous technical tools, and Opdyke et al. (2018). This can be used to identify differences in household construction patterns in recovery.

In addition to the transaction records, key informant interviews and focus group discussions should be conducted at the start, middle, and end of the twelve-month data collection to contextualise themes. Researchers should use purposeful sampling techniques to target groups across differing levels of housing construction and types of livelihoods. It is expected that questions will use financial, technical, behavioural, and political themes to guide these conversations. Questions will further unpack the existing policy environment, knowledge, attitudes and practices, and choices as governed by social and cultural norms. A suggested ten interviews and three focus groups should be completed at the proposed points in time, in each of the selected case sites. These should engage with humanitarian agencies, local government officials, and selected households. Both interviews and focus groups should be translated and transcribed for qualitative analysis. Qualitative coding software should be used as a tool to code interviews, focus groups, and observational field notes.

Phase 2: Surveying shelter and livelihood tools

While much has been documented about shelter and livelihoods, there is relatively little synthesis of how humanitarians engage across these fields and the toolsets they employ to do so. During the second phase, researchers should conduct interviews and a focus group with a diverse panel of practitioners, focusing on three main groups:

- Global-level shelter specialists.
- Global-level livelihood specialists.
- Field-level staff implementing shelter and/or livelihood programmes.

We suggest ten interviews within each of these groups. We also suggest holding a focus group session at the Global Shelter Cluster Annual Meeting—one of the largest gatherings of shelter practitioners—which will provide an opportunity to engage diverse expert perspectives.

The interviews and focus group with practitioners should be semi-structured and open ended to allow individuals to best share their experience and opinions regarding the intersection of shelter and livelihoods. Questions should seek to unpack challenges and opportunities in connecting shelter and livelihoods, as well as a focus on tools employed. Researchers should compile, review, and code a list of resources during this phase, seeking to identify practices used to link shelter and livelihoods in humanitarian programming. Researchers should transcribe interviews and the focus group discussions to identify themes that will guide subsequent fieldwork.

Credit: Hana Clemens (2014)

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

The Philippines consistently ranks as the most risk-prone country in Asia. Annual average disaster losses equate to 69% of the country's social expenditure (Alcayna et al., 2016). Inadequate and unsafe housing continues to contribute to these recurring losses. The southern Philippines has also seen recent armed conflict, providing a national context to cross-examine lessons across case sites.

3.2 Potential partners

The primary research partners, namely the University of Sydney, the University of the Philippines Los Baños, Minandao State University, and Habitat for Humanity International, could bring expertise and research-practice collaboration. Humanitarian donors could provide further guidance for research.

Researchers should work closely with local government units such as their municipal or city disaster risk reduction and management offices, which are the frontline in local response and recovery. At a national level, the Department of Human Settlements and Urban Development, the Department of Social Welfare and Development and the Department of Trade and Industry lead disaster management, housing, social services, and trade and livelihood recovery, and should be engaged to shape policy dimensions of the research. These agencies will be particularly important given that the Philippines has adopted the humanitarian cluster approach among its national departments (Abaya et al., 2020), providing a well suited case to contextualise findings in light of recent localisation efforts.

CHAPTER 12

Defining a Good Home: Touching on the Intangible

Credit: Bill Flinn, Indonesia (2009)

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CARE International UK

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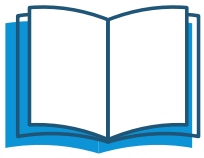
1. BACKGROUND AND RATIONALE

1.1. What are the issues?

What is the significance of "home" and "homemaking" for households recovering from conflict or disaster? The proposed research explores this question, with a view to advise humanitarian agencies on how best to support a family's recovery from crisis. There is a growing understanding among humanitarian shelter and settlements practitioners that homemakers may not necessarily perceive the conventional concerns of structural safety, space standards, and protection as priorities. To expand this field of knowledge, this research explores home and homemaking as a lens to situate shelter self-recovery in a wider debate on enabling long-term recovery. This research will explore the intrinsic value of home, homemaking and all it entails, and how the intangible aspects of a home are a core component of recovery. Ultimately, the research will enhance the narrative of shelter being "more than just a roof" (for example, InterAction, 2020) with an improved understanding of the intangible aspects of home to encourage appropriate shelter assistance that reflects the priorities of households recovering from crises.

"Home" is a nuanced concept that includes political, cultural, and social dimensions (Brun & Lund, 2008; Blunt and Dowling, 2006; Easthope, 2004). Home is "a particularly significant kind of place with which, and within which, we experience strong social, psychological and emotive attachments" (Easthope, 2004:135). Home is also political; it is "a site in which power relations of the wider society, such as relations of gender, ethnicity, class, and generation are played out" (Brun & Fábos, 2015:6). A household may make a shelter into a home with "homemaking" practices, such as painting and decorating exterior walls, arranging planting and a well-swept front-yard: actions that produce social meanings. Homemaking takes place in the day-to-day use of the house: cooking and cleaning, sitting on the stoop, and chatting on the veranda. Indeed, many of these factors may outweigh, in the mind of the family, the need for a house that will safely resist the next storm, flood, or earthquake (Flinn & Schofield, in press).

Understanding recovery requires recognition of the importance of, and indeed the necessity of, a home. A home is unlikely to be effectively established without some degree of tangible recovery, but a home is not solely a shelter for saving people's "biological" lives by protecting them from the elements. It is also critical to the meaningful "biographical" lives of the shelter's occupants, their histories, and aspirations (Brun, 2016 citing Fassin, 2012). In this context, an understanding of the importance of homemaking to recovery must include the family's own perception of what recovery means. This may be expressed explicitly or observed in people's independent choices and priorities. For instance, in an interview with a Filipina mother, after the devastation of Typhoon Haiyan in 2013, she said, "Recovery is being able to sleep well at night."[1] Homemaking becomes a proxy indicator for recovery.



1.2 What is known already?

The importance and inevitability of autonomy in the building of houses is well known (Turner, 1976; Fathy, 1973). It is by recognising people's own involvement in recovery in the context of local traditions and economies that "shelters become homes":

> *Because it is a living being, the house has intricate inter-relationships with everything in and around it, thus making the housing ecosystem the basis for planning, rather than*

[1] *Fieldwork by author and others in Leyte, Philippines, 2017*

> *the shell of the house alone. As a living being, the house becomes a home in a way that is subtle, but with deep implications. This is important, because families need homes, not mere shelters.* (Sharma, 2018:23)

Along the same lines, Ian Davis recognises that the first principle of emergency shelter is to acknowledge that the "primary resource ... is the grass-roots motivation of survivors" (Davis, 2015:42). Indeed, 90% of all dwellings are designed without professional architects or engineers (CRAterre, 2020). The work of Paul Oliver on vernacular buildings shows that home-building is very particular, even to individual family level. While there may be similarities in local housing types, it is the case that each context will evolve its own set of priorities and values. Oliver sounded a note of warning to humanitarian practitioners:

> *One can imagine a design for a mass-produced small dwelling that meets this brief ... Conceivably the right design could satisfy most physical demands, but whether it could meet most cultural requirements is altogether another matter. Cultures do not lend themselves to the design approach; one cannot write a brief for a shelter type that meets the needs of all cultures; it is doubtful if one could effectively define the shelter needs of even one social system ... Permanent shelter can potentially shape a community in a way that is destructive to its integrity as a whole* ***and inimical to the expectations of a family as a unit.*** (Oliver, 1981:41)

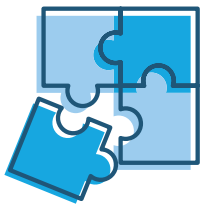
In the aftermath of the Indian Ocean tsunami, Brun & Lund (2008) showed that the slogan "build back better" (Clinton, 2006) may have the potential to consider different scales, from that of the individual household, via the local community to national development, if houses are understood as political, cultural, social, and economic constructs and if humanitarian practitioners can be cognisant of the wider process of homemaking. The elements, meanings, and implications of the "build back better" agenda have been much discussed over the intervening period (for example, Maly, 2018; Kennedy et al., 2008). The material, tangible aspects of homemaking in reconstruction processes may then be linked to the more symbolic, intangible aspects, including the sense of home and belonging (Brun & Lund 2008). These linkages between reconstruction, conceptions of homemaking, and processes of recovery are dynamic and contextual; however, humanitarian practitioners frequently ignore these intangible dimensions of recovery (Crawford et al., 2017).

Place attachment, described as the emotional bond between people and place (Brun & Fábos, 2015), is one of the intangible aspects of recovery studied by academic researchers. However, it has received limited attention by humanitarian practitioners. Loss of place due to a crisis can lead people to feel that they have forfeited something real and significant (Scannell & Gifford, 2017). *The Battle for Home* by Marwa al-Sabouni (2016) recounts her lived experience as an architect in the Syrian Civil War and the connection between the built environment and community. She notes:

> *Our homes don't just contain our life earnings, they contain our memories and dreams; they stand for what we are. To destroy one's home should be taken as an equal crime to destroying one's soul.* (al-Sabouni, 2016:57)

Place attachment and the link with home or homemaking has been identified as important for those in protracted displacement and their host communities (Brun & Fábos, 2015). The dwelling is identified as valuable for refugees or internally displaced people in protracted crises as being a place in which they can exert some control. Within the home they can exercise agency, and the wider neighbourhood is a place for shared appreciation of the built environment by both displaced and host communities (Adams et al., 2018).

Recovery, place attachment, and concepts of home may also then be considered in the context of humanitarian agencies' emphasis on the short term, which is often reflected in their support for emergency shelter. Within an emergency framework, there is often limited interest in the past (local traditions, history, and people's biographies) or in thinking of the shelter (in this case) as a starting point for building a future (Brun, 2016). The emergency shelter is primarily meant as a short-term measure to save lives in the now. However, as Oliver (1981), Davis (2015), and others allude, this emergency perspective limits the possibilities for taking the shelter, or home, as the starting point for building a better future and for understanding the potential of affected people to take part in building that future. Yet, humanitarian projects are regularly limited to activities that fall within the "temporary" emergency and early recovery phase, restricting activities that have the potential to support more long-term development, such as housing. External factors, such as short-term funding and political priorities, further limit humanitarian actors from planning into the long-term (Levine et al., 2019). This illustrates the lack of attention to and understanding of the affected populations' perception of home (partly based in the past and in place attachment) and their plans and agency towards their futures. The affected population's ongoing navigation of the uncertain situations (Vigh, 2009) they find themselves in can be sidelined. Most people self-recover, somehow, using their own agency and their own social and physical resources.



1.3 What evidence is missing?

The sources cited above all recognise, implicitly or explicitly, the importance of a nuanced understanding of "home." However, they are largely silent on what these intangible characteristics are, what importance the homemaker and community attribute to them, and how they can be addressed while assisting households to recover from crises. With some exceptions (see Verderber, 2008 on the response to Hurricane Katrina), an analysis of the impact of ignoring these on a the holistic experience of recovery that Brun describes as "biographical" (Brun, 2016 citing Fassin, 2012), and on the mental and physical health of the family and community, is also rare. The shelter response strategies of humanitarian agencies can fail to see shelter as an integrated part of a more holistic recovery process.

There is little research into the less tangible attributes of home that are vital to an understanding of recovery from humanitarian crises. *The Sphere Handbook* (Sphere Association, 2018:240) mentions that "shelter is necessary to promote health, support family and community life, and provide dignity, security and access to livelihoods." But the role of a home in supporting sociocultural requirements is only briefly referenced, noted as the need to provide adequate living space to increase options for socialising (Sphere Association, 2018:256). Shelter practitioners have recognised that the process of sheltering is at least as important as the "product" of a house, and recently there has been a tendency to discuss "homes and communities" as embodying rather more of the soft elements than the more matter-of-fact "shelter and settlements" (CRS, 2020; NRC, 2019). Nevertheless, and for understandable reasons in emergency settings, there remains an emphasis on physical rather than sociocultural aspects of recovery.

Humanitarian agencies accept that understanding people's perception of risk and priorities is critical, and that people have the right to hold these views and to make their own choices (Twigg et al., 2017). The choices people make are central to their own recovery pathway, both psychologically and practically. Participatory and community-led responses reinforce the importance of choice in creating sustainable and relevant reconstruction programmes, but the common yet narrow focus on "build back better" ignores other important aspects of building a home (Flinn, 2020; Schilderman, 2010). There is certainly no way of ranking the relative

importance families will give to safety, security, pride, dignity, appearance, and a sense of belonging, but failure to integrate these intangible aspects into shelter responses may lead to inadequate interventions. That the shelter response strategies of humanitarian agencies fail to express the importance of home in the recovery process demonstrates the need for evidence and understanding (Brun & Lund, 2008).

1.4. What initiatives are underway?

This research proposal is part of a collective effort within the sector to align several global humanitarian and development concerns. These include the drive for "localisation" and participation in support of a more holistic approach that supports people-led and community-led processes. This contrasts with the more conventional humanitarian approaches led by external actors, which have been criticised for being transactional, paternalistic, inflexible, and inefficient (Klein, 2007). There is also renewed interest in the links between humanitarian relief and long-term development, with the mainstreaming of the Grand Bargain commitment to "enhance engagement between humanitarian and development actors" (IASC, 2016a), and with this an acknowledgement that the recovery of shelter and settlements has long-term implications.

Self-recovery approaches are recognised as an appropriate and effective modality for shelter responses, with endorsement by the Global Shelter Cluster (Global Shelter Cluster, 2018a). A recent academic survey of practitioners and academics ranked supporting self-recovery as the top research priority (Opdyke et al., 2021). That self-recovery projects have recognition, suggests that the investment in research is timely and will have an impact on practice. Supporting self-recovery is an approach that respects people's right to choose, prioritise, and to exercise their own agency in determining their recovery pathways. It also recognises that the majority affected by crises will self-recover, largely using their own resources (Schofield & Flinn, 2018; Parrack et al., 2014). Exploring the ways in which people navigate their futures in uncertainty (Vigh, 2009), their homemaking practices, the ways they exercise their own agency and also interact with humanitarian responses is part of understanding this self-recovery process. Supporting self-recovery should be an ideal vehicle for respecting and promoting people's desire to build a home, to develop those intangible attributes of homemaking that contribute to positive physical and psychological well-being, so critical to recovery.

Interdisciplinary academic-practitioner research into people's perception of shelter recovery, with particular reference to their self-recovery[2], only commenced in 2017. Initially fieldwork was conducted in rural settings in Nepal and Philippines, then expanded to urban locations (Twigg, et al., 2017). Research on shelter self-recovery in different contexts continues[3], including consideration of the wider impacts of shelter assistance. This research will be a valuable addition to the shelter self-recovery programming guidance currently under development.

[2] *GCRF/NERC NE/P016200/1 and British Academy Cities and Infrastructure Programme CI 170172. Partners are/were ODI, CARE International UK, Oxford Brookes University, UCL, British Geological Survey, Loughborough University, Catholic Relief Services, Habitat for Humanity*

[3] *Global Challenges Research Fund (GCRF) Global Research Translations Award (EP/T015160/1): "Self-recovery from Humanitarian Crisis" www.self-recovery.org (2019-2021)*

1.5. What questions need to be answered?

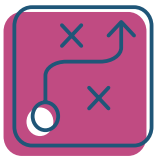
The primary research question is:

> ***What is the importance of home, and homemaking, in post-crisis recovery?***

This is supported by four subquestions:

1. ***What are the tangible and intangible aspects of homemaking that people adopt post-crisis?***
2. ***To what extent are these aspects of homemaking contributory to family and community recovery?***
3. ***What are the factors that promote or hinder homemaking as an integral part of recovery?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

Research that aims to understand the many perceptions of home requires a methodology that directly involves communities as prime actors in, and co-producers of, the study. The lived reality of crisis-affected populations should be the main source of data. A dominantly qualitative methodology will enable the study of people's lives in real world conditions and, importantly, the opportunity to represent the perspectives of the people in the study. The research should strive to include all sectors of the community, and in particular those who tend to spend more time in the home. These may include older people and people living with disability, but also women, girls, and children. Researchers should ensure that the process is not extractive, and that the community is fully involved in the study's design and execution.

Literature review

This should consist of a review of current and past research, reports, and case studies from different contexts and locations to include conflict and disasters. The review should critically examine how reconstruction has been seen as an opportunity to improve the characteristics and quality of housing as perceived by the households and to enhance "recovery" through a better understanding of the more intangible aspects of "home." It should therefore include a review of literature into recovery, homemaking, and place attachment from the development sector, as well as ethnographic and sociological disciplines.

Primary data collection approach

The primary aim is to learn about the lived reality of recovery after crisis, both in the immediate aftermath and across the passage of time, and people's conceptions of home and recovery. Consequently, the data collection and analysis should take a constructivist, grounded theory approach. A key aspect of grounded theory is minimising predetermined ideas about the research problem and remaining open to different understandings of the data (Charmaz & Belgrave, 2019). While "grounded theorists collect data to develop theoretical analyses from the beginning of a project," the researcher is part of the world they are studying and therefore

grounded theories are inevitably shaped by the researchers' background and experience (Charmaz, 2006:2). The inevitable bias of the researchers should be closely examined through an open reflective process.

Semi-structured interviews and focus group discussions, workshops, timeline mapping, and storytelling

Uncovering people's stories provides a "site to examine the meanings people [...] ascribe to lived experience" (Eastmond, 2007:248). With a subject matter as context specific as homemaking and its importance in a recovery process, and one that will be highly variable from one family to the next, the research and interview questions will adapt over time. A grounded theory approach allows themes to emerge as the fieldwork deepens, with data collection and data analysis being concurrent; the latter informs the former in a reiterative process. While the research questions can provide a starting point, the research should avoid preconceptions about the answers, allowing unforeseen themes to emerge. The participants of interviews and discussion create meaning—there is not simply one reality to be discovered and people present different aspects of themselves in different contexts.

Correlation and comparative data should be collected through observation and quantitative methodologies.

Direct observation and surveys

These will determine how people invest in housing, what is a priority and how the house is used, providing insights into the cultural and economic importance of house and home. Transect walks and household surveys can explore indicators of homemaking. These might include the money and effort invested in different aspects of the home, the way homes are used for work and relaxation, and the emphasis on "non-essential" aspects such as decoration and appearance.

Interviews and workshops

Since there will be multiple perceptions of the societal and cultural significance of homemaking, interviews and workshops should be conducted with additional stakeholders. Researchers should include humanitarian practitioners, local NGO workers, and national and municipal government officials.

2.2. Expected outcomes

The research will generate outputs relevant to humanitarian shelter practitioners and academic researchers in the form of publications such as reports, case studies, and articles. Insights can also be captured through the creative use of infographics, timeline mapping, photography, and peoples' stories. These should explore the meaning of home and homemaking, for occupants and communities, in different contexts. They should always be practice-oriented so that future shelter and settlement programming can better respond to peoples' lived reality, directly incorporating homemaking as a fundamental factor of recovery. Recommendations will emerge from the findings to advocate for the appropriate inclusion of homemaking in post-crisis shelter response strategies.

In-country workshops should be conducted to disseminate and discuss the findings. These research findings should also be shared with communities. As the research will be conducted in multiple locations, regional and local roundtable events will be forums for peer testing the findings, seeking feedback and ensuring wide dissemination.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

This research will build on the work on self-recovery that continues to be an interdisciplinary endeavour involving several partners, including CARE International UK, Overseas Development Institute, Catholic Relief Services (CRS), Habitat for Humanity, CRAterre, and Oxford Brookes University.

Strong academic-practitioner links exist with the southern Africa region and South Pacific island nations. Both regions are exposed to multiple hazards and strong local partnerships are already in place. Within the regions a variety of community contexts should be sought to include both urban and rural, those exposed to diverse risks, and communities with both formal and informal land tenure.

CHAPTER 13

Promoting Self-Help Shelter Repair in Conflict Contexts

Credit: Kumar Judhajit Dey (2016)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

The shelter and settlement self-help activities of people affected by conflict have yet to be substantially investigated. This results in a weak evidence base for understanding what appropriate support to these households might look like. Equally, the limited understanding of building physics in conflict contexts restricts the technical guidance that can support building repair. This knowledge is important to those affected, as the majority receive no other assistance to their needs. Further, their efforts to help themselves remain invisible to those providing assistance, inhibiting an inclusive and coordinated response.

Beyond their survival, basic shelter is important to people affected by conflict in recovering sustainable livelihoods and participating in community and family life. Shelter also promotes health and psychosocial well-being, as communities attach meaning to the concept of belonging to the home (Webb et al., 2020; Barakat, 2003; Douglas, 1991). Housing repair therefore also contributes to peacebuilding processes (Seneviratne et al., 2013).

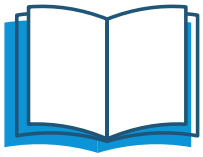
Rehabilitation in conflict contexts goes beyond the physical and incorporates social and cultural perspectives, by building a sense of cohesion between affected households and communities and identifying resilient self-help mechanisms (Barakat, 2003).

The majority of affected households receive little international or government support. For example, in Syria the *Syrian Humanitarian Needs Overview 2018* (2017) showed that of the 4.2 million people who need shelter assistance, 3.7 million could not make necessary repairs to their homes due to a lack of materials or professional assistance. Affected households often undertake self-help activities instead, where households repair their own shelter with assistance, ranging from specialist skills to the procurement of materials, from their wider families and community. A significant proportion of housing damage in conflict situations is non-structural, namely damage that leaves the structure of the housing intact. That implies that self-help rehabilitation by affected households may continue safely and economically, if adequately supported. Further consideration is, therefore, implied of the self-help of those affected by humanitarian crises resulting from conflict. Understanding these issues and why they are important to those affected by humanitarian crises may be aided by distinguishing between the two contexts of disasters and conflict. This chapter distinguishes between "self-recovery" (Parrack et. al., 2014) and "self-help" (UN-Habitat, 2008; Davis, 1978; U.N., 1976) by households. Self-dependence resulting from disasters is reflected in approaches such as building back better (UNISDR, 2017) and disaster risk reduction (UNISDR, 2015). However, these involve different drivers and challenges to those in conflicts (Twigg et al., 2017; Davis, 1978).

Shelter self-recovery is a more recent term referring to disaster contexts where households and communities use their own assets to repair or rebuild their houses using the local informal building sector (Parrack et. al., 2014:1). However, self-recovery may be less applicable in conflict contexts, due to the lack of a linear pathway to rehabilitation incorporating the reduction of risk to the hazard.

In conflict contexts, the process of rehabilitation undertaken by households and communities could broadly be considered as self-help, a concept first identified by Jacob Crane as "aided self-help" in 1945 (Harris, 1998, 1999). The concept was later developed by Turner (1972) to incorporate the importance of the process of housing, involving many social and psychological factors. This broader definition allows for a less linear process of rehabilitation, without any explicit need for reducing risk to hazards.

At the household level, basic shelter is important to those affected by conflict for their survival (Sphere Association, 2018), including the repair by the household. Fundamental gaps exist in evidence and tools to support repair activities in conflict contexts. As an example, there is no commonly agreed severity scale to categorise levels of housing damage during conflict. In contrast, tools such as the Modified Mercalli Scale categorise damage to shelter after disaster.



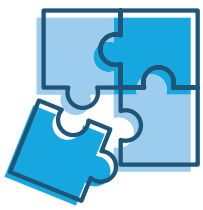
1.2 What is known already?

Literature points to the contribution the repair of shelter can make to reforming sustainable livelihoods, community and family life, and promoting health, including psychosocial well-being (Webb et al., 2020; Barakat, 2003). However, as a result of a lack of systematic collation of this evidence, currently few practical tools exist to inform such varied support from assisting stakeholders (Parrack, 2020).

Similarly, literature has explored the distinction between shelter and home (Webb et al., 2020). The difference lies less in the physicality of the house and more in the meanings that people and communities attach to them anthropologically (Bryant, 2014; Douglas, 1991). Hence, the opportunity exists to develop a better understanding of how appropriate support to shelter rehabilitation might enhance the wider lived experience for people affected by conflict.

The literature on self-recovery in disaster contexts (Schofield & Flinn, 2018; Twigg et al., 2017; Maynard et al., 2016; Parrack et al., 2014) implies lessons and good practices which may inform self-help in conflict contexts. These include understanding the limitations of self-recovery, such as that homeowners must have the time, skills, resources, and motivation for this process to be successful and that sometimes shelter is not the main priority of communities (Twigg et al., 2017). The Global Shelter Cluster has identified both conflict and self-recovery in its priority research areas (Parrack, 2020). The Cluster is also producing information, education, and communication materials to support affected populations with self-help (Dalgado, 2019). However, these are largely directed towards application in disaster contexts.

When structural damage is present, professional technical inputs and significant investment on a house-by-house basis are implied in undertaking safe repairs. However, data from conflict responses in Kosovo, the Occupied Palestinian Territories, Syria, and Ukraine (Shelter Cluster Ukraine, 2017; World Bank Group, 2017; UN-Habitat, 2014b; European Commission and International Management Group, 1999) suggests that an average of around one third of housing presents non-structural damage. This suggests that self-help repairs to non-structural damage may offer value for money with broad impacts, if practical support can be achieved safely and effectively.



1.3 What evidence is missing?

There is evidence missing, in humanitarian contexts, to better understand how shelter is more than just physical protection, often housing livestock, protecting assets, and providing opportunities for livelihood generation and cultural adequacy (InterAction 2020; Webb et al., 2020; Barakat, 2003). With few studies available currently at household level, there is an opportunity to consider community and family life, promote health and psychosocial well-being, gender, capacity, vulnerability, space, and place.

Evidence is limited of how capacities and resources vary across contexts and within populations or within households, based on gender, ethnicity, and power relations, and how these may change over the repair period (Babister, 2020; Greenberg & Zukerman, 2004). This is particularly important when considering female-headed households in conflict contexts, as they may face additional barriers to undertaking repairs. Barriers may result from lower literacy rates, limited access to public spaces, and care-taking burdens due to gender roles dictated by social norms (Greenberg & Zukerman, 2004; Bradshaw, 2001). More comprehensive evidence may enable the development of future support to promote the capacities of these groups and allow them to undertake active roles in the repair and rehabilitation process (Sliwinski, 2010). Valuable to this may be increasing recognition by the donor community of an approach to shelter and settlements interventions more inclusive of contributions by those affected, including in the emerging settlements approach (Global Shelter Cluster, 2020; Setchell, 2018) and the integration of livelihoods within USAID's scope (USAID, 2013).

Primary data and analysis are lacking on how buildings perform when impacted by ordnance and fire, as well as the performance of repair methods. Limited evidence is held by national militaries, and the engineering departments of universities (Department of Defense, 2008; Hudson & Darwin, 2005; Kashuba et al., 2002).

Those affected by conflict often have little support for initial self-help repair and rehabilitation activities such as:

- Estimating the severity and nature of damage.
- Safely entering damaged buildings.
- Assessing and mitigating the risk of structural failure, such as through stabilising damage to a building to prevent later collapse.
- Minimising degradation from exposure to the elements.

This evidence generation needs to be supported with a technical understanding of the process, drawing on knowledge within the military and urban search and rescue teams.

One such initial activity is estimating the **severity and nature of damage**. No agreed scale for categorising housing damage exists for conflict contexts. Governments and international agencies use their own scales, sometimes differing by response, with no evidence these are informed by quantified methodologies. Nor do they seem appropriate for use in multi-hazard contexts. Any scales must be clearly communicated to people affected by conflict, so they understand the support that is available and can, as needed, inform or challenge the damage categorisation of their homes. Evidence is needed on how affected people determine the viability of repairing their house and decide how to provide shelter for their household. Such evidence should include their sources of information and the quality of these sources, along with an explanation of how to integrate any support offered.

Understanding the **capacities, resources, and knowledge** of affected populations requires evidence of how they repair their homes, as well as their priorities in doing so. These priorities may differ from those of the humanitarian agencies, for example, in placing increased importance upon meeting cultural expectations, when compared with meeting minimum standards for safety and survival (Babister, 2020).

Lastly, there is an implied need for technical guidance on how to more **safely repair** non-structural damage to homes, where the household has no direct access to informed expertise, so that safe and effective repairs are undertaken and households are not placed at further risk during the construction process. Research in disaster contexts suggests that there is often a

lack of understanding of safer building techniques, despite safety usually being a priority for affected communities (IASC GSC Promoting Safer Building Working Group, 2020). In addition, the development of technical evidence bases on the impacts of ordnance and fire are implied as priorities. Some evidence is already held by governments and agencies engaged in direct implementation, in their project files.

1.4. What questions need to be answered?

The proposed research will develop evidence for self-help activities to be considered alongside direct implementation by assisting humanitarian agencies. It will enable integrated coordination and programming at community level that considers the efforts of affected people.

The primary research question is:

How can humanitarian shelter and settlements stakeholders support affected households in non-structural self-repair, during and after conflict?

This is supported by four subquestions:

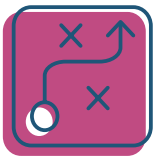
1. ***What are the initial activities that affected households engage in to repair their shelter, including in estimating the severity and nature of damage to their shelter?***
2. ***What are the priorities of the affected population, and what capacities, resources and knowledge are available to repair their shelter?***
3. ***What knowledge is missing from the understanding that affected populations have, and that is available to them, of how to more safely repair non-structural damage?***

The research proposed will contribute to the missing evidence base on shelter in conflict contexts, focusing on self-help rehabilitation through non-structural damage repair by the affected populations. The collected evidence will enable all involved parties to better understand self-help rehabilitation and be better supported practically by enabling the creation of policies and practical technical tools.

A focus on self-help rehabilitation will recognise and engage affected people, the majority of whom are currently unsupported by humanitarian aid organisations, governments, or other external actors. Involving them in developing the evidence and tools they need to progress their priorities will reaffirm a sense of ownership, stability, and independence through household shelter repair.

Taking into account the efforts of those affected will enable integrated coordination and programming at community level.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

Researchers should use qualitative methodologies to understand affected populations' experiences and capacities, and to assess how diverse individuals and households access resources. Focus groups and key informant interviews can assess internal dynamics within households (Houston et al., 2010), and participant observation enables consideration of people's lives and social relations in their totality (Given, 2008). Researchers should engage communities through participatory processes. Potential examples include:

- Assessment and repair workshops, where stakeholders and locals can exchange experiences and knowledge.
- Mapping activities where participants can map the structural damage to homes in their communities.
- Focus group discussions at household and community levels (Simonsen, 2013).

Researchers should use quantitative methodologies to gather technical information about the scale of damage and potential for repair in the conflict contexts selected. They should also collect disaggregated socio-demographic data about the affected populations. At each case study location, researchers should hold separate focus group discussions to engage women, the elderly, and people with special needs. A minimum of 15 household surveys per location are proposed, to explore diverse contexts within and between locations. Survey questions should consider prior assessments so that, as far as possible, researchers can use and build on existing data. Examples of technical information include:

- The settlement and housing typologies.
- Degree and extent of damage due to conflict.
- Access of households to markets and building .
- House rehabilitation and direct implementation undertaken in the past by government and humanitarian agencies.

Further quantitative information can be obtained from existing reports and project databases held by agencies engaged in direct implementation. These methods will ensure triangulation with the information gathered through the qualitative data collection activities (Creswell, 2003).

2.2. Expected outcomes

This methodology will enable the identification of existing capacities of households and communities with respect to identifying damage and repairing their homes and understanding the quality and safety of existing repairs. The methods account for the diversity of affected populations and include the capacity and experiences of those usually left behind or those who have less voice.

Starting with a limited but diverse series of locations, the research should then expand to other case studies. Researchers should engage and cooperate with stakeholders at different levels, focusing on the affected population and community-based groups, local governments and non-state actors (Hickey & Mohan, 2004).

The resulting evidence should be peer-reviewed by humanitarian stakeholders at both local and global levels. The research should be promoted to humanitarian stakeholders involved in shelter and settlement response. This could be done at relevant international sector conferences and meetings. Researchers should make it accessible via established academic and humanitarian platforms, supported by dedicated open-access knowledge management on platforms such as the Humanitarian Library. Researchers should respond to case study communities' preference for formats and dissemination of self-help support and guidance.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

Evidence collected must be applicable at the global level, as the research questions proposed relate to specific activities, but within diverse cultural and typological contexts. While most occupancy types and building methods exist in most contexts, there are differences within and between these contexts. They include variations in:

- Culture.
- Tenure status.
- Economic and physical capacities of affected populations.
- Settlement scenarios.
- Building typologies.
- The causes and characteristics of damage.

Case studies locations should therefore be selected within each national and regional context to reflect these variations.

Selected locations should represent global conflict trends with past or ongoing humanitarian operations. From these, researchers should select locations based on security, access, and health considerations. They should also consider the levels of project documentation available from participating operational agencies in each. Preliminary explorations imply that Colombia, Nigeria, Iraq, Syria, and Ukraine are sufficiently representative and diverse as case studies.

Extensive project documentation exists in each of these locations on conflict-related damage and repair through direct implementation. For example, there are ongoing cross-border programmes in Syria (IOM, UNHCR & Shelter Centre, 2018; World Bank Group, 2017).

3.2 Potential partners

Engaging and linking stakeholders, some for the first time, is essential to this research. Stakeholders should include affected people, local responders, and experts in specialist fields, balancing national and international capacities and perspectives.

Partners should provide first-hand knowledge of capacities, needs, and priorities in self-help rehabilitation:

- Populations affected and at risk, ensuring sufficient representation by women and other marginalised groups.

- Local community groups and leaders who best understand the structure of the community, as well as the main challenges to engaging them.

Two stakeholder groups can support access to conflict contexts, project documentation and understanding of contexts for the selected case studies:

- Government authorities, which act as bridges to the local stakeholders in rehabilitation projects during and post-conflict.
- Humanitarian, developmental, and civil society organisations with expertise in damage assessment, implementation, and information management.

Other stakeholder groups could support in collection of evidence related to the research questions and its subsequent analysis and understanding, including military first responders and damage analysts, private sector companies with significant expertise in structural and infrastructure damage assessment, and academic institutions with specific contextual and thematic expertise.

CHAPTER 14

Exploring the Role of Shelter and Settlements in Conflict and Peacebuilding

Credit: Silvia Mazzocchin, Lebanon (2019)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Out of all humanitarian crises, the five countries with the highest reported needs for shelter and non-food item assistance in 2018 were Yemen, Syria, Democratic Republic of the Congo, Nigeria, and Sudan (InterAction, 2020). These shelter and settlements crises are all in conflict situations. The recovery or establishment of shelter and settlements generates sensitive political issues during conflict. Whatever shelter strategies are implemented by operational agencies will have significant impacts, which can include fuelling conflict and contributing to peacebuilding (InterAction, 2020; Anderson, 1999).

Where root causes of conflict are linked to control of resources, such as land (van Leeuwen & van der Haar, 2016), interventions related to access and use of land will be influenced by the conflict. They will affect decisions about where shelter and settlements can be located for displaced communities, as well as having an impact on possible durable solutions, defined by UNHCR as repatriation, local integration, and resettlement (UNHCR, 2017c). Displacement can be as much a tool for aggressors in conflict as a coping strategy for affected populations; parties in conflict are often part of the negotiation when humanitarian actors are supporting displaced populations to settle (Lischer, 2007). Parties can impose restrictions on access to land, rights to settle, and freedom of movement. They can also restrict the use of building materials or building techniques. These restrictions may reduce shelter opportunities and sometimes limit assistance to provision of temporary shelters and non-food items (Global Shelter Cluster, 2013).

Timeframe is another essential element to consider. In conflict, the traditional division between relief, recovery, and development does not work. The humanitarian and emergency phase may last for a long time with lapses and relapses of violence and insecurity forcing multiple displacements of affected populations. The displaced population is often stuck in a temporary situation for years (Moore, 2017), with no durable solution, but this interim state of existence does not stop the desire for better housing and other social and community-building activities that are more associated with development outcomes (Brun, 2016).

This research aims to explore the role of shelter and settlements programmes in conflict reduction and peacebuilding. It aims to demonstrate that support to shelter and settlement interventions in conflict and displacement contexts can contribute to wider multisector humanitarian outcomes, such as protection and social cohesion.

Practitioner priorities

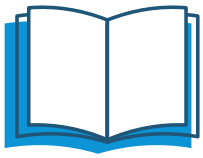
Interviews with representatives of operational shelter agencies working in conflict contexts and displacement settings have raised the following issues, which shape the direction of the research priorities:

- A typical agency response is to assess who is the most vulnerable and provide them with direct support. The process does not generally involve the host communities and it means that social responsibility or equity issues are not addressed. Integration and social cohesion are considered later, and it may be that economic, social, or environmental damage has already been done by the initial response.
- Engaging representatives from the host community in discussions about shelter interventions and throughout its implementation may help to legitimise the presence of the displaced community, improve shelter outcomes, and lead to better support for vulnerable households. Prolonged displacement is increasingly common, so

the coexistence element of connection with host communities becomes the most important part of programmes: identifying the most effective pathways to integration is crucial.

- Pressure on scarce resources is amplified in an already crowded urban environment. Additional urban in-migration from displacement can exacerbate resource conflict, social infrastructure, and cultural integration. Planning and land components of shelter and settlement programmes have the greatest long-term impact, because of ownership arrangements related to legal or customary practices. Design and location of camps have a long-lasting impact especially adjacent to urban settlements. Many camps are assimilated into the urban areas.
- Return programmes are a key part of conflict programming. Humanitarian shelter and reconstruction projects can assist peacebuilding by involving the community in planning and delivery of homes for returnees. They can encourage social cohesion in communities fractured by conflict, for example through community action planning and livelihood programmes for both host and returning households.

These priorities point towards research needed in urban areas, focusing on social cohesion and integration and impacts on host community and returnees.



1.2 What is known already?

There is some evidence of the links between shelter and conflict or displacement, but it is limited. *The Wider Impacts of Humanitarian Shelter and Settlements Assistance* (InterAction, 2020) describes impacts from conflict-related responses including reduced community tensions, increased empathy and trust in the community, more cohesive and supportive communities, increased social capital, and increased security and social stability. *Shelter in Displacement* (Refugees Study Centre, 2017) considers a wide range of relationships between shelter programmes and displacement issues, including integration of displaced people into European settings, relationships between host and hosted communities, the role of architects in displacement settings, camps as cities, issues of defining "home" in displaced households, security of tenure, and protection concerns. Taken together, the articles set out an agenda for further investigation in these areas.

The most comprehensive systematic exploration of issues raised by shelter and settlements programmes implemented by aid agencies in conflict and displacement is the Shelter Projects collection of case studies, maintained on the Global Shelter Cluster's website. It comprises over 250 case studies of which just under half relate to conflict and displacement. Shelter issues arising in conflict areas include:

- How shelter and settlement activities can make an impact on conflict reduction.
- Shelter programmes as a potential entry point for protection activities.
- Equity and perceived or real discrimination in distributing non-food items.
- The relationship between local markets and owner driven approaches.
- Links between livelihoods programmes and increased resilience.
- Engagement with the host community.
- How gender roles and responsibilities affect support for vulnerable households.
- Housing, land, and property issues.
- Strategies to prevent multiple displacements.

For practice, humanitarian guidelines and standards for how to provide shelter in displacement

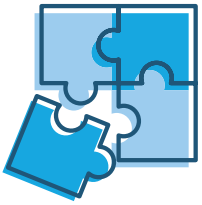
have been formulated, but in practice these are often generic and do not take into account fast-changing and diverse conflict contexts (Parrack et al., 2017). There is little or no discussion about the relationship between the characteristics of a conflict and the influence of different types of shelter provision. Guidelines are also still mainly oriented towards more organised approaches to shelter rather than self-built and spontaneous settlements. Additionally, many initiatives concentrate on shelter provided by aid agencies for displaced populations rather than the building process and the activities that take place around shelter (Parrack et al., 2017).

Existing research into post-conflict housing reconstruction is useful for contextualising humanitarian shelter and settlements research. It includes a recognition of the importance of housing and settlements infrastructure in maintaining social stability (Barakat, 2003) and contributing to long-term recovery (Skotte, 2004). However, it points out a lack of understanding of equitability and socioeconomic impact of these interventions and how they might contribute to social inclusivity (Haigh et al., 2016). There are examples of segregated infrastructure reinforcing divisions; unmet needs of marginalised groups heightening tensions; and there is generally a lack of livelihood opportunities despite large-scale construction activity (Haigh et al., 2016).

Housing reconstruction is recognised as a complex undertaking. If carried out without full consideration of the context, it can undermine governance structures and exacerbate social exclusion (Barakat & Zyck, 2011). Reconstruction can become ethnicised and politicised (Skotte, 2004). It can make pre-existing vulnerabilities worse, due to impractical or inappropriate design of dwellings (Barakat, 2003), or entrenchment of power relationships and social inequalities through control and allocation of resources (Barakat & Zyck, 2011). Opportunities to build back better have not been able to be implemented because political forces overwhelm households' capacity to make decisions (Brun & Lund, 2008).

The challenges for urban shelter programmes for displaced populations involve livelihoods and housing, land, and property support (Sanderson, 2019). Shelter principles that have evolved in camp settings are difficult to apply in urban conflict contexts, and humanitarian shelter and settlements assistance is often constrained by government restrictions (Brun, 2016). There is a need for humanitarian assistance that contributes to wider outcomes and development goals in urban settings and which benefits host and displaced communities (Crawford, 2010).

Social cohesion has become an important aspect of humanitarian response and contributes to peacebuilding goals. It has become prominent due to protracted displacements, failures of durable solutions, and related shifts in government and international agencies' focus from immediate humanitarian assistance to the U.N.'s Sustainable Development Goals. These protracted displacement settings are highly political, so integration issues, particularly between hosts and displaced people, are central. They have boosted an increase in programmes, often related to conflict resolution and reconciliation, that aim to protect or improve social cohesion. Social cohesion is now a mainstream policy objective for some U.N. agencies (for example, UNHCR) and humanitarian organisations. There has been concern over the effectiveness of these programmes and questions about how social cohesion is defined, conceptualised, and measured (de Berry & Roberts, 2018). The term "social cohesion" has its origins in several academic disciplines; there is a lack of clarity on its meaning when applied in humanitarian settings. Rather than being an individual trait, social cohesion is generally agreed to be a (desirable) characteristic of a community, or society (Schiefer & van der Noll, 2017). Many definitions of social cohesion are positive, relating to the presence and maintenance of bonds and trust within groups, a sense of belonging, shared values, and identity and willingness to cooperate. However, other definitions are negative, relating merely to the absence of conflict (Rogers, 2020).



1.3 What evidence is missing?

In recent years there have been calls to develop better evidence of the connection between shelter and settlement activities and their impact on the varied aspects of displacement and conflict (Parrack et al., 2017). The issues of shelter in conflict and displacement have been absent from evidence reviews relating to shelter research (Harriss et al., 2020; Maynard et al., 2017), and this in itself indicates an important gap to be filled, considering the resources spent on shelter and settlements assistance in conflict and displacement contexts. In a recent survey of Global Shelter Cluster Strategic Advisory Group agencies to determine research priorities (Parrack, 2020), shelter and conflict was identified as one of the top research needs.

Research concerning shelter in crises has predominantly evolved from post-disaster reconstruction studies with the findings often being applied to conflict situations, which may not be applicable or appropriate. Much of the language surrounding shelter response relates to disasters caused by natural hazards. Terms such as "recovery," "self-recovery," "building back safer" or "building back better" have far less relevance in protracted crises and conflicts where long-term displacements are common. Instead, the language used by humanitarians to discuss conflict is much more linked to protection issues; housing, land and property; and community cohesion processes. Together they contribute to longer term peacebuilding processes. Research and evidence is needed to close this gap in understanding and relevance.

1.4. What questions need to be answered?

The primary research question is:

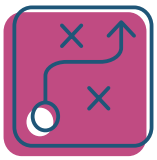
What is the role of shelter and settlements in conflict contexts and peacebuilding in urban areas?

This is supported by four subquestions:

1. ***How can the recovery of shelter and settlements help to reduce conflict and contribute to social cohesion?***
2. ***What are the key factors that determine a sense of safety and security for crisis-affected populations including host communities and displaced persons?***
3. ***Does prioritising housing for returnees over economic or social programmes lead to community cohesion?***

The research will investigate the contribution that shelter and settlements programmes can make to peaceful coexistence, social cohesion, conflict reduction, and successful integration. Demonstrating this link is a key aim of the shelter sector (Global Shelter Cluster, 2018d). It contributes to the broader aims of humanitarian response to conflict and displacement outlined in the Agenda for Humanity. This evidence could help donors and practitioners in decision making and efficient resource mobilisation in conflict and displacement contexts.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The framework for research in fragile states developed by Emmanuel (2003) should be a basis for the methodology. The principles of research proposed in this framework are collaborative partnership, community engagement, social value, scientific validity, fair selection of study participants, favourable harm-benefit ratio, informed consent, respect for recruited participants, and independent review.

The research methodology should co-develop research strategies with shelter and settlements agencies in their specific operational context. The context and location for this research should be broad, to gather evidence from a variety of conflict situations. Researchers should identify specific urban areas of interest with partners. These places should include:

- Formal and informal camp settings in or adjacent to urban centres.
- Area-based responses that focus on cross-sector issues.
- Settlement programmes where displaced communities have been integrated into existing urban housing.
- Settings of protracted displacement with significant barriers to durable solutions.
- Urban areas where fast succession of relative stability and violence create multiple displacements.
- Urban areas where displaced populations have returned.

Potential sources of data include case studies and long-term programme evaluations, historical studies, and outcome and impact evaluations of ongoing crises. The appropriate sources should be determined by the context and the approach taken by operational agencies to supporting communities.

Researchers should develop a critical framework to assess the relationships between shelter and settlements interventions and peacebuilding and social cohesion. This should be based on existing urban shelter and settlements analysis frameworks (Heykoop & Kelling, 2020; Urban Settlements Working Group, 2020; Parker & Maynard, 2015) combined with conflict sensitivity frameworks (Conflict Sensitivity Consortium, 2015). Researchers should gather qualitative data about aims and objectives of urban shelter and settlements programmes, and how successful the programmes were in meeting conflict reduction and peacebuilding aims. These data should be gathered from semi-structured interviews with country Shelter Cluster coordinators and staff of relevant international and local organisations, and INGO and local NGO shelter and settlements programme staff. Organisations or collectives representing displaced people should also be interviewed using the same method to compare agency views with those of the affected population. Interviews should take place face to face on location if security allows, in a regional hub, or remotely.

Research partners should analyse the findings thematically in relation to the critical framework and produce a mapping to compare characteristics of the urban conflict and displacement patterns with shelter and settlement strategies. Researchers should identify links between different assistance strategies and social cohesion or peacebuilding outcomes. They should discuss findings with national and international stakeholders in order to inform policy and practice and form the basis for advocacy to other sectors.

2.2. Expected outcomes

The intended audience for the research findings includes U.N. agencies, local and international NGOs, representatives of affected people, and host governments.

Potential outcomes include better informed programming and resource mobilisation and more appropriate shelter and settlement interventions, therefore increasing the positive impacts of programmes. Such research could inform better recovery planning for host governments and local and international organisations.

The research would contribute to Sustainable Development Goals 11 (Make cities and human settlements inclusive, safe, resilient, and sustainable) and 16 (Promote just, peaceful, and inclusive societies). Shelters and settlements in volatile conflicts are an essential first step towards security and dignity for affected populations and moving towards resilient and sustainable housing.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

Conflict settings are unpredictable and have unique characteristics. Even in cases where root causes or patterns of displacement look similar, types of violence and categories and interests of stakeholders differ. Risks, assets, or vulnerabilities of populations will vary between and within conflicts. These characteristics make categorisation of experiences and learning more challenging and the search for common themes complex.

Access to research subjects may be problematic. In particular, the presence of violence prevents researchers from deploying research teams. They will rely on local research partners to gain access to research data.

International NGOs may experience political obstacles to being involved in research and disseminating research findings. If controversial subjects for research are proposed, government actors may sanction or expel organisations, which would compromise their humanitarian operations, making them less likely to agree to become involved in research projects.

3.1. Potential contexts

The research could focus on conflict-prone countries mentioned above with the highest reported needs for shelter and non-food item assistance. Specific locations should be formulated with research partners, drawing on their contextual knowledge. Both refugee and internally displaced situations should be included, with awareness of differences between them in management and legal structures. Researchers should identify urban areas within those countries that have attracted large-scale displacement.

3.2 Potential partners

Global level engagement is important to develop alignment between research aims and organisational priorities. Potential partners include UNHCR, IOM, Norwegian Refugee Council, Danish Refugee Council, International Committee of the Red Cross, and Catholic Relief Services. It is valuable to establish a research partnership with international organisations working in conflict and displacement contexts and local partner organisations who have more direct engagement with affected communities. The engagement of field-level operational offices and local partner organisations that have more direct engagement with affected communities is equally valuable. Organisations or collectives of displaced people should be included as partners to represent the displaced community perspective.

CHAPTER 15

Incorporating Local Building Practices in Response

Credit: Eefje Hendriks, Nepal (2015)

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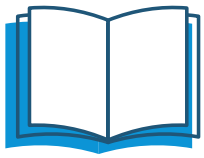
1. BACKGROUND AND RATIONALE

1.1. What are the issues?

To enhance resilience, households affected by disasters must be able to make informed choices during reconstruction. They must balance the adoption of safety measures with their other needs (Flinn, 2020). Disaster risk reduction (DRR) techniques that fit with local circumstances are likely to represent the best fit for affected households (Garnier et al., 2013; CRAterre, 2010; Dekens, 2007; Twigg, 2006; Carazas-Aedo et al., 2004; Jigyasu, 2002). The exclusion of local techniques and the shift toward non-traditional DRR practices can, therefore, be problematic for community resilience. However, during reconstruction, local non-engineered DRR construction techniques are frequently absent from building codes and neglected by technical authorities, government institutions, and funding agencies.

Local DRR building practices are a research priority for shelter practitioners seeking to support those affected by disasters (Opdyke et al., 2021). This is in line with the growing emphasis on supporting shelter "self-recovery," a process where households rely on their own resources, networks, and local capacities to repair or rebuild their homes (Hendriks 2020; Morel et al., 2018; Twigg et al., 2017; Parrack et al., 2014).

This research will focus on these techniques as part of a broader reflection on how to include diverse local DRR building practices in the recovery of shelter and settlements after disaster. The research focuses on structural issues because structural reliability is often considered too sensitive to rely on non-engineered techniques. However, structural safety is just one aspect of a home. There is a need to consider other non-structural local DRR practices and support their inclusion in post-disaster reconstruction.



1.2 What is known already?

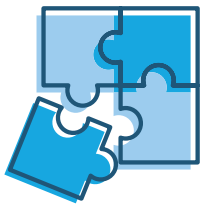
Local building cultures cover a range of local knowledge and practices relating to organisational models, settlement strategies, and housing design (Caimi, 2014). They incorporate DRR building practices that include non-engineered techniques. These techniques are implemented spontaneously and informally, with little or no input from qualified architects and engineers (Arya et al., 2013). Local techniques evolve constantly and vary from traditional techniques to more recent adaptations. This research seeks to illustrate the relevance of local DRR practices (Ferrigni, 2005) and to give more credibility to local experts who implement "safe enough" solutions.

Support for self-recovery acknowledges that affected populations have their own perceptions of what is safe enough, based on their own priorities and acceptance of risks. But it is difficult for donors and humanitarian actors to bear responsibility for solutions they do not consider scientifically safe enough or where there is no consensus with government bodies (Flinn, 2020). It is essential to better understand what inhibits these decision makers such as national and regional authorities, NGOs, and funding agencies from accepting a shift in this responsibility, to work with households to make sure they have the best information and knowledge to make informed decisions regarding safety and technical aspects.

CRS has studied the factors influencing households to adopt hazard-resistant construction practices in post-disaster settings (Turnbull et al., 2015). Hendriks & Stokmans (2020) have developed a "motivation, ability and opportunity" model that forms the basis of a communication strategy for key messages. The proposed research will also benefit from insights from a similar approach that questioned the accountability of humanitarian actors

to affected populations when measuring programme impacts (Emergency Capacity Building Project, 2007).

Despite recent interest, the lack of technical research and quantitative data on local non-engineered DRR techniques makes it difficult to assess their efficiency (De Filippi et al., 2020; Lourenço et al., 2019; Sadeghi et al., 2017). Several academic laboratories study non-engineered techniques, using experimental work and numerical modelling (Meybodian et al., 2020; Misseri et al., 2020; Xie et al., 2019; Yadav et al., 2018; Alam et al., 2017; Vieux-Champagne, et al., 2017; Islam et al., 2016). But these studies are restricted to specific settings and challenged by local variations. Some engineering associations carry out technical assessments of structures based on post-disaster field observations (for example, EEFIT). However, academics face major difficulties in including these data in research projects because of the numerous unknown and varying parameters. This type of evidence is often rejected by technical authorities (such as national authorities in charge of building codes) as not being scientific enough (Joffroy et al., 2019).



1.3 What evidence is missing?

As a result, humanitarian practitioners still lack reliable evidence to support the inclusion of local building techniques. This lack of evidence regarding the seismic advantages of local DRR techniques prevents their integration into building codes and reconstruction programmes.

With international funds coming to an end, interest in these local techniques often rises among state bodies, as these are the only ones most people self-recovering can rely on (Mughal et al., 2016). The process of gathering "good enough" evidence on non-engineered techniques raises questions about the technical and logistical limitations and about the kinds of field survey of local practices that would be useful to inform engineering projects.

There is also a need to better understand how different stakeholders define "safe enough" and how this perception evolves during reconstruction. It is a challenge to communicate evidence on local techniques without limiting their evolution or preventing local variations. This is important, as specific variations of a technique should never be implemented without questioning their relevance to household conditions, and households themselves are the best decision makers (Flinn, 2020).

1.4. What questions need to be answered?

This research aims to better understand what causes households, technical authorities, governmental institutions, and funding agencies to include or exclude local techniques and find pathways to facilitate their acceptance if necessary. It will examine what leads these stakeholders to accept techniques as safe enough.

The research will also consider how to produce and communicate acceptable evidence of the structural value of non-engineered techniques to enhance their adoption.

The primary research question is:

Which pathways for evidence production and communication of local non-engineered DRR construction techniques can lead to adoption by different stakeholders in the recovery of shelter and settlements after disaster?

This is supported by three subquestions:

1. ***How is "safe enough" defined by different stakeholders during reconstruction processes?***

This subquestion relates to the criteria that should be considered in a comprehensive assessment of a technique. That is, measuring not only a technique's structural reliability but also its replicability, affordability, and cultural acceptability.

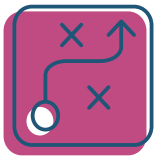
2. ***How can communication of DRR construction techniques encourage informed choices by disaster-affected households?***

This subquestion aims to investigate ways to communicate appropriate information to households so they can make informed choices. It seeks to better understand the varied stakeholder perceptions of different types of evidence and knowledge providers.

3. ***What processes for technical evidence production regarding local non-engineered DRR techniques could enhance adoption by different stakeholders?***

This subquestion relates to the production of "good enough" evidence regarding local non-engineered DRR structural techniques.

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

We suggest conducting a comparative analysis of data collected in:

- Haiti after the 2010 earthquake.
- Haiti after the 2012, 2016, and 2017 hurricanes.
- Nepal after the 2015 earthquakes.
- Philippines after the 2013 typhoon.
- Bangladesh and France between 2010 and 2020.

The data was collected during different academic field surveys, laboratory work, and humanitarian missions. It consists of:

- Formal, semi-structured, and informal interviews.
- Focus group discussions with community members and key stakeholders.
- Grey and academic literature review.
- Field observations.
- Building surveys.
- Experimental work using shaking table and reaction wall apparatus for shear test.

The complementarity of the different data is key to answering the overarching research question, as it connects social and engineering sciences. The scientific rigour of academic data

collection and analysis complements the field observations, access to key actors and meetings, and informal interviews by practitioners.

Subquestion 1. How is "safe enough" defined by different stakeholders during reconstruction processes?

Preliminary research in Haiti and Nepal shows that the lack of technical "good enough" evidence on local non-engineered DRR construction techniques is a major legal and ethical barrier to accountability towards the households that agencies aim to support. It prevents agencies accepting informed household decisions regarding safety and technical aspects. Further interviews with funding and operational agencies (NGOs, Red Cross, development agencies, boards of standards) should be conducted to consolidate the preliminary findings. This work will contribute to identifying safe enough technical solutions and good enough evidence regarding them.

We propose using the process of recovery from crisis in Haiti as the main case study, integrating the results from ongoing research at the AE&CC laboratory. The AE&CC research analyses the different aspects of local building practices with respect to the recovery of shelter and settlements. It uses a qualitative document analysis of about 60 field mission reports, publications, project documents, and conference presentations. It also uses a thematic content analysis of interviews conducted in 2019-20 with 23 stakeholders involved in specific reconstruction projects using local practices. They included international researchers and experts (architects, civil engineers, humanitarian actors) from universities, INGOs and associations, and Haitian construction professionals.

The methodology used in the AE&CC research and in the work identifying and characterising local DRR practices (Caimi, 2014) should be applied to a holistic analysis of local non-engineered DRR techniques supported or implemented in the selected contexts (in connection with Subquestion 3 activities). Interviews should include disaster-affected households (including direct beneficiaries of reconstruction programmes and self-recovering populations), practitioners, governmental bodies, and engineering consultants. Shelter assessments should focus on structural aspects, technical and financial accessibility, replicability, and cultural appropriateness.

This will allow in-depth analysis of the perceptions of what is safe enough according to different actors, what influences this judgement, and how it evolves during reconstruction.

Subquestion 2. How can communication of DRR construction techniques stimulate informed choices by disaster-affected households?

The role of the various actors in the reconstruction process (affected households, technical experts, and construction workers) in DRR decision making should be analysed using the theoretical framework developed by Hendriks et al. (2018). That framework connects different factors and barriers to knowledge adoption. Researchers should analyse key stakeholder and household interviews from reconstruction processes in different countries to understand what inhibits acceptance.

Preliminary research in Haiti (Joffroy et al., 2019) showed that families who did not directly benefit from international or government support included technical improvements based on local DRR techniques and promoted by some shelter programmes, with their own resources and networks. Additional research in Haiti should include interviews with households and construction workers to assess their knowledge of different techniques and their sources of information. The interviews should consider structural aspects, technical and financial accessibility, replicability, and cultural appropriateness. The researchers should also participate in ongoing analysis of the connection between stakeholders' adoption of local

DRR techniques in Haiti and the production of several pieces of technical evidence between 2010 and 2020. These include field reports based on post-disaster observations and academic research on the structural behaviour of non-engineered constructions.

Researchers should also review the communication tools and analyse the main communication strategies used by professionals and supporting agencies in shelter and settlement response in the different contexts. We suggest reviewing three existing tools:

- A collection of examples of local non-engineered DRR practices (Caimi et al., 2017).
- The Shelter Response Profile (Carazas-Aedo et al., 2017; Sevillano Gutierrez et al., 2018) disseminated by the Global Shelter Cluster.
- The Informing Choice for Better Shelter protocol developed by the Global Shelter Cluster (Dalgado, 2019).

The first two were developed to help shelter and settlement practitioners and project managers identify, document, and support local DRR techniques. The third supported affected households by conveying adequate information on non-engineered techniques and should be the main perspective of analysis in this tool assessment.

The researchers should also analyse the limitations and unintended consequences of some shelter programmes in Haiti that intended to support households make informed decisions about their shelter. This work can be further complemented by feedback from the National Society of Earthquake Technology (NSET) regarding the popularisation of technical elements they worked on in Nepal. Researchers should analyse a comparative study (Dixit et al., 2017) conducted in different districts of Nepal that highlighted that the level of safety of rebuilt structures was not correlated with the involvement of humanitarian actors. The levels of compliance with earthquake-resistant construction techniques were analysed against guidance from government engineers and financial support of the government for applying the technical guidelines. It also compared people's understanding of the techniques with the humanitarian assistance they received.

The activities relating to Subquestion 2 will contribute to effective communication of technical evidence by:

- Assessing the varying perceptions of different types of evidence, knowledge providers, and communication processes.
- Understanding different shelter and settlement projects' contributions to informed decisions of self-recovering households through their communication strategies and the limits they faced.
- Identifying examples of activities to be planned in order to stimulate informed choices by affected households regarding DRR construction techniques.

Subquestion 3. What processes for evidence production regarding local non-engineered DRR techniques could enhance adoption by different stakeholders?

The first step is to assess the limits of different processes used to produce technical evidence regarding non-engineered practices (mainly experimental work, numerical modelling, and field observations) with shelter and settlement response perspectives. A literature review should include the work of Vieux-Champagne (2017), Hofmann (2015), and current work by 3SR laboratory.

A second step (connected to Subquestion 1 activities) uses field surveys to collect information about local DRR structural techniques. It should assess the reasons for choosing specific structural components and variations (relating to materials and implementation

modalities, in building design, or during the works). The tools used for these field surveys should be co-produced by engineers, academics, and practitioners to incorporate different perspectives on the production of academic technical evidence on non-engineered techniques. This step will ease technical comparative analyses of different practices.

Researchers should use these field studies to select a specific non-engineered DRR structural technique (connected to timber structures cross-bracing or inclusion of seismic bands in load-bearing masonry walls) with local variations observed in two different sites. Numerical models and experimental work should then be used to assess the impacts of these variations on static and dynamic structure behaviour. This third step will contribute to a better understanding of the mechanical sensitivity of the technique.

This work will provide shelter and settlement practitioners and researchers with a critical analysis of different evidence-production processes from a technical and logistical point of view and of their complementarity. Moreover, this will identify useful field surveys of local DRR techniques and their variations to inform engineering research projects. It will also contribute to reflection on technical sensitivity and the impacts of the gaps between theory and practice. Finally, it will help in developing tests to cost-effectively assess the likely performance of a local variation of a recognised technique.

3. RESEARCH CONTEXTS

3.1. Potential contexts

Nepal, Pakistan, Haiti, Philippines, and Bangladesh are proposed as research contexts. These low-income countries have all been supported by humanitarian shelter and settlement actors in post-disaster recovery. Moreover, various shelter and settlements responses were promoted in these contexts in the aftermath of earthquakes or typhoons. This should facilitate discussion on the relative impacts of newly introduced techniques and non-engineered local construction techniques to build back safer. Moreover, the researchers should analyse the evolution in technical authorities' and humanitarian actors' considerations of local non-engineered DRR structural techniques over several years and its correlation with the development of engineering research relating to them (Xie et al., 2019; Yadav et al., 2018; Alam et al., 2017; Vieux-Champagne et al., 2017; Islam et al., 2016).

Researchers could compare the evolution in considering local DRR techniques in reconstruction programmes in Nepal with the reconstruction programme after the 2005 Pakistan earthquake (Mughal et al., 2016). There, the government first supported Bhatar /Tag (timber bands) and Dhajj dewari (timber frame with multiple diagonals). The government then rejected them due to a lack of evidence of their structural behaviour, before eventually allowing them.

Haiti provides an opportunity to reflect on the relative impact of academic works and of field evidence. Shelter practitioners encountered limitations when they aimed to support informed decisions by households regarding their shelter.

The case study of self-recovering communities on the west coast of the Philippines explains that key messages do not always reach self-recovering communities. This is partly due to the lack of clear responsibilities for knowledge dissemination between different stakeholders, especially at institutional and governmental levels. The study also highlights that safe housing is not always a first priority for communities recovering from disasters. Two shelter programmes in rural communities on Panay Island that aimed to support local DRR techniques (Joffroy, 2018) can be included in the comparative study.

Finally, several authors of this proposal were involved in shelter programmes in eight rural communities in Bangladesh, and in a partnership of international and national academics (ENSAG, BUET), technical consultants (CRAterre), and operational agencies (Caritas Bangladesh, France, and Luxembourg). The programmes supported local building practices in the recovery of shelter and settlements during the last 10 years (Moles et al., 2020). The second phase of that research project is starting and will last for the next 10 years until 2031, offering opportunities to collaborate.

3.2 Potential partners

Supporting local building practices in the recovery of shelter and settlements requires the expertise of practitioners and academics of different backgrounds. Academics working in social sciences and engineering can contribute to this research, such the University of Grenoble Alpes, University of Sydney, Eindhoven University of Technology, and the Institute of Engineering of Tribhuvan University. Practitioners, such as CRAterre, NSET, Lumanti, and CARE International UK, can contribute in two major ways to this research. First, they can provide direct information to academic researchers in relation to the different fields they were involved in. Second, they can critically review the data collected by academic researchers and analyse it through their own experiences and field knowledge.

This research project will connect two complementary professional communities from different countries. This collaboration is fundamental to the inclusion of local non-engineered DRR techniques in shelter and settlement response, and by extension the diversity of local DRR building practices. This will ultimately enhance their safety, affordability, replicability, and acceptability and support local livelihoods; all are key elements in recovery processes.

CHAPTER 16

Designing Safe Pedestrian Routes for a Biological Hazard Response

Credit: PrathameshGhadekar (2015)

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1. BACKGROUND AND RATIONALE

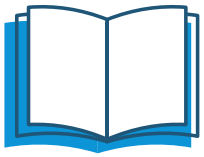
1.1. What are the issues?

In the context of a health emergency caused by an infectious disease such as COVID-19, Ebola, or measles, which is transmitted from person to person, international authorities have established recommendations to reduce the risk of contagion. Ensuring a minimum physical distance between people or confining them to their neighbourhoods and homes are the most common ones (WHO, 2020). These recommendations imply a spatial modification of human settlements at all scales.

Settlements worldwide face the challenge of adapting their public spaces to mitigate the spread of viruses and ensuring that social and economic activities can continue. The COVID-19 crisis has highlighted several issues with public spaces that need to be addressed, including accessibility, flexibility, design, management and maintenance, connectivity, and equitable distribution (UN-Habitat, 2020c).

The challenge is even more significant in precarious settlements, such as informal neighbourhoods, temporary settlements, and other vulnerable contexts (Patel, 2020; Sharifi & Khavarian-Garmsir, 2020). These precarious settlements lack access to essential services such as water points, toilets, or dining areas in their own homes, or those are shared at the community level (Europa Press, 2020). It is exceedingly difficult to maintain home confinement measures over time in these contexts. Most families do not have savings, so they need to leave their homes to earn daily income in the informal economy. Besides, the population may need to perform other subsistence activities, such as urban agriculture and livestock husbandry, or shopping in the local markets.

On the other hand, in extremely precarious settlements, one of the biggest problems is overcrowded housing, which, combined with low housing quality, makes home confinement difficult and unhealthy (UN-Habitat, 2020d). Similarly, overcrowded sidewalks are usual in these contexts due to a lack of urban planning design (IASC, 2020; UNHRC, 2020). It implies no optimal dimensioning of the urban layout, making it challenging to promote social distance measures in public spaces. Most people in precarious settlements journey on foot; people use the streets extensively for informal commercial or recreational activities. Therefore, it is necessary to adapt public spaces so that communities can carry out essential daily activities while minimising their risk of exposure to contagion (Honey-Rosés et al., 2020).



1.2 What is known already?

The implementation of mitigation measures in public space is widely accepted. The World Health Organization (WHO) has proposed measures to adapt public spaces to enable physical distancing. For instance, placing markings on the ground, temporarily closing streets to cars to make more space for walking and cycling, one-way walking sidewalks, and frequent cleaning and disinfection (WHO, 2020). COVID-19 has generated some literature on possible urban design measures (Álvarez del Valle et al., 2020; Barcelona City Council, 2020; Córdoba Hernández et al., 2020a; Córdoba Hernández et al., 2020b; NACTO & Global Designing Cities Initiatives, 2020). Among the measures that cities are implementing, the design of temporary safe routes for pedestrians stands out. These are "pedestrian routes with at least four meters width to safely access public facilities such as markets, medical centers, and parks" (Barcelona City Council, 2020). These measures have been implemented in different cities, including Barcelona (Barcelona City Council, 2020), Denver, Washington DC, New York, and San

Francisco (Steckler et al., 2020). They show that it is possible to carry out impactful low-cost interventions quickly.

The measures mentioned above have been carried out in formal cities, not in precarious settlements. The use of public space is different in these two contexts. Unfortunately, there are very few studies of mitigation measures in precarious settlements. The existing scientific literature focuses on identifying vulnerability factors for COVID-19 in formal contexts.

High population density, inadequate access to basic infrastructure services, and precarious livelihoods makes it difficult, if not impossible, to contain the spread of COVID-19 in slums through social distancing and quarantine measures (Corburn et al., 2020; Salama, 2020; Sharifi & Khavarian-Garmsir, 2020; Swasti Vardhan et al., 2020). There are humanitarian aid guidelines that propose mitigation measures to reduce overcrowding. For instance, re-planning the provision of services and assistance activities to prevent large gatherings and movement of people, upgrading camps and collective shelters, increasing shelters' covered living space, and providing additional basic facilities to reduce the number of households sharing them (IASC, 2020). However, these measures are generic, with most of them focused on the shelter rather than the neighbourhood scale.

The proposed research will investigate the use of safe routes in precarious settlements. Safe routes are public streets or roads whose physical conditions allow users to carry out daily activities without putting their health at risk. It means considering the management of safe pedestrian traffic flow as a strategic measure for people who need to stay outside. The safe routes approach applied in wealthy contexts cannot be the same as in vulnerable contexts because the street's use is different.

The concept of basic habitability considers the minimum standards that meet a person's essential needs (Gesto Barroso, 2015), at both the shelter and settlement scale. In a biological hazard context, safe routes are a strategy to meet the basic habitability standards in precarious settlements. According to the basic habitability framework, where a progressive improvement of living conditions is a key factor (Gesto Barroso, 2015), the settlement could incorporate temporary risk mitigation measures, which could gradually be consolidated. Therefore, a settlement could become more resilient without a high initial investment.

Some studies have been conducted on how different parameters, such as sidewalk sizing and population density, affect COVID-19's spread, to detect areas most likely to be infected. However, the results are inconclusive due to the combination of density and other factors, such as income level, socioeconomic characteristics, and labour or professional activities (Hamidi et al., 2020; Sharifi & Khavarian-Garmsir, 2020; WHO, 2020). Humanitarian guidelines define priority areas as those where people live in significantly overcrowded conditions, with higher densities, less space for expansion, more contact with the population at risk, or a higher proportion of vulnerable people (IASC, 2020). However, there are no studies that include the physical characteristics of public space in precarious settlements, as well as the social and behavioural components that condition exposure to risk. Finally, we are missing indicators to evaluate the health, social, economic, and environmental impacts that such risk mitigation measures have on the population in precarious environments. Therefore, it is not possible to determine the efficiency and effectiveness (cost-benefit rate) of the investment.

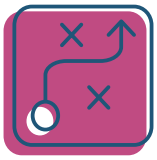
1.3. What questions need to be answered?

The research questions are:

What physical criteria define infection risk in public space in precarious settlements, which should be used to prioritise interventions?

Are safe routes an efficient and effective strategy for reducing the virus's spread speed? What is their impact? Do they have associated social, economic, or environmental effects? Will communities accept them? What would the communities' acceptance process entail?

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The research methodology should be mainly quantitative-analytical. Researchers should use comprehensive indicators and data collection, classification, tabulation, and data geo-referencing for analysis and interpretation. A case study settlement should be selected based on high-risk contagion factors (unplanned urban areas, high-density area, lack of access to essential urban services) and the local partnership's strength with the local community.

The research should be organised in three phases.

Phase 1: Prioritisation analysis

Analyse the urban fabric to identify streets in which it is a priority to intervene, according to their vulnerability to a biological hazard. Several indicators will be useful for identifying priority streets for action:

- Centralities and connecting routes. Public places are the greatest threat to the spread of the virus because it is difficult to maintain a safe distance (WHO, 2020). Therefore, researchers should work with local actors to identify public gathering places for daily activities (such as supply centres, markets, schools, and health centres) and the main communication routes to these places.
- Flows of uses of public space. Population density seems to have the greatest impact on the spread of disease as it is challenging to maintain safe distances (Sharifi & Khavarian-Garmsir, 2020; WHO, 2020). In precarious settlements, the population density is very high, bordering on overcrowding in many cases (IASC, 2020; UNHRC, 2020b). Therefore, analysing the density of mobility in public space by incorporating a time component may allow information about mobility strategies that reduce population influx.
- Pathways with previous physical vulnerability. The urban fabric's characterisation will identify streets that are unsafe or vulnerable to a biological hazard. Roads that do not allow transit due to their high slope (more than 35%) or location in floodable areas should be categorised as highly unsafe. Roads not in floodable areas and with a slope of less than 35%, and those without a covered sanitation network should be considered moderately unsafe. Those that do not have lighting and therefore pose a risk to vulnerable groups, such as women and children, should also be considered moderately unsafe (Gesto Barroso, 2015).

- Surface for pedestrian traffic. Streets that do not have exclusive pedestrian circulation spaces (sidewalks) pose a physical risk to pedestrians. It makes it more difficult to maintain a safe distance because available space for walking on the street changes according to whether there is a vehicle on the road. Streets that do not have sidewalks or which are not wide enough for simultaneous circulation of vehicles and pedestrians, should be considered highly vulnerable.
- Layout of the routes and accessibility. Straight streets give users visual control so they can maintain a safe distance from other pedestrians. In many precarious settlements, the safest forms of mobility are on foot or by bicycle since public transport is overloaded and most of the population does not have private vehicles (Sharifi & Khavarian-Garmsir, 2020). The streets in such settlements are usually not straight, but they result from the empty space between houses. Safe streets are those that allow visual control at all times at a distance of more than 100 metres. Therefore, the research should analyse the layout in sections of 25 metres by GIS. Streets should not contain stairs or other elements that make the use of bicycles difficult or that represent a barrier for the pedestrian.
- Urban materials. Another mitigation measure is frequent disinfection of surfaces that infected people may have physical contact with (WHO, 2020). In precarious contexts, unpaved roads and sidewalks are common. Therefore, a street will be considered more vulnerable to the spread of COVID if it does not have a pavement that can be disinfected. Improvised lounge areas in the street due to the absence of urban furniture, or the existence of urban furniture with porous finishes that are difficult to disinfect would also be a risk.

Researchers should review these indicators, adapt them to the context, and complement ideas proposed by other disciplines or other local communities. All local stakeholders and community representatives should participate in that process. Include men and women, children and elderly, persons with disabilities, and minority groups, including indigenous migrants and internally displaced people.

Conduct transect walks with the community (UN-Habitat, 2020a) to collect data and confirm the results. The spatial components, such as digitalisation and geo-referencing, will be indispensable. Therefore, it is necessary to map the settlement and the data required to carry out the analysis. This information should be provided by the settlement's managing entities, such as local or national government, or humanitarian aid organisations. Subsequently, the geo-referenced data will be analysed in the cartography, identifying the priority routes of intervention. The information obtained should be validated by all in a plenary session, incorporating the local community contributions in the identification.

Phase 2: Safe route design

Adapt the proposed mitigation measures to the scope of studies and to implement them. This is a very executive phase, but it is essential since the research project's success will depend on the population's acceptance and willingness to comply with the measures.

The research team should develop proposals for adapting the proposed measures to the study area that will be validated by the research stakeholders. Potential mitigation measures are included in the Guide to adapting public spaces to mitigate the spread of COVID-19 (Sierra Romero, 2020) and in Streets for Pandemic: Response & Recovery (NACTO and Global Designing Cities Initiatives, 2020). Local community teams should be selected to implement the measures. Ideally, the project should work with existing community groups or civil society organisations working in the community. Simultaneous awareness-raising activities should be organised to inform the population about the protocols for public space use under these mitigation measures. These activities should continue throughout the research process. The

local community teams should implement the measures.

Phase 3: Impact evaluation

This phase should start in parallel with the previous ones. Thus, the measurements will be made once the actions are implemented. Measurements could include health, economic, perceptual, and behavioural variables. Finally, the data should be analysed and the conclusions provided. Since this is scalable research, a report of lessons learned and recommendations for future work should be developed. We recommend a pilot study in an area of approximately 22.5 hectares (a sector area for emergency settlement urban planning).

2.2. Expected outcomes

The pilot study should produce:

- A map of vulnerability to biological hazards in public transit spaces.
- A catalogue of successful low-cost solutions adapted to the area of study.
- A cost-benefit report.

Other research outputs could include:

- A replicable methodology for identifying areas vulnerable to contagious diseases in public transit spaces in precarious settlements.
- A catalogue of low-cost solutions for the mitigation of biological risk.
- A replicable methodology for measuring the impact of the mitigation measures.
- Lessons learned and points of improvement that can be incorporated in future interventions.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

The research should be carried out in low-income population settlements, with high-density urban fabric (planned or unplanned). These could be informal settlements in urban or peri-urban areas, emergency post-disaster settlements, or displacement camps.

Ideally, three settlements of each type should be analysed. For each settlement, measurements should also be taken of areas without safe routes. The analysis of each type of settlement would be carried out by applying the parameters described in Phase 1. The aim is to identify the priority areas in each context, which may or may not be different. A total of 24 settlements should be analysed (12 study and 12 control samples). As a minimum, it is recommended to select one type of settlement and carry out the study in three different contexts.

Potential research partners are the United Nations Human Settlements Programme (UN-Habitat), especially its Global Public Space Programme, and IMPACT Initiatives. IMPACT teams are present in over 20 countries across the Middle East, Africa, Asia, Europe, and Latin America. Their remote and field staff are experts in assessment, data analysis, and GIS. Local counterparts, could be national and local government agencies responsible for health and public works in the country where the next epidemic is declared, together with civil society working in health and shelter—a key player being the national society member of the Red Cross and Red Crescent Movement, as well as international agencies with a particular mandate in response to this type of threat, such as WHO and Médecins Sans Frontières.

CHAPTER 17

Addressing Disaster Risk in Informal Settlements

Credit: Leeanne Marshall (2014)

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1. BACKGROUND AND RATIONALE

1.1. What are the issues?

Improving the flood resilience of housing is an important challenge for communities living in informal settlements. Humanitarian agencies engaged in mitigation, preparedness, response, and recovery relating to housing and disasters have an opportunity to support their efforts. More than a billion people around the world live in informal settlements (UN-Habitat, 2016b). These areas are characterised by unregulated, impoverished, and difficult housing conditions. They are often on at-risk or marginal land, leaving them highly vulnerable to natural and human-induced hazards. While it is important to consider moving from areas with high disaster risk, an alternative is the concept of in situ upgrading.

This research focuses on the Pacific region, where informal settlements are growing as a result of rapid urbanisation. Floods pose a serious challenge to informal settlements in this region, yet little evidence has been gathered on building resilience in these specific contexts. Given the generally inadequate outcomes of relocation projects and lack of local building guidelines, in situ upgrading may build flood resilience of informal housing.

Upgrading of informal settlements may not be a typical example of humanitarian assistance, but it can be argued that the reactive approach of only responding after a crisis is not sustainable. By addressing the disaster risks in informal settlements, communities are better prepared for hazards, which reduces the need for humanitarian relief and response. It is an anticipatory and proactive form of humanitarian assistance. This chapter refers to housing rather than temporary or transitional shelter.

1.2 What is known already?

The growing worldwide trend of disasters has significant impacts on housing in informal settlements (see for example, Sanderson et al., 2020; Carrasco & Dangol, 2019; Abunyewah et al., 2017; Jones, 2017; Asian Development Bank, 2016; McCallin & Scherer, 2015). The impacts are most evident in rapid-onset disasters such as earthquakes. However, they are also evident in ongoing and recurrent events such as floods, which have a cumulative impact and economic cost, which the urban poor can ill afford. Furthermore, spurred by climate change, floods are becoming unpredictable and more widespread, and increasing in magnitude (Power et al., 2017; Braganza, 2012), amplifying the risk for informal settlements.

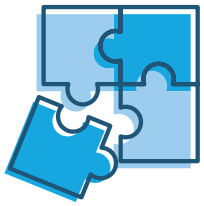
Although 80% of the world's informal settlements are in Asia and Africa (United Nations Statistics Division, 2021), small island developing states are also urbanising rapidly, accompanied by the growth of informal settlements (Connell & Keen, 2020). In many Pacific island countries, urbanisation is occurring at more than three times the global rate (Kuruppu, 2016).

The Solomon Islands is a case in point: although still predominantly rural, a high urbanisation rate of close to 5% has resulted in 25% urbanisation in 2020, jumping from 20% a decade ago (Plecher, 2020; UN-Habitat, 2012). Between 35 and 40% of the growing population in the capital city, Honiara, live in informal housing (Tonkin & Taylor, 2020a; Kiddle & Hay, 2017; UN-Habitat, 2012).

The concept of in situ upgrading of informal settlements is promoted by prominent international agencies, including the World Bank (2020) and United Nations (UN-Habitat, 2014c). Typically, upgrading projects include the provision of basic infrastructure and services

(Cities Alliance, 2014). Upgrading maintains existing community networks and livelihoods and provides the opportunity for social inclusion.

Relocation and resettlement is widely practiced in post-disaster contexts, often with the aim of reducing future disaster risk. The mixed outcomes of such projects have been widely discussed (Ahmed et al., 2020; Carrasco & Dongol, 2019; McCallin & Scherer, 2015; Jha et al., 2010; Shaw & Ahmed, 2010; Oliver-Smith, 1991). Extensive documentation of such resettlement projects indicates a range of negative social, economic, and psychological outcomes for the displaced and resettled communities. These include disruption of social and community networks, difficulty of accessing livelihood opportunities, and trauma, isolation, and marginalisation (Carrasco & Dangol, 2019; Chapman & Maki, 2018; Jones, 2017; McCallin & Scherer, 2015; Partridge, 1989). In many cases, the new settlements are uninhabitable, abandoned, or taken over by groups with higher incomes (Bah et al., 2018; Shaw & Ahmed, 2010). Relocation is also a much more expensive option compared to upgrading (Abunyewah et al., 2017; Trundle & McEvoy, 2016).



1.3 What evidence is missing?

While the positive social impacts of in situ upgrading of informal settlements are evident, there is little evidence specifically about in situ upgrading of housing and its implications for disaster resilience. Typically, upgrading projects focus on infrastructure and services (Bah et al., 2018; Ahmed, 2016). Very few projects deal with housing improvement, although housing is an essential and valuable asset. The work that does exist focusses on the impacts of rapid-onset disasters, such as earthquakes, on informal housing. Floods, with their persistent, regular, and cumulative impacts, are less featured. It is therefore important to examine whether in situ upgrading offers an opportunity for building resilience of informal housing to floods. Riverine floods are typically seasonal, and communities have adapted to them over centuries. However, urbanisation and climate change have made flooding patterns erratic and unpredictable, with high magnitude events causing severe impacts (see for example United Nations Environment Programme, 2019), making it an important area for research.

Much of the existing body of work on informal settlements, both research and practice, has been conducted outside the Pacific region. However, particular ways of building and living in Pacific contexts highlights a need for further investigation. Within the Pacific region, the most extensive informal settlements are in Melanesian cities including Honiara (Jones & Sanderson, 2017). Thus, Honiara offers valuable lessons that may benefit communities, government and non-government agencies, and researchers working in the Pacific region in the Shelter and Settlements sector. The growth of informal settlements across the Pacific region makes the Honiara case study relevant to the wider region.

The significance of informal settlements in the Global South and the bulk of related research and action is reflected less in the smaller cities in the Pacific region, pointing to an important area for research. Much of the recognition of the impacts of disasters on informal settlements focuses on rapid-onset events (such as earthquakes), while floods are less featured in the discourse. While Pacific island countries are known for coastal hazards due to climate change, less is known about inland riverine flooding in these countries. There is a need for a more comprehensive understanding of this hazard in the Pacific context within a broader global framework. Given the benefits of in situ upgrading, evidence is required on whether and how it can specifically support building resilience to floods. This could possibly be gained through in-depth community-based research.

1.4. What initiatives are underway?

Within existing practice there is a diversity of approaches to managing informal settlements. These are succinctly captured by Bah et al. (2018:222-223) as ranging from "... benign neglect, laissez-faire, forced eviction and demolition, resettlement or relocation, slum upgrading programs, and the adoption of enabling strategies" (also see Jones, 2017; Weksea et al., 2011; Arimah, 2010). A common approach followed by many governments in the Global South is to demolish informal settlements and evict residents. Even approaches termed as "slum rehabilitation" or "slum improvement" (Jones, 2017:2) that attempt to convey well-intended policies can in reality be eviction programmes. It is important to consider moving from areas with high disaster risk (McEvoy et al., 2020; Bah et al., 2018; Weerasinghe et al., 2014; World Bank, 2013). However, there is growing evidence that forced eviction should not be the basis for relocation, and that in situ upgrading for disaster risk reduction should be the first option (Chapman & Maki, 2018; UN-Habitat, 2018; McCallin & Scherer, 2015; Cities Alliance, 2014; Icaza, n.d.). Only in situations of extreme risk should relocation be considered.

1.5. What questions need to be answered?

This chapter describes research to understand how to approach affordable in situ upgrading of housing in informal settlements to improve resilience and reduce the impact of recurrent floods. The research will look specifically at the impact of such upgrading in the Pacific region, where this issue has received limited attention.

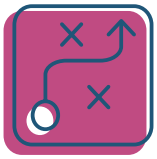
The primary research question is:

Does in situ upgrading of housing in informal settlements offer an opportunity for flood resilience in the Pacific region, and if so, how?

This is supported by three subquestions:

1. ***What form of investigative framework would allow collecting information and gaining knowledge relevant to in situ housing improvement?***
2. ***What are the barriers and opportunities to in situ upgrading of housing in informal settlements at the different stakeholder levels (communities, local authorities, etc.)?***
3. ***What lessons about the potential of in situ upgrading and impact can be drawn from the case of Honiara that may be applicable for ongoing research and/or adapted in other contexts?***

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

The research questions will be explored through the case of Honiara, Solomon Islands. A location-based approach allows a contextual understanding and exploring a research problem in detail. It can serve as a pilot project that can be undertaken with less funding than multiple

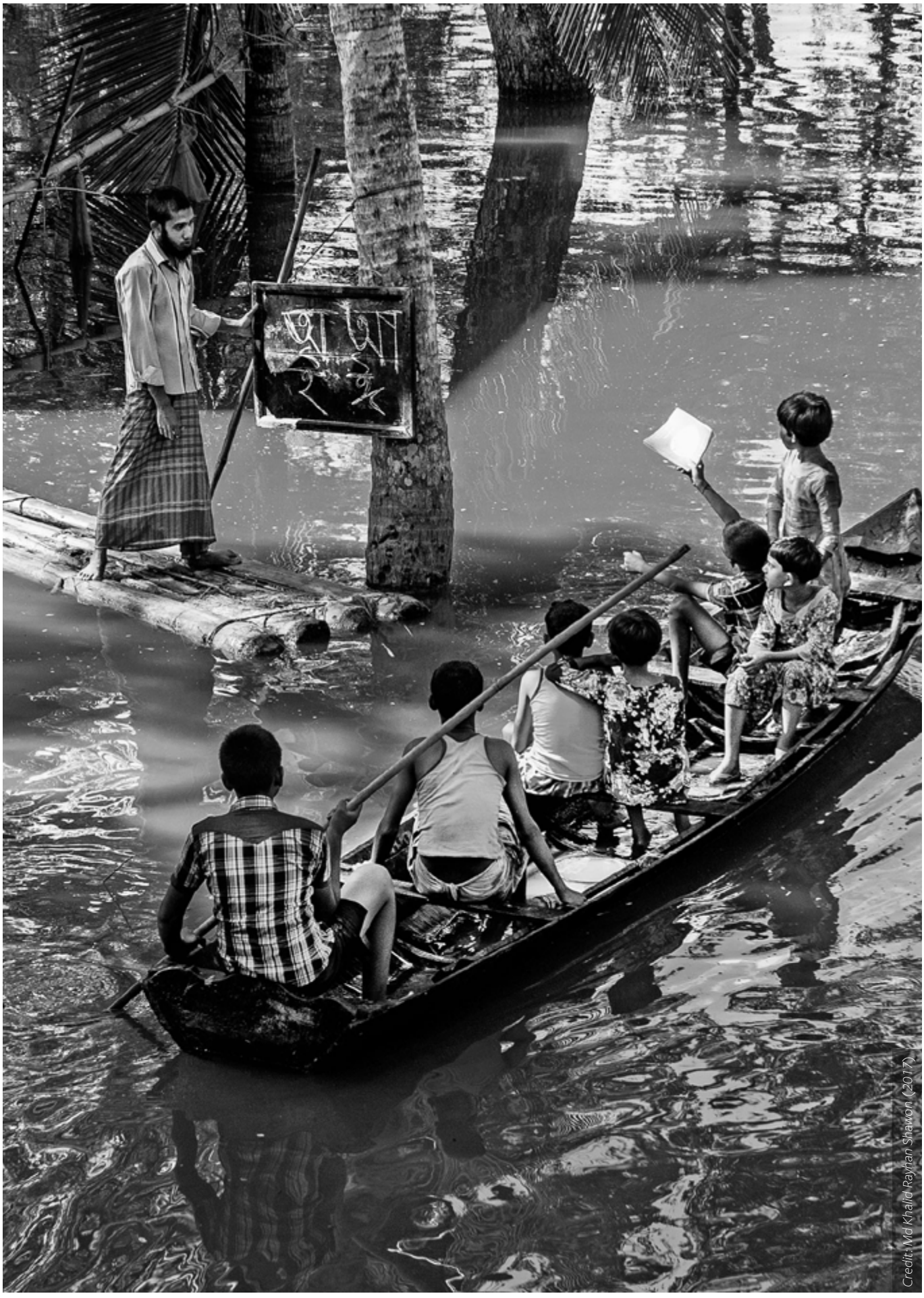
case studies. Honiara has similar conditions to other Pacific cities and can offer relevant lessons across the region and elsewhere in the Global South. The seminal work of Yin (2017) on case study research has informed the development of this chapter and should be further referred to during the research. As highlighted by Yin, case study research differs from statistical research. In this research, the research questions are meant for the researchers, not the participants, for whom other inquiry frameworks such as checklists and questionnaires should be designed. The lessons to be drawn from the Honiara case for other contexts will primarily be qualitative in nature, with limited context-specific quantitative analysis, involving the construction of a logic that is plausibly relevant to other similar situations.

The approach should predominantly be qualitative, as is typical in case study research. However, researchers should also collect some quantitative data, such as costs of building materials and construction and dimensions of houses and spaces and analyse that within the wider qualitative framework. The collected data should be subjected to thematic analysis involving a manual coding method to identify key themes. Researchers should follow a six-step process commonly used in thematic analysis, including familiarisation, coding, generating themes, reviewing themes, defining and naming themes, and writing up (Braun & Clarke, 2019; Caulfield, 2019). The thematic codes will allow earmarking recurrent and unique themes to inform recommendations for achieving resilience. The data from field investigations should be coded to identify the opportunities and barriers relating to in situ housing upgrading and possible ways to enable resilience of housing to floods.

The research methodology has three successive phases, corresponding to the subquestions above:

1. Develop an investigation framework relating to in situ housing improvement in informal settlements affected by floods. Drawing from a literature review and previous research engagements in Honiara, the framework should consist of questionnaires and checklists for participants to be used in the field during the next phase.
2. Conduct field research based on the investigation framework to gain empirical knowledge and understanding from communities and supporting organisations in Honiara to complement the literature review. The checklists and questionnaires should be used for on-site observations, interviews, focus group discussions, and community meetings. These activities should explore the opportunities and barriers to in situ upgrading experienced by communities and organisations and its potential for flood resilience.
3. Assess how the outcomes of the above two phases can offer lessons of wider relevance for other Pacific island countries that can be investigated through a larger multi-country research project. This should also indicate opportunities for adaptation elsewhere in the Global South.

Based on existing city-level risk assessments, the research should explore areas with the highest flood risk, and develop detailed community profiles, localised risk assessments, and building audits for detailed documentation. Other hazards such as cyclones and landslides can happen in conjunction with floods. Therefore, a multi-hazard approach will need to be explored, again informed by localised risk assessments. It may not be feasible to retrofit existing housing in higher risk zones, particularly where flood depth could be above 3 metres in a 1% Annual Exceedance Probability flood event (Tonkin & Taylor, 2020a). However, in the other risk zones with lower flood depths, it could be an option. There is evidence that many houses are already raised on stilts (McEvoy, 2019; Bruce & Marshall, 2018), and the research should study such local initiatives to understand opportunities for wider replication.



Credit: Md Khalid Rayhan Shawon (2017)

The research should explore the opportunity for a participatory community-based approach for in situ upgrading. Existing community development committees in informal settlements can be important focal points for building on existing construction skills through a training-of-trainers approach.

To support initiatives for housing improvement, there is a need for financial incentives. For example, a report by the World Economic Forum on affordable urban housing highlights the role of the private sector to "develop innovative ways of establishing creditworthiness and serving low-income households seeking to improve their informal housing" (WEF, 2019:43). The research should explore such housing finance options, particularly microcredit programmes. It should consider the existing system in Honiara of bank loans for building materials (McEvoy, 2019), and how that might benefit from capacity building and technical support.

2.2. Expected outcomes

This research aims to demonstrate how in situ upgrading can contribute to efforts to deal with floods in informal settlements. It should address the barriers and opportunities in a context where such efforts have largely been ad hoc, without support from any agencies.

This research can potentially form a basis for future building guidelines that are specifically targeted to the Solomon Islands. These findings may also be useful for the rural communities that experience floods and which mostly use traditional materials for housing. Current guidelines are largely based on Australian and New Zealand standards, which are not entirely relevant in the context of Honiara informal settlements. Such an approach was followed in a project in South Asia, where a "grey building handbook" was developed in local languages for informal sector builders, with a suite of safe building options to match different incomes and site conditions (Ahmed et al., 2018).

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

3.1. Potential contexts

Serious and persistent impacts by floods occur in Honiara, particularly on informal settlements. Flood impacts are the most pronounced on such housing, as it's often built with vulnerable materials and without following resilient construction guidelines. Such informal housing is expected to persist over the long term (Keen & McNeil, 2016).

After the 2014 flood, some government programmes, such as the April Ridge project, were initiated to relocate households from the Mataniko riverbank to a flood-safe area. However, the new location presented similar problems as discussed above. In the meantime, the growth and densification of existing informal settlements continue. This has led to construction of housing in many additional at-risk areas, such as steep slopes vulnerable to landslides (McEvoy, 2019; Trundle et al., 2016), creating multi-hazard risks.

There is limited land-use planning in Honiara. Building standard controls, particularly in informal settlements is generally lacking (McEvoy, 2019; UN-Habitat, 2012). Building codes are not easily accessible (Gwilliam, 2019) and building inspectors lack the capacity to monitor

the building process (Bruce & Marshall, 2018; UN-Habitat, 2012). Tenure security in Honiara informal settlements is a complex process with diverse arrangements (Bruce & Marshall, 2018; UN-Habitat, 2012). With such settlements expected to remain (Keen & McNeil, 2016) and possibly continue to grow, approaches for housing improvement will need to work with this reality.

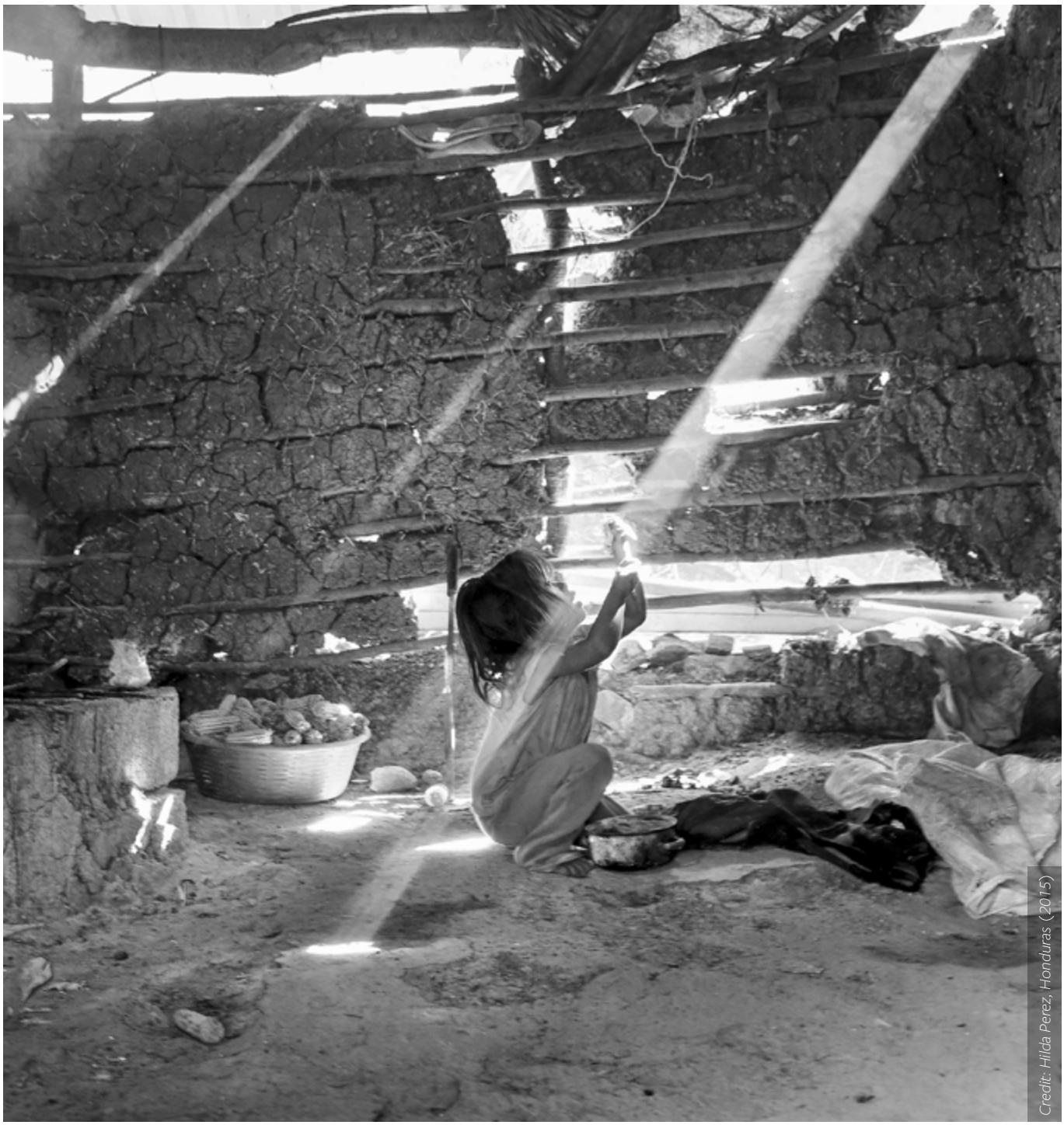
Construction is mixed. Corrugated iron sheet, timber, leaf thatching, and even cardboard and plastic are used in poorer housing (McEvoy, 2019; Bruce & Marshall, 2018). Almost 50% of the housing is of a single floor, sometimes elevated on stilts, with timber frame construction, although concrete posts are also used by those who can afford them (McEvoy, 2019; Bruce & Marshall, 2018; Trundle & McEvoy, 2016). However, neither the *National Building Code of the Solomon Islands* or *the Home Building Manual of the Solomon Islands* recognise such informal housing with mixed materials and traditional construction; they largely provide guidelines for formal housing (Gwilliam, 2019). Additionally, provisions for floods are not included (Gwilliam, 2019), nor does the Building Ordinance have such requirements (Tonkin & Taylor, 2020a).

3.2 Potential partners

The research could potentially be led by the University of Newcastle, Australia, and the Australian Red Cross, in partnership with organisations in the Solomon Islands. Key local research partners at the governmental level could be the Ministry of Lands, Housing and Survey, the Ministry of Infrastructure and Development, Honiara City Council, and the National Disaster Management Office. Non-governmental partners could include the Solomon Islands Red Cross Society and its local partners. These local organisations could assist in accessing local information and linking the research team to informal settlement communities for undertaking the field investigations. Their staff could also act as key informants for interviews and participate in focus group discussions. Private sector firms such as Tonkin & Taylor could be a technical research partner, given their extensive previous flood risk assessments undertaken for the World Bank (Tonkin & Taylor, 2019). Networks established with such partners in previous work can be built on with potential for a wider multi-stakeholder engagement.

CHAPTER 18

Integrating Geoscience and Community Hazard Knowledge



Credit: Hilda Perez, Honduras (2015)

Susanne Sargeant
British Geological Survey

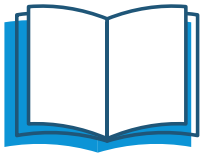
Beth Simons
CARE International UK

1. BACKGROUND AND RATIONALE

1.1. What are the issues?

In this chapter, we propose research to explore how existing roadmaps for integrating scientific and community knowledge for disaster risk reduction (DRR) could be adapted for use in shelter programming, and what would need to be in place to do this successfully. People recovering from disasters caused by natural hazards always do so in dynamic, multi-hazard environments. This can have a significant impact on people's exposure and vulnerability to both future frequent localised hazards and infrequent large events. Consequently, geoscience knowledge and expertise, taken here to include information on hazards relating to the physical environment (such as earthquakes, floods, landslides), hydrology and hydrogeology, soil and ground conditions, and weather and climate, is vital to inform assistance given to people as they recover and increase the likelihood of shelter programming leading to reduced disaster risk.

Post-crisis can be an opportunity to reduce shelter vulnerabilities, well known within the Shelter and Settlements sector as "build back safer." Supporting shelter self-recovery within multi-hazard environments requires an approach informed by affected communities and various scientific and technical disciplines including geoscience, which can provide context on aspects of the physical environment impacting recovery. For example, communities could indicate areas of localised flooding to inform "build back safer" messaging, which could be corroborated where necessary by geoscientists. Collating information on approximate slope angles and soil types within context analyses could inform landslide risk management. Effectively incorporating geoscience and community knowledge into programme planning could, therefore, lead to enhanced shelter recovery outcomes, contributing to longer-term disaster resilience of shelter. To achieve this, community, shelter, and geoscience knowledge must be integrated, which is challenging (see for example, Gaillard & Mercer, 2012). Although there are ongoing efforts in DRR programmes, it is not commonly part of humanitarian shelter and settlements operations.



1.2 What is known already?

Significant work has been conducted on integrating different knowledge for decision making (for example, Gaillard & Mercer, 2013; Jones et al., 2012; Mercer et al., 2010). Jones et al. (2012) outline issues to consider when integrating types of key knowledge at the knowledge-policy interface, which are relevant for this research. These are:

- Research-based knowledge from scientists, university researchers or professional organisations (here, geoscientists).
- Practice-informed knowledge from organisations with practical experience of working at the knowledge-policy interface on specific topics, which could include shelter practitioners.
- Citizen/lay knowledge from communities and the groups or organisations that represent them.

Jones et al. (2012) highlight ways in which the knowledge these actors have is different. Many of these different types of knowledge are rooted in the rules, values, and norms of each group and will present challenges to integrating their knowledge.

Integrating community knowledge in shelter programmes

The Shelter and Settlements sector uses response approaches that rely on local knowledge. For example, provision of shelter tool kits or cash assumes that people will build using techniques they know and that are tailored to their local environment, using local resources. Evidence from research and practice shows how integrating community knowledge in shelter construction, for example by adapting local construction techniques, enhances uptake of shelter DRR messaging and leads to positive community perceptions of projects (Hendriks, 2020; Crété and Moles, 2019; Larraza et al., 2018). Prior to a crisis, community knowledge of hazards and coping strategies during disasters has been shown to be important in reducing damage to homes in numerous contexts (see for example Mavhura et al., 2013). However, fully integrating community knowledge into programming is often overlooked, and DRR measures relating to shelter reconstruction are often not adopted (Lyons et al., 2010).

Integrating geoscience knowledge and shelter

Aspects of geoscience are integrated into sector tools, such as the Shelter Response Profiles (see for example Global Shelter Cluster, 2018c), which contain information on hazards and the environment. Additionally, the Settlement Profiling Tool (UN-Habitat, 2020b) requires information on climate change risk. Numerous tools are provided by EHA Connect for DRR and Shelter and settlements programmes incorporating geoscience. They include the use of remote-sensing data on land use and acknowledging additional risks resulting from climate change in reconstruction (EHA Connect, 2020). Information on hazards in post-crisis contexts may be produced by geoscientists, for example to support the landslide response in Freetown, Sierra Leone in 2017 (British Geological Survey, 2017).

Fully integrating geoscience knowledge into shelter practice is challenging. It takes time and resources to build trust and for people to learn to work together effectively, as Sargeant & Lindquist (2016) found during a workshop to increase use of earthquake information in decision making for NGOs in Bangladesh. While workshop approaches can lead to positive outcomes, they are not practical in a response, especially if there are no pre-existing relationships to build on. Participants in a July 2020 workshop to explore linkages between geoscientists and shelter practitioners identified various challenges in working together in post-crisis contexts. These included:

- the lack of interaction between geoscientists and shelter practitioners prior to an emergency to build relationships and networks needed for knowledge exchange
- humanitarian funding priorities limiting the scope for shelter practitioners to work with scientists on DRR activities
- the incompatibility between the scale and level of information required by humanitarians and the level of simplification judged to be acceptable from a scientific perspective (Simons & Sargeant, 2020).

Integrating scientific and community knowledge for DRR

Gaillard & Mercer (2012) highlight the need for an approach that integrates "local knowledge," which they define as experiential knowledge, and "scientific knowledge," gained through formal education. This would inform DRR activities in a way that ensures communities have a key decision-making role in the process. They identify three main challenges to integrating knowledge:

- The lack of trusted tools to allow multiple stakeholders to work together in a way that accommodates each group's knowledge, expertise, agency and capacity to act, and manages power asymmetries within the group.

- The lack of practical frameworks to support integration of knowledge, although there are examples (see Gaillard & Mercer, 2012, for details).
- The lack of institutions and policies supporting the integration of scientific and community knowledge for DRR.

Gaillard & Mercer (2012) believe a key issue that must be addressed is the lack of spaces for the different knowledge holders to come together and build trusted relationships and mutual understanding.

The roadmap for integrating knowledge for DRR proposed by Gaillard & Mercer (2012) has two stages (Figure 18.1). The first is where local and scientific knowledge come together to inform a risk assessment. This is then used in discussions between stakeholders including communities, scientists, NGOs, and authorities in the second stage. Those discussions lead to a range of top-down and bottom-up activities. In theory, these stages should set the scene for positive action. Although Gaillard & Mercer (2012) recognise the complexity of integrating knowledge and actions for DRR, our objective is to determine whether such a roadmap might be adapted for a humanitarian context and the impact this has on shelter outcomes.

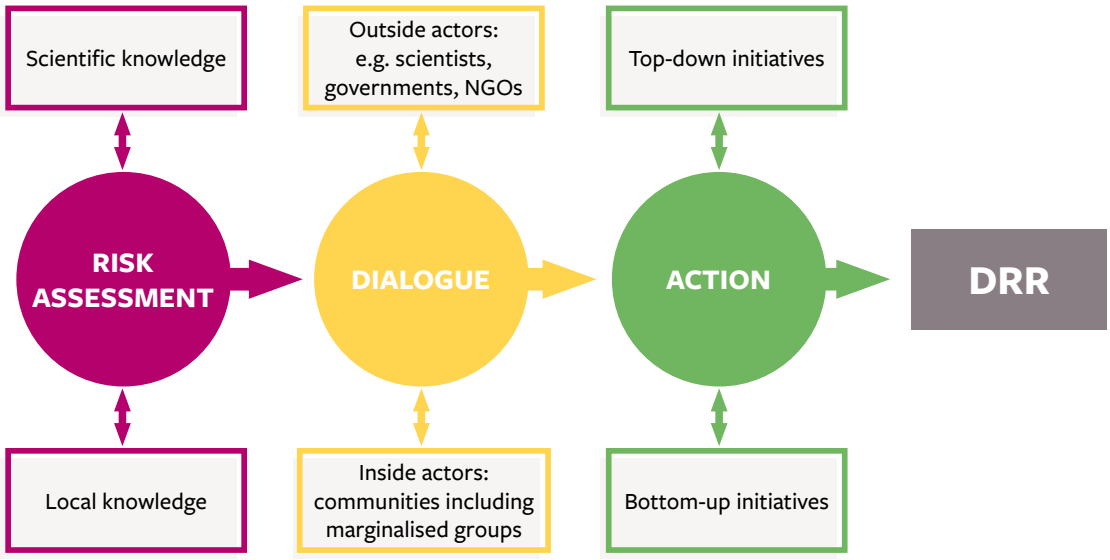
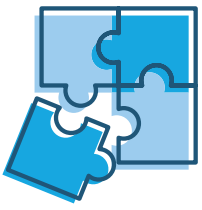


Figure 18.1. Guide for integrating local and scientific knowledge and actions for DRR. (Source: Gaillard & Mercer, adapted for this document) (2012).



1.3 What evidence is missing?

A recent report rated the impact of shelter programming on DRR as "weak" (InterAction, 2020:13). In an evidence synthesis of the shelter sector, it was considered that shelter programming often doesn't consider local knowledge and nuances and a "one size fits all" approach to programme design that did not sufficiently consider local hazards hindered programme implementation and outcomes (Maynard et al., 2017:50). Johnson et al. (2016) indicate that forming DRR strategies in different contexts to communities leads to ineffective responses. Finally, *The Sphere Handbook* (Sphere Association, 2018) states community hazard and risk assessments should guide humanitarian activities, but this is rarely acknowledged in case studies or evaluation reports, although participatory tools for hazard assessments such as *Participatory Approach for Safe Shelter Awareness* (PASSA) exist. Better evidence of where community knowledge has informed strategies and the impact this has on shelter outcomes is required.

There is acknowledgement that multidisciplinary approaches are valuable, leading to effective

programmes (InterAction, 2020). Multidisciplinary working, including science, is indicated as a lesson for enhanced shelter resilience for major disasters, including the 2010 earthquake in Haiti (GFDRR, 2016). Furthermore, there are few post-disaster shelter case studies and evaluation reports addressing recovery in multi-hazard environments, but why this is remains unknown. Evidence of integrated DRR approaches and their impact on shelter resilience is weak in all contexts (InterAction, 2020).

There are few shelter practitioners with a geoscience background, and the level of geoscience capacity in U.N. agencies, NGOs, and state and local government actors should be established. Gaps exist in understanding how the different groups—geoscientists, shelter practitioners, and communities—find each other and then access space for dialogue. There may be evidence, not articulated in the literature, that could provide insight into the tools, procedures, and processes needed to facilitate this (for example, geoscience-humanitarian networks or changes to humanitarian or academic practice). Identifying what may support these networks would help geoscientists to understand the information shelter practitioners often require and how they work. It could also establish connections between practitioners and scientists in affected countries before a disaster happens.

Understanding the tools used in shelter and DRR practice that value community experience and knowledge and how this supports shelter outcomes would be beneficial to understand where and how geoscience knowledge could be incorporated. As part of the research proposed here, understanding whether integration of geoscience knowledge in shelter programming leads to enhanced shelter recovery is a key gap to address.

1.4. What initiatives are underway?

Geoscientists and shelter and settlements practitioners have contributed to a multidisciplinary investigation of shelter self-recovery (Twigg et al., 2017). Following this, research on integrating geoscience and community knowledge for shelter resilience has been undertaken by Stephenson et al. (2018), and the way the physical environment influences self-recovery is considered by Sargeant et al. (2020). Another self-recovery project (Self-Recovery, 2019) is currently underway to develop best-practice guidance for the Shelter and Settlements sector to support self-recovery. This requires a holistic approach that is informed by multiple disciplines, including geoscience, to ensure that the influence of the physical environment on recovery is considered.

Through these activities, there is now an established relationship between the British Geological Survey (BGS) and CARE International UK, which led to geoscience information being provided and used in shelter response (see Simons & Sargeant, 2020), demonstrating the value of making connections prior to crises.

Academic research on knowledge exchange to inform building practice is ongoing (see for example Hendriks & Opdyke, 2020) and there are projects linking community knowledge, engineering, architecture and shelter (Humanitarian Frontiers Lab, 2020; Global Projects and Organizations Research Group, 2017; SHERPA, 2017). There are also many examples of linking community and scientific knowledge for DRR (McWilliam et al., 2020; Visman, 2014; Mossaic Project, 2013) and shelter resilience (see for example Mikulec & Richardson, 2018). Outside of shelter self-recovery research, there do not appear to be any significant initiatives underway involving the triad of geoscientists, shelter practitioners, and communities in crisis settings. We speculate that this may be due to lack of interaction and understanding between the different groups about the potential benefits of working together, echoing the observations of Jones et al. (2012, chapter 4) but we see that this is beginning to change.

1.5. What questions need to be answered?

The primary research question is:

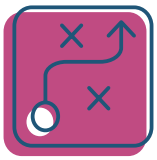
> ***Can approaches for integrating geoscience and community knowledge in multi-hazard DRR be applied in shelter practice?***

This is supported by two subquestions:

1. ***If so how, and what would need to be in place?***
2. ***Could this approach lead to enhanced multi-hazard shelter resilience?***

Short-term shelter programming has the potential for lasting positive DRR outcomes. Poor shelter can be a major vulnerability in multi-hazard environments, so provision of adequate shelter that incorporates DRR and is informed by community and geoscience knowledge is vital to manage risk and protect development gains. This aligns with the Global Shelter Cluster approach of supporting self-recovery and promoting climate and disaster-risk aware communities (Global Shelter Cluster, 2018a).

2. RESEARCH METHODOLOGY AND OUTCOMES



2.1. Methodology

Literature review

The main focus for review will be on how scientific and community knowledge are integrated in response. Researchers should review academic literature, shelter case studies, and evaluation reports for multi-hazard approaches, community-led DRR, and incorporation of geoscience knowledge in programming. They should review approaches for integrating scientific and community knowledge in DRR to identify one, or develop a hybrid of several, that can be used as the basis for the field research.

This will produce an understanding of current discourse on the integration of community, scientific, and shelter knowledge for DRR on which to build a model, or models, that can be used as a focus for field research, detailed in a short report.

Field-based research

For each country, review the national DRR policy and practice landscape, before focusing on understanding how this manifests at the community level and translates into shelter programming. The communities where the research will be conducted should be identified in collaboration with practitioner partners.

Phase 1—Context analysis

This phase should include a document review of the country-level, socio-political/environmental landscape, including current relevant DRR and disaster risk management policies, relevant institutions, activities and any relevant "build back safer" messages developed. This will inform the stakeholder mapping in Phase 2.

Phase 2—Stakeholder mapping

Stakeholder mapping should identify community representatives, policy makers, practitioners, and geoscientists. Researchers should:

- Use the knowledge integration models from the literature review, discuss with stakeholders, and identify opportunities and challenges.
- Complete surveys and discussions with local communities to establish shelter condition and community approaches to hazard management.
- Establish baselines for indicators to measure the impact of this approach on multi-hazard shelter resilience.
- Develop and implement a model for integrating knowledge that is grounded on the experiences of communities, shelter practitioners, and geoscientists.

Phase 3—Consultation

Present findings to the shelter sector and consult through four 1-day workshops (one in each country and one at the global level) and a sector-wide survey about how practice could be modified to encourage greater integration of scientific and community knowledge.

Researchers should present findings in all the research contexts to the communities, geoscientists, and shelter practitioners involved in the research for discussion. The aim of this is to start to build relationships between these groups, to share experiences from other locations, and consider how to integrate community and geoscience knowledge.

This phase should also include a final report back to the communities on the findings of the project.

Phase 4—Follow-up visits

Follow-up visits will allow researchers to assess changes against baseline resilience, improved networks, and knowledge indicators. They should take place no less than six months after initial fieldwork.

2.2. Expected outcomes

The research should generate outputs relevant to communities, such as mechanisms for integration of their knowledge in shelter programming and their own construction practices. Additionally, outputs should be generated for shelter practitioners, policymakers, and researchers, including peer-reviewed articles for academic audiences and working papers for practitioners and policy makers. Publications should outline models and recommendations for integrating community and scientific knowledge in post-crisis contexts that could be applied in different settings. How this supports shelter resilience should be a central message for all outputs. Dissemination through Shelter Forums and relevant conferences, and within countries of study is essential to reach target audiences. Outputs for communities should be developed in conjunction with local organisations to ensure that they are appropriate and useful.

This research should demonstrate the value of integrating different types of knowledge for shelter resilience and increase understanding about how to do this. By building the evidence base for effective shelter DRR approaches, practice can be adapted to incorporate new approaches and enhance a key co-benefit of shelter and settlements programming in recovery and DRR. Strengthened relationships and increased understanding between geoscientists, communities, and shelter practitioners should facilitate efficient co-working in emergency contexts and support community recovery more effectively.

3. RESEARCH CONTEXTS

Annex A describes general research risks and limitations that might apply to all chapters, including this one.

This research provides an opportunity to engage with both local and global shelter practitioners and academic partners. The contexts suggested (Nepal, Ethiopia and the Caribbean) are diverse multi-hazard settings with repeated disaster events, so they will offer different views of all aspects of the knowledge integration process.

Nepal

Nepal has repeat disaster events such as flooding and landslides, as well as having had a major earthquake in the last decade. There are numerous, well documented shelter vulnerabilities in both urban and rural contexts. Geoscientists contributed to the national DRR framework formulated after the 2015 earthquakes. There are strong local geoscientist links with the Housing Recovery and Reconstruction Platform (HRRP) and a knowledge intermediary, the National Society for Earthquake Technology (NSET). Nepal provides an opportunity to establish whether geoscience, shelter, and community knowledge can be integrated to effectively reduce shelter vulnerabilities and establish the potential value of geoscience in urban contexts.

Ethiopia

Ethiopia has numerous natural hazards, including flooding, earthquakes, volcanoes and drought, and conflict displacement with associated shelter vulnerabilities. Hazard risk profiles for DRR exist at regional and some local levels and are held by the Disaster Risk Management Office, which is the Shelter and NFI Cluster co-lead (National Disaster Risk Management Commission at national level). A Shelter Response Profile exists for the country (Global Shelter Cluster, 2018c), with information on hazards and local building practices. International links between geoscientists and the BGS and Addis Ababa University in Ethiopia represent an opportunity to investigate the factors behind the apparent disconnect between geoscientists, shelter practitioners, and communities.

Caribbean

The Caribbean region is exposed to numerous hazards, particularly tropical weather, and has ongoing economic and climate migration. For example, Haiti, the Dominican Republic, and Dominica have had widespread documented shelter vulnerabilities in recent disasters. The regional intergovernmental agency, CDEMA, has a strong DRR mandate and there are close links between the BGS and local geoscientists in parts of the Caribbean through ongoing research programmes.

ANNEX A

Research Ethics and Risks

TWO GUIDING PRINCIPLES

The contributing authors identified a number of research ethics issues, either relating specifically to a particular topic under discussion or to humanitarian research more generally. To avoid duplicating them in different chapters, we extracted and consolidated them.

Two fundamental principles stand out.

The first is do no harm. To apply that principle, all researchers have a responsibility to:

- Ensure the safety of respondents and themselves.
- Protect confidentiality.
- Undergo training to ethically address disclosures of violence, trauma, and identify referral pathways.
- Institute safeguarding procedures to protect particularly vulnerable groups, such as women, refugees, and persons with disabilities.

The second principle is participation and collaboration. This requires researchers to:

- Put affected populations at the centre of research and programme design and implementation.
- Partner with local researchers to understand social, cultural, and political contexts.
- Access vulnerable individuals and groups, using local organisations and specialists.
- Establish accountability mechanisms, including safe and anonymous feedback mechanisms.

Additional technical and contextual risks may remain to be considered.

To avoid harm, researchers should promote voluntary, representative participation

Community and stakeholder participation in the proposed research should be voluntary, so researchers should obtain informed consent from participants. Consent procedures should ensure that the research and its objectives are communicated fully and clearly to participants and other stakeholders.

Data should be collected and stored with confidentiality ensured, according to relevant legislation or codes of practice. Academic partners have an important role in overseeing and facilitating research design, rigour, and ethics approval and in providing or supporting research training for local partners. Humanitarian partners have an important role in reviewing research questions to ensure their relevance and facilitating safe and secure access to the field, including safeguarding measures.

In general, researchers should take a reflexive approach and beware of ethnocentrism (that is, evaluating other cultures according to preconceptions arising from the standards and customs of one's own culture). To that end they should follow relevant practitioner research and ethical codes to ensure community safety, dignity, rights, inclusiveness, and well-being. Research plans, designs, and protocols should pass through an ethical review process. Academic and operational partners should submit their research plans to their institutions' ethics committees. At a minimum, review of design and protocols by peers with relevant expertise can provide researchers with the support to engage with the ethical dimensions of working with vulnerable populations.

To promote participation and collaboration, researchers must engage with local partners

Some projects propose participatory research/participatory action research (PAR) approaches where researchers and participants work together in research design, data collection, and analysis. In such cases, the process of research is as important as the outcomes, because participants' skills, knowledge, and capacities are developed through the research experience. PAR also decreases power imbalances between researchers and participants

Researchers should also avoid unintentionally excluding or favouring particular communities and individuals. Such bias can be mitigated by adopting an inclusive, equitable partnership approach to the research, and through reflexive and inductive approaches to research design and knowledge production. Researchers must also be aware that participatory processes can (and should, where possible) challenge existing power imbalances to create more equal engagement of community members; but this is hard to achieve if the engagement is only short term. Choosing facilitators with experience and knowledge of the local context is crucial.

SPECIFIC CONSIDERATIONS

Conflict settings

Home and belonging can be difficult and sensitive subjects. This may be especially true for people who have lost family members or are traumatised by a crisis. To mitigate the risk of insensitivity and re-opening old traumas, researchers should adopt a methodology that fully involves the community. This should include activities that work with and are co-designed by the community, such as workshops and disaster preparedness. The involvement of local NGOs and community organisations in the design and execution of the fieldwork will help limit potential risks and be vital to the successful outcome.

Security, safety, and health concerns can restrain physical access to affected populations. A lack of telephone and internet signals may also limit remote access. To mitigate this risk, researchers should select locations that offer access through organisations engaged in direct implementation. Remote assessment techniques, currently being explored by IOM and other agencies, should also be explored along with proven remote profiling mechanisms, such as the IOM Displacement Tracking Matrix.

Depending on the political landscape and intentions of different governments, some government bodies or local authorities may obstruct organisations' involvement in the research and dissemination of the findings, affecting their ability to operate. To mitigate this risk, researchers can consider involving local authorities, government bodies, and non-state actors early in the process to align visions and promote productive collaborations.

Variables change between conflict contexts and within a given conflict over time. This makes it difficult to gather evidence from case studies reflecting the global context. To account for these variables, comparative case study analysis can be conducted to reflect varying magnitudes and durations of the conflicts and varying geographical and cultural contexts.

COVID-19

Covid-19 presents widespread and potentially deadly risks to field researchers everywhere. The pandemic's spread, together with rapidly changing patterns of infection, require all researchers in the field to be responsive and adaptable to local conditions.

Fieldwork will expose research personnel, local partners, and communities to the risk of infection. All members of field research teams should be fully briefed and trained in appropriate safety and security protocols, with a risk management plan developed by the research team and updated regularly (on a monthly basis). Infection spreads

and levels in the study areas should be monitored and responded to promptly. An adaptive, flexible and mixed approach to operational management and research is needed, and it should be built into project plans from the outset. Travel and social distancing restrictions may change at short notice.

International travel to conduct research in person is generally discouraged at present. Research projects and operational programmes are putting more emphasis on engagement of local partners or researchers where this can be done safely, and particularly on the use of remote methods for collecting field data. Research can be initiated and directed remotely, but recruitment of local data collectors and respondents will have to be facilitated by local partners. Field research and convening of key informants and community groups may be not viable in many places during the pandemic. Covid-19 restrictions in country will determine group sizes, meeting opportunities, and general access. Local stakeholders will have competing priorities, particularly the need to provide assistance to affected people. Local partners and researchers may also have to conduct some or all of their research remotely, even where in-country travel is permitted. They should receive clear guidance and training for this.

The coming months and years are likely to see much more online engagement and more limited field-based work by local partners, with guidance and support provided through online communications. Remote research can be an effective, viable approach, depending on the capacity of local researchers and practitioners and the level of in-country travel restrictions. ICTs and social media are likely to play a key role in carrying out remote research: technologies already exist for this (e.g. WhatsApp and other group chats, Zoom meetings, interactive surveys on phones or tablets, language technology, GIS) and are being used in a variety of research projects.

On a more positive note, the restrictions imposed by the pandemic also provide opportunities to 'localise' research, to increase research capacities in country, and to strengthen links with local universities: this could encourage more locally relevant research agendas.

LGBTQIA+ and people with diverse SOGIESC

"Do no harm" concerns may discourage some organisations from engaging with people with diverse SOGIESC. Criminalisation and societal marginalisation among displaced and host communities are often cited as reasons why humanitarian actors draw back from diverse SOGIESC inclusion in needs assessments, service delivery, and other community engagement contexts. However, as doing nothing may perpetuate existing harm, an obligation exists, as affirmed by the *Core Humanitarian Standard* (CHS Alliance, 2014), to acknowledge and overcome barriers. Mitigating measures need to be context specific but should involve support of local diverse SOGIESC organisations or informal networks, use of peer researchers, identification of safe spaces, robust consent and data management, and suitable training for staff. Risk management measures regarding the safety and well-being of researchers that are SOGIESC diverse will also need to be instituted in communities that criminalise such groups.

Children

Research that involves the participation of children will require both parental consent and the child's assent, which refers to a child's affirmative agreement to participate in a study. Researchers must take the necessary steps to reduce the sense of intrusion or discomfort that children may experience during the research process, accounting for the impact of the child's social, emotional, and mental status may have on the child's ability to make informed decisions and exercise their agency (Maglio & Pherali, 2020). Particularly in crisis-settings, the tensions between a child's right to be "properly researched" and the "do no harm" principle heighten and researchers may need to conduct additional risk assessments to prevent traumatisation or re-traumatisation (Hart & Tyrer, 2006).

In some cases, participation can do more harm than good. For instance, many projects understand and use participation only as a consultation process where children are asked to choose between options, but do not have a say in what the options are. Moreover, working with a selected group of the community can increase segregation and internal divisions. Understanding the local context and the diversity of people and their lives is fundamental to planning the co-design process. As participation involves very vulnerable children and people, safeguarding

policies need to be in place. To ensure ethical considerations of children's rights and well-being are in place, the six principles for children's participation outlined by the International Bureau for Children's Rights (2018) should be applied to co-design processes and underpin the research process.

In some contexts, it may also be challenging to argue for children's participation, as children are not seen as experts. Therefore, it can be difficult to show how children can contribute to built environment interventions and to improving the final outcome. Children's participation will need to be valued by all stakeholders in order to be an integral part of the process.

Women

The safety of women, particularly those who experience(d) gender-based violence, should be factored into all project decisions. Researchers should consider whether questions regarding violence should be included in a study or if warning participants about sensitive topics that will be raised is sufficient. Special considerations will be needed for studies conducted in countries where laws require professionals such as researchers to report cases of abuse to local law enforcement authorities or social service agencies.

Obtaining community support will be important to ensure the success of a research study, especially to solicit participation. However, if studying how shelter and settlements programmes with an intrahousehold tenure security element affects the prevalence of violence against women, researchers may need to consider describing the study in more general terms. According to the World Health Organization and PATH (2005), framing such research with general terminology such as a "study on women's health" may be necessary in more conservative communities as to not jeopardise the safety of participants.

In addition to Annex B, other relevant codes, standards, guidance, and research studies identified by the chapter authors and the editors include:

- CHS Alliance (2014)
- Ellsberg & Heise (2005)
- Hart & Tyrer (2006)
- Humanitarian Health Ethics (2021)
- International Bureau for Children's Rights (2018)
- Maglio & Pherali (2020)
- Mezinska et al. (2016)
- Mfutso-Bengo et al. (2008)
- O'Mathuna (2015)
- Singapore Statement on Research Integrity (2010)
- Smith & Blanchet (2019)
- Thorley & Henrion (2019)

There are also many online papers, articles and blogs on data collection and analysis approaches and methods during the COVID-19 pandemic:

- ARC (2020)
- IMPACT (2020)
- Lupton (2020)
- Samuels (2020)
- Wood et al (2020)
- Ziegler & Mason (2020)

ANNEX B

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