

Research Report

# Shelter Self-Recovery in Vanuatu



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# ACRONYMS

BBB	Building back better/safer
CDCCC	Community Disaster and Climate Change Committee
CGI	Corrugated Galvanised Iron
DESPAC	Department of Strategic Planning and Aid Policy Coordination
DoF	Department of Forestry
DoLA	Department of Local Authorities
DRR	Disaster Risk Reduction
FGD	Focus Group Discussion
HH	Household
IFRC	International Federation of Red Cross and Red Crescent Societies
IOM	International Organization for Migration
KII	Key Informant Interview
LRTC	Lume Rural Training Centre
NDMO	National Disaster Management Office
NGO	Non-Governmental Organisation
PATCH	Pentecost and Ambrym Tropical Cyclone Harold shelter response project
RQ	Research Question
SCV	Shelter Cluster Vanuatu
SFP	Shelter Focal Person
TC	Tropical Cyclone
TVET	Technical and Vocational Education and Training
VMF	Vanuatu Mobile Force
VRCS	Vanuatu Red Cross Society

# EXECUTIVE SUMMARY

1. This research project aimed to explore the lived reality of communities in Vanuatu recovering from major disasters and to understand the impacts of interventions by humanitarian organisations such as CARE, and thereby develop guidance for shelter self-recovery projects. The research was guided by the following three research questions, which informed the structure of this report:
  - Research question 1 (RQ1): How is self-recovery understood by different stakeholders?
  - Research question 2 (RQ2): How has community self-recovery and support for self-recovery changed since Cyclone Pam in 2015?
  - Research question 3 (RQ3): What interventions and strategies are used by communities to support shelter self-recovery and enhance DRR practice?
2. There were three island research sites – Tanna, Maewo and Pentecost - that were affected by different disasters where self-recovery interventions were implemented. Tanna was affected by TC Pam in 2015 and the work by CARE there represents an earlier stage of the application of the self-recovery approach. Maewo relocated people from the nearby island of Ambae after volcanic activity from 2017 and the self-recovery work by CARE consisted of support for the new settlers to build houses that would provide safety from future disasters, which the existing community had the opportunity to utilise as well. Pentecost was severely affected by TC Harold in 2020 and CARE undertook an extensive shelter self-recovery there that included a variety of inputs including provision of training, materials and equipment.
3. The research methods involved data collection in the research sites through FGDs and interviews of community key informants and households, supplemented by interviews of staff members in key organisations. Thematic analysis of the data was conducted, following a qualitative approach, drawing mainly from the primary data with reference to some key secondary literature.
4. The findings of the research are structured along the lines of the above three research questions, consistent with the structural logic and sequence of the data collection tools.

## 4.1 Understanding recovery (RQ1)

- 4.1.1 The initial community recovery process consists of salvaging materials from damaged homes to build a temporary shelter. People might live in inadequate shelter over an extended period after a disaster as they incrementally improve their dwellings. Self-recovery projects of organisations such as CARE focus on incorporating a degree of safety so that such shelters would be resilient. Tarpaulin sheets provided as emergency relief assist in protection in the interim before more durable options are available.

4.1.2 There appeared to be a lack of clarity at the community level on the concept of self-recovery as an assisted self-help process indicating the need for translating it to that level. At the level of organisational staff, more clarity was evident, and several staff members highlighted the merits of the approach.

4.1.3 The issue of traditional versus modern building materials is significant in a context where many people aspire for modern houses. However, poorly constructed modern houses pose a risk in disasters and there are examples of shelter made of traditional materials that provide safety. Affordability is a key issue with low cash flows in rural areas, thus organisations such as CARE aim to support the use of traditional materials with safety features using a limited set of modern materials such as cyclone straps, wire and nails, together with training based on SCV guidelines on safe construction.

#### 4.2 **Multiple disasters – then and now (RQ2)**

4.2.1 A key purpose of shelter self-recovery is to enable communities to build back better/safer (BBB), which has stepped up in Vanuatu since TC Pam. This involves incorporating safety features in shelter that allow a degree of resistance and reduces the need for repair and rebuilding after a disaster. The BBB message was found to have gained ground through CARE's efforts in the research sites.

4.2.2 The supply of natural materials is important for self-recovery but can be affected by the loss of vegetation in a disaster; people in Pentecost were facing an acute shortage of *natangora* thatching material. CARE's support to chainsaw operators to harvest timber from trees fallen by the cyclone addressed the problem of materials shortage, though people will need to wait for some years before the *natangora* and bamboo to grow back to be able to fully rebuild. There is an overall growing problem of a diminishing supply base of natural materials, pointing to the need for sustainable forestry initiatives.

4.2.3 A review of organisational interventions indicated gaps in the government's work at different levels. While there were critiques of the work of NGOs, there was also appreciation. The SFP model that evolved since TC Pam was found valuable as well as the overall self-recovery support by CARE.

#### 4.3 **Knowledge exchange, the role of different communities and shelter DRR (RQ3)**

4.3.1 An important element in shelter self-recovery is knowledge exchange to develop local capacity and awareness in safe building practices. This is undertaken by organisations such as CARE through training programmes and demonstration by building safe houses. The training of SFPs is important in this regard, as well as others such as chainsaw operators.

Strong resilience and traditional knowledge exist in communities, which is a resource that self-recovery initiatives draw upon.

- 4.3.2 The role of different communities is illustrated by the specific case of relocation in Maewo. Here the original plan of the government to establish a large permanent settlement did not materialise and people were disappointed by the failed promise. This impacted a self-recovery type project of the government where people could not or did not complete a shelter for which a structural frame was provided. The relocation created pressure on the existing community, but even then, there was evidence of strong community-to-community support.
- 4.3.3 The gender strategy of CARE had resulted in positive outcomes in a strongly male-dominated context. This is particularly reflected in the development of a cadre of trained women SFPs, which was recognised by the local male Chiefs. There were still challenges with the continuing economic reliance on men and limited involvement of women in machinery-related trades, pointing to the need to continue gender-based initiatives.
- 4.3.4 Low income is a key factor contributing to vulnerability and is compounded by various factors such as being a woman, elderly, single mother and/or widow, or having a disability, and limited access to knowledge and skills. Self-recovery projects of organisations such as CARE therefore place priority in addressing the needs of the most vulnerable. At the same time, there was strong social capital in communities ranging from the family to community to community-to-community levels, a valuable resource for self-recovery programmes.
- 4.3.5 Incorporating DRR features into shelter is a key aim of self-recovery programmes. In addition to physical improvements to shelter, training at the community level based on safe construction guidelines have raised community awareness. This is augmented by traditional knowledge. Traditional safe houses can serve as evacuation centres during a cyclone and building demonstration safe houses by CARE created further awareness of shelter DRR.

## 5. Recommendations

### 5.1 Understanding the context

Every shelter self-recovery program is different, and there is a need to predict what will work and what will not according to the context. There is a need to think about the context, about what the community wants, what they are used to, what materials and labour (skilled or unskilled) are available.



## 5.2 **Consulting and communicating with the community**

Consulting and communicating with the community for programme delivery is widely understood in the NGO community, yet misunderstandings can occur because of differing expectations, which need to be managed to avoid negative outcomes. The idea of self-recovery needs to be translated at the community level so that there is stronger clarity and undue expectations are not created.

## 5.3 **Drawing on community resourcefulness**

Social capital, traditional knowledge and community leadership are key areas of community resourcefulness that inform shelter self-recovery initiatives. The self-recovery model should rely on a synthesis of organisational support with community resourcefulness.

## 5.4 **Considering knowledge exchange needs**

A community consultation process allows insight to be gained into the knowledge exchange needs at the community level as evident from the field investigations, where the need for refresher trainings, certification of SFPs, guidance on different types of construction – both modern and traditional – were some of the suggestions that deserve consideration. A key area to explore is additional knowledge on how to source materials beyond an island through community-community support.

## 5.5 **Promoting the necessity of preparedness**

With regard to shelter self-recovery, specific measures for preparedness need to be promoted at the community level where people require more training and awareness to ensure appropriate actions relating to shelter, food gardens, water supply, etc in a disaster, and preparation of adequate safe shelters and other concerns in a disaster. Preparedness for supply of natural materials after a disaster is also important by exploring options of support to local suppliers.

## 5.6 **Supporting sustainable forestry and plantations**

To address materials supply crisis, natural resource management including replanting and rejuvenating trees for timber supply, and also natural organic materials - bamboo, *natangora*, wild cane, plants for bush rope, etc - according to local building traditions of specific island contexts is necessary. This can be done in partnership with the government.

## 5.7 **Advocating for governmental engagement**

NGOs should be advising and helping the government to set policies and help people access skills, materials and logistics that support self-recovery strategies, and provide guidance on means of leveraging financial and institutional resources. Advocating governmental support to CDCCCs to engage in self-recovery is



important. Other areas include advocacy to include traditional shelter building techniques and materials in building codes and education.

#### 5.8 **Continuing support for gender and social inclusion initiatives**

NGOs such as CARE should build on their achievements in the field of gender and social inclusion and use it as a tool for wider leverage at the institutional and community levels. They need to continue and upscale this role so that women, the elderly and people with disabilities have a stronger voice in shelter self-recovery.

#### 5.9 **Assessing the applicability of a cash transfer approach**

It needs to be assessed whether the cash transfer approach is applicable according to the context. It might be applicable especially for the most vulnerable and it also allows making individual choices on how to recover according to specific circumstances. Conditional cash transfer can be tied to the application of resilience measures in shelter. It might mean looking further at trainings and access to knowledge for a self-recovery approach and options for a recovery grant process.

#### 5.10 **Having an exit strategy with strong legacy outcomes**

It is important to plan an exit strategy after project completion with valuable legacy outcomes. What is left behind needs to be taken into account and the level of self-reliance and empowerment for future self-recovery projects needs to be understood. The possibility of future ongoing shelter maintenance through support by SFPs should be explored.

## 1. INTRODUCTION

This research project aimed to explore the lived reality of communities in Vanuatu recovering from major disasters and to also understand the impacts of interventions by humanitarian organisations within the recovery process, and thereby develop guidance for the implementation of shelter projects that support self-recovery. The term 'self-recovery' here is followed to describe how communities recover after a disaster on their own, supplemented with assistance from humanitarian organisations. It is an assisted self-help process, where organisations help people to help themselves consistent with the concept suggested by Flinn et al. (2017).

The research was guided by the following three research questions formulated by the GCRF research team:

- 1) Research question 1 (RQ1): How is self-recovery understood by different stakeholders? This question involved gaining an understanding of self-recovery and it was explored across all stakeholders participating in the research through focus group discussions (FGDs) and semi-structured interviews of households, community key informants and organisational key informants.
- 2) Research question 2 (RQ2): How has community self-recovery and support for self-recovery changed since Cyclone Pam in 2015? This question is concerned with multiple disasters, looking at the 'then' and 'now' situations. Research on Tropical Cyclone (TC) Pam was undertaken in Tanna island because the other research sites, Pentecost and Maewo, were not affected. In Pentecost and Maewo respectively self-recovery after TC Harold and Ambae volcanic hazard was explored, with limited exploration of the impact of TC Pam.
- 3) Research question 3 (RQ3): What interventions and strategies are used by communities to support shelter self-recovery and enhance DRR practice? Here aspects relating to knowledge exchange, the role of different communities and disaster risk reduction in shelter were investigated across all three research sites and all stakeholders regarding different disasters with a focus on communities and aspects of disaster resilience.

The findings from the field investigations required a degree of interpretation and did not necessarily fit neatly into the categories defined by the above three research questions. Nonetheless, they offered a wealth of insights that provided more substance to the research questions. The research questions have informed the structure of this report and it is evident from the discussions below how the questions have been interpreted.

## 2. RESEARCH SITES

Research sites consisted of three islands – Tanna, Maewo and Pentecost - that were affected by different disasters where correspondingly different self-recovery interventions were implemented (see Fig. 1). The sites are presented below in chronological order of the disasters, representing the evolution of the self-recovery model.

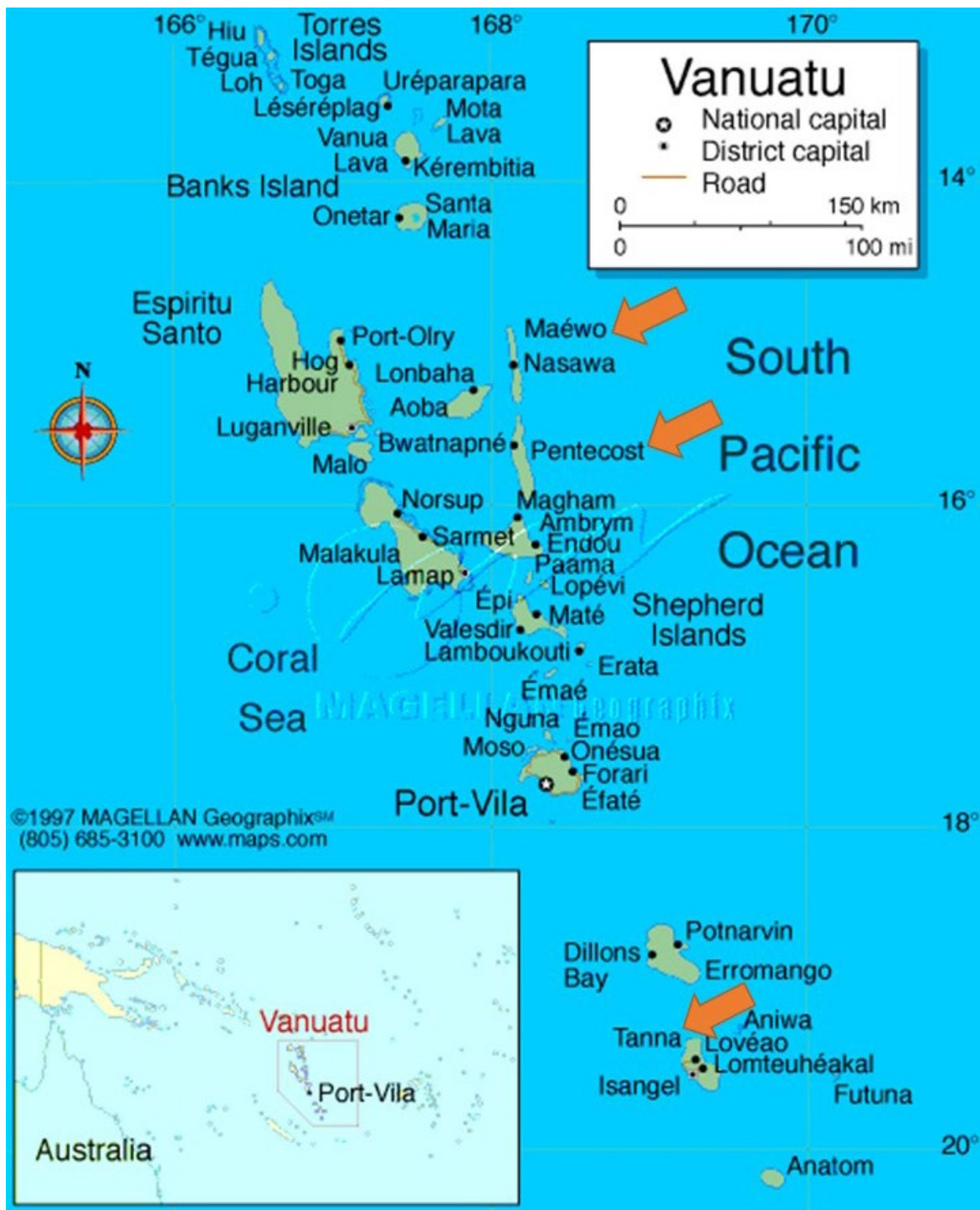


Fig. 1: Map of Vanuatu indicating the three research site islands (source: Mapcruzin.com; copyright-free: <https://mapcruzin.com/free-vanuatu-maps.htm>).

## 2.1 Tanna

The island of Tanna is located in the southern region of Vanuatu and has an area of 212 square kilometres and population of about 32,000 (Britannica, 2021a; VNSO, 2016a). It was one of the islands most severely impacted by TC Pam in March 2015 with 80-90% of shelter destroyed (CARE, 2015; Esler, 2015). A number of humanitarian organisations provided assistance in Tanna, after TC Pam such as IFRC and CARE. The shelter self-recovery approach followed by CARE at that

time was somewhat similar to that applied later in Pentecost after TC Harold in 2020 – provision of tarpaulins and shelter tools, and training on safe construction to support the self-recovery process of the cyclone-affected communities. The support also included chainsaws together with training on chainsaw operation to process timber from trees felled by the cyclone (CARE, 2015). The training was conducted in partnership with the local Lume Rural Training Centre (LTRC) and focused on four key safe construction messages derived from the guidelines of the Shelter Cluster Vanuatu (SCV), a consortium of humanitarian organisations engaged in the shelter sector, of which CARE is a member: (a) Safe location; (b) Proper foundations; (c) Wind-resistant bracings; and (d) Strong connections between the different parts of the shelter structure (CARE, 2015; SCV, 2019). The shelter tools were distributed at two levels – at the household level, shelter support or fixing kits (nails, wire and cyclone straps), and at the community level, toolkits with more fixings and chainsaws to selected operators. Additionally, a demonstration traditional safe house (*'kastom'* houses, or *Nimilatan* as known in Tanna) was built to share safe construction concepts with the community (French Red Cross, 2017). This intervention represents an initial stage of the application of the self-recovery approach, which guided subsequent shelter self-recovery interventions.



**Fig. 2:** A house rebuilt in Tanna after TC Pam with support from CARE including technical advice and toolkit.

## 2.2 Maewo

With the active Manara Vouï volcano on Ambae island threatening to erupt from October 2017, about 2,500 people were evacuated to the neighbouring island of Maewo (Oxfam, 2018). The 260 square kilometre island had an existing population of about 3,500 (Britannica, 2021b; VNSO, 2016b) and the population increase of more than 70% necessitated humanitarian interventions for provision of temporary shelter. With the support of SCV, CARE followed a self-recovery approach through the provision of shelter toolkits and training on safe construction for the new settlers to build houses that would provide safety from future disasters such as cyclones, a prevailing hazard there; the existing community had the opportunity to incorporate these safety



features into their homes as well. Settlers returning to Ambae they were able to take the toolkits and use them there together with the knowledge they gained. The project also included the mapping and strengthening of cyclone shelters or traditional safe houses (*kastom* houses, *Nimilatan*) (CARE, 2020a). In both Maewo and Tanna, there was additional training on building *kastom* houses and demonstration *kastom* houses were built for communities to learn from. Other agencies implemented different approaches to support shelter, for example, the National Disaster Management Office (NDMO) provided a structural frame for a house that people could complete. With people going back and forth between Maewo and Ambae, the situation in Maewo was transitional and the initiatives in Maewo differ in that respect from shelter projects on land that was already settled before the disaster or permanent resettlement projects.



**Fig. 3:** Many of the evacuated people in Maewo have returned to Ambae and some of those who have stayed behind are building houses such as these.

### 2.3 Pentecost

Pentecost island is located in the northern region of Vanuatu with an area of 438 square kilometres and population of about 17,000 (Britannica, 2021c; VNSO, 2016b). It was severely impacted by TC Harold in April 2020 with thousands of houses destroyed or damaged (Robinson-Drawbridge, 2020). Extensive damage was experienced in homestead food gardens on which people rely for livelihoods, and trees and vegetation that serve as sources of building materials were widely damaged. Among different agencies providing humanitarian assistance, the shelter self-recovery project implemented by CARE was undertaken in coordination with the SCV and NDMO. The support provided through the project included emergency shelter assistance consisting of tarpaulin sheets, rope and information and education materials followed by shelter recovery support to 1602 households across 46 communities, which included shelter kits (fixing kits and toolkits) and training of Shelter Focal Points (SFPs) including women. Additionally, people from the community were trained in chainsaw operation and provided chainsaws and fuel to

process timber from fallen trees (CERF, 2020; Hau Meni & Associates, 2021; IHG, 2020; USAID, 2021).

This self-recovery project was based on an agreement between CARE and the communities negotiated through the local Chiefs that CARE would provide the shelter repair and rebuilding equipment and the communities would be responsible for obtaining building materials other than the processed timber provided through the chainsaw operators. There was also an agreement that the communities would support the chainsaw operators beyond what was provided by CARE, such as, additional fuel if required above the allocated 7 litres per household and agreements in individual communities to pay fees and provide meals to the chainsaw operators. Furthermore, there was an agreement for the SFPs and chainsaw operators to prioritise support to vulnerable people such as the elderly, widows and single women-headed households.



**Fig. 4:** An elderly widow in the Rangsuksuk community, Pentecost, who partially rebuilt her house after TC Harold with some support from CARE and her son. The natangora (sago palm) roof was built with salvaged leaves from the previous destroyed house together with some leaves supplied by CARE obtained from the neighbouring island of Maewo.

### 3. RESEARCH METHODS

The communities participating in this research have all been affected in different ways by TC Pam (2015), Manara Voui volcanic activity (2017) and TC Harold (2020). Communities were purposively selected based on their involvement in CARE's humanitarian response programmes, particularly its self-recovery support initiatives (e.g. Pentecost and Ambrym Tropical Cyclone Harold (PATCH) shelter response project). A representative sample of research participants included a range of responses and experiences, gender balance and diversity of geographical locations (e.g. inland and coastal communities, north and south situated communities). Community-based fieldwork was conducted in Tanna, Maewo and Pentecost, and supplemented by interviews of staff members in organisations from Port Vila and overseas.

The data collection methods included focus group discussions (FGDs) at the community level, and semi-structured interviews of households and community key informants in the three research sites and semi-structured interviews of organisational key informants in Port Vila, Tanna and overseas. The original target was to undertake 10 focus group discussions (FGDs) (5 female and 5 male) in 5 communities in Pentecost, where a significant part of the data collection was undertaken because of the most recent nature of the self-recovery project there, but it was found useful to visit another community (Whitewota) in Pentecost and conduct a couple of additional interviews (see Appendix 1). Details of the FGDs and interviews are provided in Appendix 1, and the FGD and interview tools, or guidelines, and questionnaires are provided in Appendix 2. The data collection tool was informed by methodological approaches developed by the GCRF team. Table 1 summarises the data collection methods, samples and interview respondents.

**Table 1: Summary of data collection methods**

<b>i. Community Level</b>				
	<b>Methods</b>	<b>Pentecost</b>	<b>Tanna</b>	<b>Maewo</b>
		6 communities (FGDs in 5)	2 communities	3 communities
1.	<b>Focus Group Discussions (FGDs) (TOTAL 20 FGDs in 3 locations)</b>	1 female + 1 male FGD per community. TOTAL 10 FGDs	1 female + 1 male FGD per community. TOTAL 4 FGDs	1 female + 1 male FGD per community. TOTAL 6 FGDs
2.	<b>Semi-structured interviews:</b> Community Key Informants, especially Shelter Focal Points (SFPs) <b>(TOTAL 15 interviews in 3 locations)</b>	7 interviews (3 female)	2 interviews (1 female)	6 interviews (1 female)
3.	<b>Semi-structured interviews:</b> Households, including vulnerable people such as the elderly, widows and people with disabilities <b>(TOTAL 10 interviews in 3 locations)</b>	6 interviews (4 female)	2 interviews (1 female)	2 interview (2 female)
<b>ii. Organisation Level</b>				
<b>Method: Semi-structured Key Informant Interviews (KIIs) (TOTAL 10 interviews)</b>				
1.	National Disaster Management Office	1 x Staff (Port Vila)		
2.	Department of Strategic Planning and Aid Policy Coordination (DESPAC)	1 x Staff (Port Vila)		
3.	Public Works Department/ Shelter Cluster Lead	1 x Staff (Port Vila)		
4.	Lume Rural Training Centre (LRTC)	1 x Staff (Tanna)		
5.	International NGO (CARE)	2 x Staff (Port Vila)		
6.	Vanuatu Red Cross Society (VRCS)	1 x VRCS Disaster Manager with Shelter /PASSA/ field experience (Port Vila)		
7.	International NGO (IOM)	1 x Staff (Port Vila)		
8.	International NGO (Australian Red Cross)	1 x Staff (Australia)		
9.	Independent Shelter Consultant	1 x Consultant (Port Vila); former CARE Shelter Technical Adviser		
10.	Donor agency	1 x USAID (Washington D.C.)		



The collected data was subjected to thematic analysis that involved a manual coding method to identify key themes. The interview and FGD responses were analysed through the coding process to gain an insight into the main themes and issues pertaining to shelter self-recovery in Vanuatu. The thematic codes consisted mainly of perspectives of the respondents, and then recurrent and also unique issues were identified to inform this report.

The research followed a qualitative approach involving both secondary and primary data collection and analysis of the data to identify key issues relating to shelter self-recovery. A range of secondary data was reviewed including relevant publications as well as grey literature. A full literature review is not presented here; where relevant, key documents have been cited for reference. This report is derived mainly from the primary data from the field consisting of interviews and focus group discussions (FGDs) with reference to some key documents.

## 4. DISCUSSION OF FINDINGS

The findings of the research discussed below are structured along the lines of the three research questions. The structural logic and sequence are consistent with the data collection tools (see Appendix 2).

### 4.1 Understanding recovery (RQ1)

In this section, in response to RQ1 to understand shelter self-recovery, an overview of the self-recovery process is presented, drawing from the findings from the field, followed by a discussion on the concepts and perceptions regarding self-recovery of different stakeholders from communities to humanitarian organisations. Then a key theme – traditional versus modern construction – which permeates through the discourse on shelter self-recovery is analysed.

#### 4.1.1 Shelter self-recovery process

Typically, after a disaster people search for materials that can be salvaged from their damaged homes to build a temporary shelter. In the case of Pentecost after TC Harold, it included timber posts and framing members, *natangora* (sago palm leaves) and in some cases CGI (corrugated galvanised iron) sheets. Some people used coconut leaves on top of their roof to temporarily cover any damages. The narrative in Box 1 of a household in Pentecost illustrates this initial recovery process.

#### **Box 1: Initial recovery process**

Our house was fully destroyed - nothing left, not even a single post standing. Me and my family went for shelter at Pangi school, when we arrived the next morning at our village everything was on the ground. The first thing we did was to find somewhere to sleep. I am lucky that my son's house had only small damage, so we fixed their house and could sleep there.

It took me two to three days to clear the place, and for three weeks I rebuilt my house. I did not use any materials from elsewhere - I just collected the bits of undamaged materials like posts, bamboo, walling and *natangora*, and utilised them to rebuild my house. The materials were already about ten years old, but I had no choice, I had to use them because it is hard to find other local materials.

Many of the people were able to repair their *natangora* roof with damaged pieces, or used tarpaulins provided by CARE or other organisations. Most people built simple and temporary shelters while they waited for trees and *natangora* to grow back so that they could build something more durable over the long term. Estimates from the communities indicated a protracted recovery timeframe, from 5 to 10 years, before they would be able to incrementally build a permanent house built of modern materials, for those people who had the intention to build such a house. Findings from Tanna indicate that many households there were still in this process of gradual recovery more than five years after TC Pam. However, rapid shelter production is generally uncommon in rural areas of Vanuatu even during normal times because there is an overall low level of cash flow; a house is often built slowly and incrementally over a period of time, and in a post-disaster situation it may take longer because of the disruptive circumstances. Thus, while people might be living in inadequate shelter over an extended period after a disaster, it is characteristically common in the self-recovery process. An evaluation of CARE's post-TC Harold project (Hau Meni & Associates, 2021) highlighted the importance of recognising the extended time it takes to support shelter self-recovery.

This typically incremental self-recovery process varies according to the economic level of the household; for example, a household in Pentecost with some available funds planned to pay a qualified carpenter to help build a "safer" house and identify the best materials to use, while many others remained in makeshift temporary houses. The concept of long-term recovery is often understood, and accepted, by communities as an incremental process. With limited resources at hand, the transition from temporary to permanent housing has to be undertaken in stages as and when funds permit, as explained by a FGD participant in Maewo: "Temporarily, you can build back a local traditional style house. If you have *natangora* nearby, you will be able to access it quickly. You can build a temporary house in a week or so if you prepare, if you collect your materials first. From there you can aim to rebuild a permanent house next, but it depends on your income. A semi-modern house is often an option while people wait to get enough money to complete a fully modern house." The aspiration towards a modern house, however, cannot be easily realised for most people in the rural islands of Vanuatu. Successive disasters mean that incremental progress can be set back, thus, self-recovery projects of organisations such as CARE focus on incorporating a degree of safety so that even shelters built of lightweight materials are more resilient than shelters that generally do not include such measures.

While not an ideal situation, the tarpaulins provided as emergency shelter assistance provided a degree of protection from the weather well after the initial emergency period (see Fig. 4), as pointed out by a household: "The tarpaulins were very helpful because we used them to cover the roof, while we are waiting to build back our permanent houses." Recognising this reality, one organisational staff member highlighted the importance of linking emergency response to recovery; accordingly, since tarpaulins are going to be used over an extended period, humanitarian organisations that are members of SCV provide good quality tarpaulins that last for at least two years as per the global standards of the International Federation of Red Cross and Red Crescent Societies (IFRC) (IFRC, 2019; SCV, 2019). The value of tarpaulin sheets as an interim solution while people organise materials for future rebuilding is also pointed out by SCV (2020b). On the other hand, in Tanna, after the post-TC Pam experience, it appears that communities had

begun to expect support such as tarpaulins and have adjusted their behaviour according to that expectation (see Box 2), as evident from this comment from a household there: “If another disaster came, our first priority would be to get back all the damaged pieces of our house and make a temporary shelter, and we would then wait for support from an external group such as an NGO to help us rebuild.” Management of such expectations and fostering community self-reliance is a key challenge that humanitarian organisations face worldwide, not only in Vanuatu, and an important part of the task in supporting the self-recovery is for organisations to consult, communicate and negotiate with communities towards clarifying their role and managing expectations.



**Fig. 5:** A temporary house in Pentecost built with salvaged materials after TC Harold. Note the use of tarpaulins provided by CARE on the roof of the structure behind on the left.

#### ***4.1.2 Concepts of shelter self-recovery***

Despite the communities in the research sites having been involved in self-recovery projects, there appears to be a lack of clarity on the concept. The term is not easily translated into the local language, Bislama, a reason why the responses in the community interviews reflected an overall lack of understanding. Even at the level of community key informants who were trained SFPs, or others associated with self-recovery projects such as chainsaw operators, local builders and village Chiefs, the concept of self-recovery being an assisted self-help process was not clearly understood – they often interpreted the term literally as communities recovering on their own. In a few instances, FGD participants in Pentecost articulated it as a ‘50-50’ arrangement, a notion that may have perhaps emerged from the fuel sharing arrangement with the CARE-supported chainsaw operators. However, the ‘50-50’ idea was a way for CARE to communicate in a simple manner the shared responsibilities of the self-recovery approach, which perhaps made sense to more people after regular meetings with community representatives including the local Chiefs. Communicating such nuanced concepts can often be a challenge and requires a sustained period of engagement to achieve widespread clarity.

On the other hand, organisational staff members who were associated with shelter recovery programmes, particularly from implementing or donor organisations, understandably articulated clearer definitions of the concept; one such staff member even suggested linking the emergency stage to recovery in order to establish continuity in the self-recovery process and provided a simple definition: “Providing access to materials and training to enable people to build better themselves.” There is thus scope to translate such concepts from the organisational level to the community level to enable a wider understanding of self-recovery, which may contribute to more effective community engagement in self-recovery projects.

At the organisational level, there is recognition of both the merits and shortcomings of the self-recovery approach. It has been suggested to be particularly relevant for Vanuatu with its dispersed islands, where self-recovery allows effective utilisation of limited funds. It is viewed as a way for communities to gain ownership of knowledge and share it with subsequent generations, as well as for allowing the participation of the whole family in the recovery process. It is perceived as a flexible process where communities have a choice on the extent of their participation. On the other hand, a ni-Vanuatu government staff member cautioned that self-recovery projects can create dependency and raise unrealistic expectations (see Box 2). However, such critiques tend to lump together self-recovery with the wider set of developmental interventions by the government and NGOs, and fail to recognise self-recovery as a distinct approach that specifically aims to foster self-reliance; although, if self-recovery projects are not carefully implemented, they can face the same pitfall as cautioned by the critique. Nonetheless, the issue of expectations discussed in the previous section is central to such critiques and deserves attention. One may also argue about the speedy rebuilding described by the staff member that it actually consisted of building temporary and simple shelters as in the case of Pentecost discussed in the previous section, not full recovery as implied – this is something that communities would do anyway irrespective of organisational support.

**Box 2: Dependency in Tanna**

“Communities in Vanuatu are naturally resilient – people have the knowledge to rebuild their houses, and in the past would rebuild automatically. In Tanna, when I returned to my home community after TC Pam, I found that everyone had rebuilt after just one month, with minimal support. People collected the damaged materials and used these to rebuild.”

“When I went back in 2016, the TAFEA Province Secretary General suggested that NGO support had reduced the resilience of the communities in Tanna. After the support was provided, people developed increased expectations about what the government and NGOs would provide. People were waiting for *kappa* (CGI roofing sheets), or their homes to be built for them. Large trees had fallen, and even though people had the resources to mill them, they did not. People in other islands also saw this, and now have expectations from the government and NGOs to help them after a disaster.”

“There are growing challenges now with trust – sometimes people are not reporting correctly with the hope that they will receive support. After the Tanna ashfall in 2020, it was reported that all communities in Tanna were affected, whereas it was only those in the east. The reports resulted in all communities receiving government-issued food supplies – which then went to some people who did not need it.”

### 4.1.3 Traditional versus 'modern' building materials

As a reflection of the state of change occurring in Vanuatu with growing urbanisation, traditional materials are becoming unpopular and industrial, or 'modern', products are replacing them. This is captured by a FGD participant in Pentecost: "Now there are new ideas emerging in the community – people are changing their house design to make it more permanent. Cement floor. Use big timber post. Still using *natangora*, but using cyclone strap, 6-inch nails, wire to make it stronger – instead of bush rope. Some households are using screws instead of nails which can be stronger. Some people are trying to use cement in different areas to strengthen their house. One metre foundation is important, with extra cement if possible."



Fig. 5: 'Modern' houses are becoming common in Vanuatu, for example in Maewo as shown here.

This phenomenon varies across the different islands and is more evident in urban areas. A narrative of a FGD participant in Maewo described the situation there (see Fig. 5): "In the past, all the elders lived in traditional houses. But since independence [from colonial rule in 1980], lots of things are changing in our communities. Lots of people have half-permanent houses; house half made of [concrete] blocks. People are aiming to build full block houses. Now in Maewo more than half of the people live in a permanent/semi- permanent house or a house that uses modern materials. As people earn money through kava, etc, they are aiming to move to a modern house. Cement floor, halfway block, *kappa* [CGI sheet] roof. In 5 years or so, we think more than 80% will live in a modern house."

A key issue is affordability, as simply encapsulated in a comment by a FGD participant in Pentecost: "The main thing holding people back is access to finance to pay for it." As people gain access to more cash reserves and more people pursue non-agricultural livelihoods, they are interested in housing that lasts longer and provides better living conditions. The majority of people save money from selling agricultural products – kava and taro - or selling food at local markets. One household in Pentecost has opted to go on seasonal work and thinks that after 2-3 years they will have enough money to build a "permanent house". However, a resident of Maewo pointed out that a modern house can cost about 2 million Vatu and may take 10 years or more to save money to build one. While traditional natural materials are generally sourced for free from

local forests and plantations, modern materials are linked with the cash economy and have to be bought from hardware stores, usually in urban areas, and specialised workers are required to build a modern house in contrast to the typical household self-help process of building with natural materials. If such modern materials are damaged in a disaster, they cannot be easily repaired, and new materials have to be purchased.

Nonetheless, it is a fact that thatch roofing requires regular maintenance and replacement every 3-5 years, and can leak if not well-maintained, whereas CGI sheet can last up to 10-15 years and offers better protection from rain, hence its appeal to communities, not only in Vanuatu but widely throughout the Global South. The vulnerability of traditional shelter was evident in the widespread destruction in TC Pam, as reported in a study by a team of NGOs including CARE (Save the Children et al., 2015). But often people do not know how to build well with modern materials, hence the damage to CGI sheet roofs that has not been secured properly to the structure, as well as thicker varieties of sheeting not being used, evident from the impact of cyclones. This has been reported in several publications by the consultant (Ahmed, 2020; Ahmed and McDonnell, 2020). A household in Tanna with the experience of TC Pam pointed this out: "In a modern house, people are worried that the iron roof could cut you, the block walls could fall on you." Similarly in Pentecost after TC Harold: "*Natangora* roof is safer than *kappa* – if *kappa* flies it can cause more injury to people."

However, as evident from the view of several participants of the research, a modern house is considered safer than a traditional one. There are reports of people seeking shelter in a neighbour's modern house during a cyclone with this perception of safety. As one participant suggested, "This [modern house] is also an evacuation centre, but it can also be a house that you live in day-to-day." There is a need for caution though – if not built according to a region-specific wind code, as is the case of most buildings in rural areas of Vanuatu, they may not be able to endure the impact of a cyclone, evident from the many 'modern' houses badly damaged by TC Harold in Pentecost (see for example Ahmed, 2020; Ahmed and McDonnell, 2020). Local resources and skills to build a safe modern house are clearly lacking in such a context.

There were also research participants who highlighted positive aspects of traditional construction. As a participant in Maewo commented: "Natural materials are readily available. We need to focus on this, it will always be available, even in difficult economic times. Local materials are cheap – everything is available. When we want to build a permanent house that is cyclone-proof, you need money. It is expensive. You cannot just buy only iron roof; you need other modern materials to go with it." In Tanna during TC Pam, many people took refuge in cyclone shelters built of traditional materials (*kastom* houses; *Nimilatan* or *saeklon haos* in Bislama) and several reports pointed out that most of the deaths were caused from injury by modern materials while those sheltering in '*kastom*' houses survived (Plunkett & Balick, 2018; SCV, 2015). In North Tanna during this research, it was found that people lived a more traditional lifestyle and overall traditional houses were preferred. They knew how to reinforce buildings in preparation for a storm with extra bracing and with palm branches draped over the thatch roof to secure it. The majority of people there were not aiming to build a modern house and felt that traditional designs were enough to keep them safe. It appears that elderly people still preferred traditional houses and considered modern houses unsafe; it was often young people who had been exposed



to modern, urban values who preferred modern houses, indicating a process of social transformation.

Given the lack of affordability for the wider population and the hazards of unsafe construction with modern materials, at the organisational level there is strong support for traditional construction, with improvements in terms of safety such as better connections between joints, use of cyclone straps and bracing (see for example SCV, 2019). In Pentecost, some communities requested CARE to provide *kappa*, but the response from CARE was that it was not safe in cyclones as it could blow off and cause serious injury; although most households preferred *kappa*, CARE recommended using *natangora* in line with the SCV recovery guidance (2020a) that advises supporting local building traditions instead of supplanting them with imported building practices. Traditional shelter design can be supported by embedding resilient construction techniques and developing building skills to build stronger houses without changing the local design. A SFP in Maewo trained by CARE mentioned: “We have learnt that a safe house is not just a modern house. A modern house that is not well-built can be unsafe. People need more technical knowledge on how to build strong modern houses. Knowledge on traditional building is there – but need more knowledge for modern houses. Young people have money and want to build a modern house – they need some standards to follow to make sure that it is safe. But traditional knowledge of a safe house is still there, it is still strong.”

In alignment with the SCV strategy (SCV, 2019; SCV, 2020a), the views of CARE are echoed by other professionals, for example by an expatriate shelter consultant who argued that using traditional materials is a safer and long-term strategy; with effective management of natural resources, people would have access to local materials such as timber, ropes and *natangora* in the future, even if they do not have money. Furthermore, he added: “Most people think that a modern house is a strong house – but modern doesn’t mean strong. Modern houses using cement and blocks that are incorrectly built and designed are not strong.” This is the key message for self-recovery - both building community resilience and knowledge together. A professional from a training centre in Tanna pointed out the maintenance aspect – people might be able to build a modern house, but they find it difficult to repair or rebuild if their temporary income stream diminishes. On the other hand, rebuilding traditional shelter is easier and allows self-recovery. He observed that in Tanna, different materials are used for roofing, such as wild cane and coconut leaves; people generally have free access to these resources, they are not reliant solely on *natangora*.

The SCV recovery strategy (2020a) does acknowledge that the limited use of some modern materials such as cyclones straps, nails and wire might be necessary in many places, but cautions that this should not replace existing traditions, for example, the use of ‘bush’ rope for lashing together parts of a structure. This is reflected in the provision of shelter toolkits by organisations such as CARE that include straps, nails and wire, and backed with training to SFPs on supporting households to use traditional materials as much as possible. On the ground in Pentecost, the picture was that of the use of a mixture of modern and traditional materials as identified by several FGD participants in Pentecost. While some people had already used the cyclone straps and nails provided to strengthen their house, others were hoping to do that in the future when they obtain building materials, and if they could afford it, use cement for the flooring. In general,



tools such as saws and hammers in the shelter toolkits provided by CARE were being used for various purposes, while some households have kept the straps, nails and wire to be used later and others have used them as an initial step to reinforce the house that would be improved incrementally. People wanted enough timber to be able to have lots of bracings, which is a positive impact of CARE's safe construction training. Some people were aiming for a *kappa* roof, while others were waiting for *natangora*. Some identified treated timber as important. One participant who had access to funds was planning to build a semi-modern house using timber and cement, with good connections using nails, bolts, cyclone straps and *kappa* roofing; he expected that it would take two years to incrementally build the house. The self-recovery approach of humanitarian organisations needs to work with this reality of mixed use of materials, aspiration of a 'modern' house while supporting local traditions of building with natural materials as much as possible and also making sure that where modern materials are used, the quality of construction is adequate and safe.

## 4.2 Multiple disasters – then and now (RQ2)

In response to RQ2, in this section issues relating to the developments in shelter self-recovery since TC Pam are discussed. The concept of building back better/safer, which has gained currency amongst humanitarian organisations is reviewed in the context of Vanuatu. The increasingly massive devastation in recent cyclones due to climate change and the consequent devastation of natural building resources and the impacts on shelter are analysed. As the shelter self-recovery field has progressed, there have been critiques of the different organisational approaches, and also appreciation, which are examined.

### 4.2.1 Building back better/safer

A key purpose of shelter self-recovery is to enable communities to rebuild their houses in ways that reduce their future disaster risk and makes the houses resilient, in line with the widely used concept of building back better/safer (BBB). This is consistent with the Priority 4 of the global Sendai Framework for Disaster Risk Reduction (UNDRR, 2015). Self-recovery projects are not only about providing funds, equipment and training, but doing that with the intent of addressing the vulnerabilities that cause damage and destruction to shelter, and to prevent people from rebuilding exactly the same type of shelter that was impacted by incorporating improvements that would provide safety. This has stepped up since TC Pam, and BBB is now widely espoused in self-recovery programmes. There are of course limitations to BBB within the existing resource constraints and the self-recovery framework. While in the past humanitarian organisations endeavoured to provide absolutely strong and durable shelter after a disaster in the name of BBB, this is now widely questioned because of the substantial resources required and often unsatisfactory outcomes; the self-recovery model supplements the recovery initiatives of communities, as an organisational staff member mentioned: "Working side-by-side with communities." It respects the choices that people make "while providing materials that enable people to build back stronger", as another organisational staff member stated. Thus, compromises are inevitable, nonetheless, self-recovery can still address long-term developmental objectives through a humanitarian window by promoting BBB. As another organisational staff

member suggested, “You need to be realistic with what you will achieve – skills, education, equipment and finance is limited. You need to aim for a safe house, to avoid people spending too much money on repairing it after a disaster.” Indeed, not only in Vanuatu but throughout the Global South, it is unrealistic to conceive of building rural domestic shelter to a standard that can endure a Category 5 cyclone; that standard is applicable for an evacuation centre or safe refuge. The purpose of building back domestic shelter better/safer is to incorporate design and construction features that allow a degree of resistance that might enable better safety to people living in them, and after a disaster the need for repair and rebuilding is reduced. In the event of smaller disaster events, such an improved shelter would survive or at least fare better than its predecessor.

Reports from the field indicate that the BBB message has gained ground in Pentecost through CARE’s self-recovery project. As one household mentioned: “When rebuilding my house, I consider the instructions which I have been trained on by people from CARE.” According to a female SFP there: “Now that they have experienced TC Harold, they want to make their houses stronger – ready for a future disaster. Nail posts better; nail on cyclone straps; digging foundations. Before, some people were cutting wood that wasn’t dry, but now they are making sure to cut wood that is dry to prevent insects and posts from going rotten.” As observed by another SFP in Pentecost: “I think they feel safe about the changes they have made in their buildings, people are trying their best to build safe houses this time.” The promotion of BBB through self-recovery projects was also evident in Tanna, as the case study in Box 3 indicates.

**Box 3: Building back better in Tanna**

After TC Pam, the local Lume Rural Training Centre (LRTC) joined with CARE to run a training-of-trainers programme with the aim to help community members build back better. CARE provided resources and funds for LRTC trainers to train local shelter workers and run information sessions in communities on safe building techniques for both modern and traditional type shelter. The training focused on planning and location, accessing local materials, building strong foundations, bracing and connections. LRTC also worked with CARE and local communities to gather local knowledge on building technologies and techniques used in a traditional Tanna safe house (*Nimilatan* or *saeklon haos* as called locally). This information was gathered from the community and used to build a number of model safe house as demonstration for the community.

A local builder discussed the uptake of BBB in Tanna: “In the past, people used to build houses without thinking of standards. Now after TC Pam we are aiming to build houses that meet a standard which will mean they are safe from future cyclones.” A woman from the community, who was a FGD participant in this research, provided an account of the BBB experience: “Training on bracing, foundations - it was good information. This came through shelter experts, using Lume Training Centre. They also did a range of demonstrations. But not everyone followed or implemented all of the information or training provided. People have absorbed some key parts – bracing is now commonly used, but hook [a cross at the bottom of the post] in foundations people have not used much; that is hard, people are lazy! But bracing is easy. People are burning the bottom of the post by following the information provided.” Perhaps in such a context, more sustained support and supervision by trained experts such as SFPs is necessary.

While the situation in Maewo after the temporary relocation of people from Ambae is different from the post-cyclone contexts of Pentecost and Tanna, the impact of CARE’s training initiatives is evident. As a SFP there mentioned: “I can see in the community now that people are building their houses differently after Ambae [volcanic activity] – people have more knowledge how to build houses stronger.” Another SFP, who was also a local Chief, narrated his experience: “I have changed

how I built my own house – I have built it lower to the ground. I learnt this after Ambae [volcanic activity]. I feel much safer in my house.” The impression on Maewo of TC Harold and the self-recovery projects in Pentecost is evident from the comments of a FGD participant in Maewo: “If a Category 5 cyclone comes and damages houses, I will try to rebuild my same house, but stronger. I think we can always keep improving – every time we face a disaster, we will learn from it and change our building strategies.”

#### 4.2.2 Supply of natural building materials

As discussed above in section 4.1.2, organic or natural buildings materials are used widely in Vanuatu, especially in rural areas and outer islands. Their local supply is essential for repairing and rebuilding shelter after a disaster and is significant in the context of the self-recovery model that supports such community-based processes. Their use varies across the different islands – in the northern islands such as Pentecost and Maewo, a traditional house uses *natangora* for roofs, bamboo (split and woven into panels) for walls and timber and bamboo for the frame structure, whereas in the southern islands such as Tanna, coconut leaves and wildcane are used for roofs (see Fig. 6).



Fig. 6: A typical house in Pentecost (left) and in Tanna (right) built with natural materials.

A significant challenge to shelter self-recovery after TC Harold was the massive devastation to *natangora* trees and bamboo plantations, which will require many years to rejuvenate to allow harvesting again for building materials. Some communities on Pentecost, particularly in the south, had seen total loss of all *natangora* trees and bamboo groves and estimate it could take 3-7 years for regrowth to satisfy the demand of the island's population. Some people managed to salvage *natangora* from their damaged house, and where possible from the fallen trees, but this needed to be done almost immediately before the leaves rotted. With many demands on communities after the disaster, this was not possible – there were reports that people were busy attending to their damaged kava and other crops because these are essential to their livelihoods and by the time they managed to go and look for *natangora*, it was too late and most of it had rotted.

According to a SFP in Pentecost, recent cyclones have begun to have more impacts: “My experience from past cyclones is that they did less damage than TC Harold and Pam and the recovery process was quicker; all the bamboo and *natangora* were not damaged.” These cyclones are perhaps an indication of the more extensive devastation that can be expected in the future

due to climate change. After a disaster like a massive cyclone, people have many pressing needs such as tending to their homestead food gardens that are vital sources of income, salvaging essential household items (clothes, utensils, etc) and attending to children, and many people in Pentecost did not get to looking for *natangora* from fallen trees until too late. Some people with more resources and who owned a boat have been able to collect *natangora* from other parts of the island that were less affected, such as north Pentecost, or from neighbouring islands such as Maewo. But supply of bamboo was more difficult, so some households had been able to erect a structure with timber provided by CARE-supported chainsaw operators and even a *natangora* roof, but their houses did not have walls because of the lack of bamboo supply.

CARE provided training, support and equipment to chainsaw operators in Pentecost to harvest timber from fallen trees and make it available to the communities for rebuilding houses. However, because of the lack of supply of *natangora* for roofing and bamboo for walls, typical local traditional building materials, the timber was not being utilised in some communities and some people expressed worry that the timber might soon begin to rot. As a research participant noted: “We have all the tools we need to build the house, and the timbers which our chainsaw operator has cut. But our problem is we don’t have the *natangora* and bamboo yet. Currently I don’t have a safe house for my family.”

Even the training on safe construction provided to households could not be fully utilised because people were not able to begin rebuilding. Some of the local SFPs bemoaned: “I am thinking they don’t use me because most of the local materials are not yet ready.” The expected time for *natangora* and bamboo to grow back and become available was 5-10 years, and people were worried that the timber processed by the chainsaw operators would not be of much use by then. A protracted timeframe for recovery was expected by most people. Thus, the situation in Pentecost consisted of varying levels of completion and types of shelter more than 15 months after TC Harold – a limited few who were able to afford it built their houses with modern materials, some having a roof and frame structure but no walls, or even only a frame with no roof and walls, while many others were living in makeshift shelters made of salvaged materials and tarpaulins provided by humanitarian organisations.

According to an organisational staff member, “The *natangora* question is beyond the scope of an NGO.” It is believed to be a wider issue that requires the government’s attention through its forestry programmes. Nonetheless, in consultation with local Chiefs, CARE considered an initiative to bring *natangora* from neighbouring Maewo, which was not affected by TC Harold. However, this did not eventually materialise because of various logistical and other challenges; mobilising the community in Maewo effectively was a key challenge (USAID, 2021). As explained by different organisational staff members, the *natangora* would have to be first woven and then transported - “It cannot be transported just as leaves.” It also needs to be brought quickly to the site before it rots, which did not prove possible because of the lack of limited shipping transport options. This experience points to the need for more intensive community consultation and coordination on the ground so that the constraints could be identified earlier and addressed. However, it needs to be understood that due to COVID-19 restrictions at that time, there was pressure on existing staff, and it would have proven difficult to provide more on-the-ground coordination. This is acknowledged in a report by a funder (CERF, 2020), which also highlights the

remarkable way that CARE managed its shelter programme during these difficult circumstances with the limited staffing.

The situation in Tanna after TC Pam was reported not to be this acute, although recovery there was also a long process. As a local resident mentioned: “For us, the cyclone recovery is not finished yet. We still don’t have access to basic resources such as firewood – all our trees are still young.” The reliance on natural building materials means that there would also be a supply crisis after a disaster, though the extent of that may vary. Even in Tanna, it was reported: “The main challenges were access to local materials – all trees were damaged.” Nonetheless, in Tanna, while much of the leaves were lost, many trees survived and the leaves grew back, so in a few years’ time the resource base was somewhat stabilised.

Compounding the constraints of natural material supply after a disaster is the diminishing supply base of existing stock. A staff member of a training centre in Tanna warned, “If we don’t plan now, there will not be enough local resources to go around in a future disaster.” Various factors reported by research participants contribute to this supply decline. The obvious factor is population growth, leading to increased demand: “It is hard to find enough materials from the bush – everyone is needing the same thing”, commented a participant from Tanna. Related to this, there is more demand for agricultural land for growing cash crops such as kava, cutting down trees and vegetation to clear land, consequently reducing the supply of natural building materials. People now have to travel longer distances to obtain materials, as a resident of Tanna narrated: “To find all of these materials it takes a long time. All these can be found in the bush, but sometimes located far from the village. Sometimes you need to go to different villages to source the right materials.” However, an expatriate shelter consultant viewed this from a different angle: “It is not a case of availability, but more that people no longer have the knowledge of where it is in the bush; often, only the elders have the knowledge where the right materials are located. People don’t use the forest as the time before.” The decline of traditional knowledge in Tanna has also been observed in a report by the French Red Cross (2017) during its TC Pam recovery work. Perhaps it is a combination of all these different factors leading to a transformative change of the natural environment – declining traditional knowledge with urbanisation and modernisation and growing population pressure, compounded by disasters that drastically reduce the supply base. At this juncture, it is essential that combined institutional and community initiatives are undertaken to sustainably develop and manage natural building resources with a view to preparedness for future disasters, as well as, documenting traditional knowledge and developing educational programmes for future generations.

#### ***4.2.3 Reviews of organisational interventions***

Within the self-recovery process, there are a wide range of governmental and non-governmental stakeholders, and with successive disasters since TC Pam, their activities in this field have increased. NDMO is a key governmental stakeholder in the disaster risk reduction (DRR) field and trains and manages the Community Disaster and Climate Change Committees (CDCCCs) throughout Vanuatu. CDCCCs played an important role in the evacuation from Ambae to Maewo during the volcanic activity in 2017-18 and there were some positive reports from the community there, such as: “The trainings and support they provided, this helped our whole community – not

just people from Ambae.” And: “Though we have never been hit by any cyclone for a very long time, our CDCCC here are well prepared and know what to do if we will be given any disaster warning, particularly a cyclone warning. For example, during Cyclone Pam and Cyclone Harold we were given red alert for PENMA province and our CDCCC met very quickly. They helped those move who didn’t have a safe shelter, including vulnerable groups, to a safe house.”

On the other hand, there were also critiques of the CDCCCs, mainly that they were sometimes not active and only became busy if there was a disaster, as reported by several community members and also an organisational staff member: “During the time of [disaster relief] distributions, they will become very active. But for preparedness, not so much.” While they were active in some communities, in others “they had completely fallen away.” Sometimes the critiques stemmed from the politicisation of the CDCCCs, and at the community level it could be personal because a certain person was not popular. Some of the organisational staff members who were interviewed were critical of the CDCCCs and the NGOs that support them, pointing out that lack of ongoing training meant that CDCCCs lose their knowledge, highlighting the value of their role and effectiveness if they could be well-trained. It can be difficult to retain specific knowledge because CDCCCs are trained on a broad range of subjects through long training sessions, and the information and responsibilities was overwhelming for them as observed by a community key informant: “We expect a lot from these people.” As a CDCCC Chairperson and also SFP in Maewo commented: “The government should recognise the benefits of CDCCCs – that they are helping the life of their people. It is the role of the government to support and maintain the CDCCCs and provide incentives to the representatives.” Despite these critiques of the CDCCCs, their role is widely recognised as being valuable and perhaps augmenting their work with more support and training would allow addressing some of the critiques.

After TC Pam, the Red Cross was active in Tanna and provided different types of community resources. However, a community water tank provided within a school was discontinued from providing water outside the school, and other facilities fell into disrepair. As a research participant observed, “We have not seen Red Cross again for a long time – they have not come back after TC Pam to check on us and see how things are going.” This is a typical problem globally – after a disaster there is a flurry of activities, which over time are discontinued and their impacts are not sustained. On the other hand, in Maewo, there was appreciation of the Red Cross because they had installed piped water supply for the temporary shelters, and even after the temporary residents returned to Ambae, people from Maewo could benefit from it.

The SFP model has evolved from the past approach followed after TC Pam when it was initially proposed by Vanuatu Red Cross Society (VRCS) and the French Red Cross. It was less structured then and relied on local resource persons who could serve as “shelter champions” (CARE, 2015), which then grew into the SFP model as noted in a baseline study by CARE (2020b). It has been developed since it was introduced by CARE in Maewo after the relocation of people from Ambae and subsequently applied in Pentecost and has now become part of CARE’s “shelter model”. With regard to CARE, there were quite a few positive reports and appreciation of the self-recovery project in Pentecost, evident from comments such as: “Everything that CARE provided was very helpful. The trainings were good, information shared by the SFP very helpful, the tools and the timber cutting were all very much appreciated and helped us a lot.” And: “CARE’s support has



enabled me to build my new house. If it wasn't for them, I would not be able to recover in this time." Importantly, it was acknowledged that CARE helped in speeding up the recovery process, which otherwise would have taken longer. Because of previous training and following early warning by the local CDCCC, some people had been prepared and collected and stored *natangora* beforehand and could utilise that during the recovery. This highlights the importance of preparedness - it is a lesson that can inform future initiatives.

### **4.3 Knowledge exchange, the role of different communities and shelter DRR (RQ3)**

In this section in response to RQ3, firstly a key intent of self-recovery programmes - capacity development through knowledge exchange - is discussed, drawing on the training initiatives of CARE. The role of different communities in self-recovery is then illustrated through the case of Maewo, which is a specific case of island-to-island/ community-to-community support that also offers broader lessons on self-recovery. Knowledge exchange is further explored through the cross-cutting themes of gender, vulnerability and social capital – all key factors in self-recovery. Finally, shelter and DRR are examined in the context of the disaster risks and impacts in the research sites.

#### **4.3.1 Knowledge exchange for capacity development**

An important element in shelter self-recovery beyond the physical aspects of shelter is knowledge exchange to develop local capacity and awareness in safe building practices. The lack of local capacity, particularly in building with modern materials, and the need for its development was highlighted by several FGD participants in Tanna: "Generally in Vanuatu, our knowledge is not enough to ensure a modern house is safe from a Category 5 cyclone." And: "At the moment people are just going ahead and building a modern house without any guidance or knowledge of best practice." This was confirmed by an organisational staff member: "There is still a gap in technical knowledge, especially in safe modern construction. Ideally NGOs could also provide some guidelines on safe building practices for modern houses." While a discussion on this is beyond the scope of this report, there is now emphasis on addressing the need for building safer modern houses in urban areas as articulated in the SCV recovery guidance (2020a).

Even in the case of traditional construction, incorporation of safety elements, is a gap that organisations such as CARE address. For example, in Maewo this was discussed at an FGD: "In our community we have SFPs who attended a traditional safe house demonstration in Rembu Village. After that, we decided to build a safe house for everyone in the community" (*kastom* house, *saeklon haos*) (see Fig. 7). Another example mentioned in Maewo was that there were now more trained carpenters in the community who were able to help build houses to a good standard. Furthermore, in another FGD in Maewo, it was narrated: "After taking part in some building workshops we now have a different view on how we can be prepared and how we can rebuild after a cyclone. It has helped us understand that the houses we have been living in need to change – and that we need to do a lot of planning to build different models of a house that we



can be safe in.” It was acknowledged that the training helped not only the people who were trained, but the whole community.



**Fig. 7:** A traditional safe house in the Merino community, Maewo, built after training on safe traditional construction.

Of particular note was the training of community members as SFPs, including women. This is discussed further in section 4.3.3. The knowledge exchange extended beyond training SFPs to others associated with the self-recovery process, for example, in Pentecost chainsaw operators were trained and provided equipment to process timber from fallen trees for supplying the community for shelter self-recovery.

Significantly, the cultural aspects, or *kastom*, of each context are key determinants of the type of shelter self-recovery interventions that would be effective. The people of Vanuatu have strong resilience and capacity for self-reliance and have been dealing with disasters for a long time. This has resulted in a low death toll in a ferocious cyclone such as TC Pam (Handmer & Iveson, 2017). As mentioned by a ni-Vanuatu organisational staff member: “We still have knowledge on how to make traditional houses – the different types of houses, houses to cook, to hide from in a cyclone. This knowledge is still there.” During data collection, there were many examples of these qualities and also capacity for local innovation by blending modern and traditional materials - for example: using chicken mesh to keep thatch from being displaced; knowledge on selecting local timber, drying and smoking it to prevent insect attack; a local version of ‘tilt-up’ walls, that is constructing a wall on the ground and then lifting it in place for ease of construction. Only in recent years with more ferocious and frequent disasters due to climate change, local capacity and resilience have been subject to pressures, requiring external support, but humanitarian organisations such as CARE recognise these qualities, which is a basis for the self-recovery model.

#### **4.3.2 The case of shelter self-recovery in Maewo**

The role of different communities is illustrated by the case of Maewo. The shelter self-recovery initiatives in Maewo were different from the post-cyclone projects undertaken in Pentecost and

Tanna because it was a relocation programme. However, there were some plans for permanent resettlement of a limited number of households, nicknamed a “second home programme”. As discussed in Box 4, the people who evacuated to Maewo from Ambae after volcanic activity there were promised land-and-house packages by the government, but this eventually did not materialise. Households were then encouraged to be adopted instead under the Maewo ‘*kastom*’ system, but the people from Ambae felt they had been misled by the government and most of them gradually returned to Ambae.

**Box 4: Failed expectations in Maewo**

A female community leader from Ambae who played a role in the evacuation and relocation to Maewo after the volcanic activity in Ambae considered that they were lucky to move here because the local community looked after them. They were encouraged to move because they were informed by the government that they would be granted land which they could subdivide and live on. But after 6 months that had not happened. Hence, they wanted to go back to Ambae. The Chiefs made an agreement that they could stay with the local communities, but they did not feel secure in this arrangement – “We didn’t think this was black-and-white”. People did not feel very confident of the government and some people felt that is there would be another ashfall in Ambae, they would relocate temporarily to another part of Ambae, not again to Maewo. It also seems that there was a mixed provision of government support – some families received a complete house, others only CGI sheets – there was confusion on who would or should receive support and people were left waiting. It seems that the sheets were given to people with connections with the government, not those who needed it. As an organisational staff reflected: “The second home strategy in Maewo was one of the worst things that happened in shelter in Vanuatu. They originally planned to build 600 houses – no one has the capacity to do this in Vanuatu; it was purely politics – promising people they will have a free house!”

With funding from the New Zealand Government, and later China, the government then embarked on building 22 houses for people that were most affected from the displaced community of Walumbiwe on Ambae. In this project instead of a complete house, a house structure was built, which the beneficiaries were expected to complete - a 50-50 type approach as how some understand the self-recovery model (see Fig. 8). The structural frame, cement bags, posts, rafters and framing for the roof were all provided. People from Maewo were expected to supply the bamboo for the walls and the Ambae beneficiaries would build them; however, many of the beneficiaries responded that they did not have the skills for it. Some of them were travelling back and forth to Ambae, many had already returned, and some had gone back and said they would return but asked the houses to be built for them while they were gone. Then local guardians were appointed to look after the houses – it became a very slow process. The bill of quantities was wrong, the houses were too large, they had to be reduced to a smaller size, and the house design focused on a modern design requiring significant engineering. All the materials were supplied, and the VMF (Vanuatu Mobile Force), funded by NDMO, built the structures. However, the beneficiaries were not willing to build, only about half of the houses were eventually completed, some with bamboo, some with bricks (see Box 5 for a narrative of a beneficiary). The idea was a second home for people to go back and forth. But hardly anyone returned and most of the houses were taken over by people in Maewo. An organisational staff member involved in the project expressed the view that: “The second home model that we utilised was probably a model of what not to do.”



**Fig. 8:** A house structure was provided in the government shelter project in Maewo, which the beneficiary was expected to complete (source: Daily Post, 2019).

There were about 60 new houses built on Maewo – most of those were built by people themselves by working with the local Chiefs and sourcing their own local materials. These models seemed to work better than the above government project where there was hardly any community consultation. There were many different complexities – even down to the relationships between people from Maewo and Ambae, which affected the supply, or lack of supply, of local materials.

**Box 5: The experience of a beneficiary of the government’s shelter project**

“When I came to Maewo, I stayed under a tarpaulin shelter. But I wasn’t satisfied – it was very hot, it also had a bad smell. I brought some old *kappa* from Ambae to build a shelter. I stayed here while the government and New Zealand built my new home. But we still face challenges. The house still isn’t complete. The foreman slept in a different community – but he wouldn’t always come. We relied on him to build – we couldn’t build the house in our way. The government designed the house and it was to be built in a set way. It also required special equipment, like a drill, circular saw, that we didn’t have access to. The foreman needed to be there for us to build – but when he was not there, our morale went down. We wanted to go ahead but felt we couldn’t. One week he would come, one week he wouldn’t. We couldn’t finish our house.”

“It took 2 months to get to the stage where it is now (still unfinished). All the posts and roofing have been done – and then it was up to us to put walls on it. We haven’t done this as we have not been able to get bamboo. We have just used tarpaulins on the wall. I can’t say whether it is because there is none available, or whether people aren’t willing to give it. I haven’t been into the bush to look. But no one has come to offer us to find it. We do not know how to do this, as it is not our home island. People didn’t offer bamboo and we felt we could not ask.”

“If there is another eruption in Ambae – I will be able to come back to this house. I would like to save up to buy some cement sheet or Masonite. Or maybe bring bamboo from Ambae. I haven’t forgotten this house, but my biggest challenge is that all my children are at school – three in secondary. That is my priority. In Ambae we are just sleeping in a small house that was made as a market house. We don’t have a good house to live in. I feel like I can come back to Maewo if I need to. I have built a home here now, but lots of other people have not. If there was another Ambae emergency I think I would be ok as I have this house here and I can come back to this community. If the whole community needs to move, we will need support from the host community. If it’s just me, I will need support from my host family. Especially in sourcing bamboo for the walling for my house.”

The key issue with the temporary relocation is that the island’s population increased by 70%, leading to pressure on existing resources. Homestead food gardens were stretched to provide food to the temporary residents, and despite fishing in the local reef being restricted, the people from Ambae began fishing there to make ends meet. This was also the case with natural building materials required for the new shelters. As evident from Box 4, this was a reason why many of the government-provided shelter frames could not be completed. On top of this, the people of Maewo were asked to provide *natangora* for the post-TC Harold recovery in Pentecost. As a Maewo resident commented: “It was hard – we had just helped Ambae – and we were then asked to provide support for Pentecost.”

Despite these pressures, there was a strong feeling for island-to-island or community-to-community support embedded within the ‘*kastom*’ values in Vanuatu, captured in accounts of Maewo residents when reflecting on the Ambae temporary relocation: “Everyone in Vanuatu has an underlying concept of partnership. We are happy to help each other.” And: “Our community is always ready to help. We helped send food and *natangora* to those affected by TC Harold.” The temporary residents from Ambae appreciated the kindness of being hosted: “The community really helped us here. They provided food, they took us into their family.” “We were well-looked after by the community – they provided what we needed.” This supportive structure contributed strongly to shelter self-recovery initiatives and allowed overcoming many of the challenges in the process. This is illustrated in Box 7 by the narrative of a relocated household from Ambae.

**Box 7: Island-to-island/ community-to-community support**

“As months went by, we were told to move back to Ambae as now the state of emergency is over. Many of our families that came from Ambae to Maewo are now returning to Ambae. Myself and my husband checked with our family in Ambae if our house was ok, but we found out it had been completely destroyed. With tears running down my face I had to tell my husband that we must stay in Maewo, as he has a medical problem. My husband talked with one of the SFPs here to see if he can give us a piece of land for us to settle on. He agreed, so we built a little house, but it wasn’t very strong. The SFP then asked us to move in with him so now we are staying with him - he has been so kind to us, giving us food every day.”

#### 4.3.3 Gender

The data from the field did not indicate any broader issues related to people of LGBTIQ+ background and gender was largely interpreted in binary terms, which is reflected in the discussion here in this report. Vanuatu is a traditional and largely patriarchal society, although there are signs that gender roles are changing. Respecting the local traditional values, and thereby to be able to maximise the quality of the data collected, the FGDs and community interviews for this research were conducted in separate groups for women and men by respective female and male facilitators. In the FGDs when participants were asked what a house/home means to them, the women tended to focus on the family and children, and the importance of the kitchen, whereas the men’s responses included technical and design aspects of a shelter. However, a number of women mentioned the importance of safe shelter construction and design, and some men also mentioned the importance of family and children. This was an indication of the changes in gendered perspectives. Even within the traditional set-up, women play an important role in the recovery process, as described by a builder in Tanna, pointing out that



women were very involved after TC Pam, for example, fixing the homestead food gardens and recovering livelihoods, and weaving palm leaves for repairing damaged shelter.

Traditionally, women in Vanuatu are not directly involved in construction-related work and training women as SFPs by CARE was an important social advancement; in the post-TC Harold self-recovery project in Pentecost and Ambrym, out of the 118 SFPs trained 43% were women (CARE, 2020a). As self-confident comments of a trained female community leader from Ambae illustrate: “I went to some CARE trainings and took this back with me – I learnt how to talk to the community, how to encourage them. I learnt how to help people look at the future and work together to recover.” Another female SFP in Pentecost noted: “I feel much more confident after going through all the different trainings, especially the trainings on women’s roles and confidence. Before I used to sit behind the men, but I learnt to stand and ‘tell your heart’. I feel confident to share information with both women and men.” Beyond construction, both female and male SFPs are also trained in disaster preparedness and conducting community drills. An expatriate shelter consultant reflected on his observation that there was more awareness in communities about the importance of having women as SFPs. Further evidence from an evaluation of CARE’s self-recovery project (Hau Meni & Associates, 2021) confirms that that people from the communities in Pentecost have recognised women SFPs playing a crucial role in supporting them in shelter, while a request made to CARE signed by all the Chiefs in Pentecost to continue the gender-based work was an indication of the local recognition of the positive impact of the work. Box 7 provides an account of a CARE staff member on their strategy for promoting gender equity for SFPs.

**Box 7: CARE’s gender strategy**

“In Ambrym, CDCCCs existed, but were completed made up of men. Our first activity in Ambrym was to do a refresher training for CDCCCS and include women – ending up with nearly half of all CDCCC reps as women. SFPs were selected from these new CDCCCs – about 50-50 men and women. Endline evaluation asked people who the main person supporting them in rebuilding was – 56% said that the main person supporting them was a female SFP – which is very significant. In Pentecost it was still very significant – about 40%. They are both hard places to work on gender.”

“The shift is very important – even if it was 20% - the first meeting I went to with chiefs, was a room full of men with some women at the back who could not talk. Traditionally, women are not in positions of leadership. We were able to do that through leadership groups in communities, but given the scale and timing of the project, we were not able to consult with a diverse range of stakeholders outside of traditional leadership structures. This is a challenge of the context. The assumption was that by talking to women’s leaders, church leaders and chiefs they would go back and consult with their community members and feedback their suggestions to CARE. This strategy helped us to adapt our model.”

CARE’s initiatives towards gender parity have a long history and have continued to evolve since TC Pam. As presented in a report (CARE, 2017), initiatives for a gender responsive approach to DRR in Tanna reduced the impact of TC Pam on communities and enabled them in their recovery. The shelter self-recovery projects of CARE seemed to be having an impact also in Maewo on changing gender roles and creating opportunities for women’s participation, as well as men’s perspective, reflected in comments made by a village Chief (male): “Women are now working together with men. Women are working on new things – they are also joining trainings. Some women have joined to build the traditional safe house [demonstration *kastom* house]. This would not have happened before – it used to be the role of the men. But now women are a part of this

process.” Various reports indicated an increased involvement of women in the self-recovery process, even of women building their house by themselves, attributing it to the knowledge exchange initiatives of CARE, as noted by another Chief in Maewo: “This has come up since all the trainings after the Ambae disaster.”

The importance of specific considerations for women have been highlighted by both community and organisational participants, for example women’s privacy in evacuation centres, making sure that women play a role in house design and provide specific contributions to the design of kitchens and bathrooms, which men often do not prioritise. A female ni-Vanuatu organisational staff member suggested: “If women are involved, it works much better.”

Despite all these developments, challenges due to culturally assigned gender roles persist. A female SFP in Pentecost pointed out that 39 out of 40 chainsaw operators trained by CARE were men. The only woman chainsaw operator was however strongly praised for her commitment and support to the community, which is a small but important step in challenging traditional gender roles in machinery operation. In Tanna, it was observed that shelter construction was still largely a male role and the local LTRC hardly have any women in the construction course, and women were instead encouraged to study courses on life skills or interior/ furniture design. Thus, although the efforts of humanitarian organisations such as CARE are remarkable and laudable, there is still work to be continued for bringing about more significant and widespread transformation. The vignette in Box 8 from Pentecost after TC Harold illustrates the persistence of reliance of women on men for shelter recovery.

**Box 8: Reliance on men for shelter rebuilding**

“My sleeping house fell down, but my local-style kitchen was ok. Initially I received some money from my husband who has been working in Australia for the last few years. He sent 30,000 Vatu to pay a contractor [just a local community member] to rebuild my sleeping house using the old materials from the damaged house, and also some new timber posts [not the ones cut by a CARE chainsaw operator]. I only bought extra nails - long ones 5-6 inches, not short ones.”

“I am now in this house and feel safe in it. But I plan to rebuild a more permanent house when my husband returns. They will need to buy *kappa*, cement, etc.”

“My support has mainly come from my husband. I have not received the timber posts as I did not have enough money to buy food for the chainsaw operators, but I already paid for the extra 10 litres fuel on top of the free 7 litres. But I am ready now and just waiting for the chainsaw operator to return from his travels. These posts will be used in the future a more permanent sleeping house. “

“I am selling coconuts for 20 Vatu each to save money. Previously I made my income from kava, but that has all been damaged and it will be another five years until it will earn money again. My main problem is my husband is away and, as a woman, I don’t have the knowledge or skills to make the repairs and build a new house by myself.”

**4.3.4 Vulnerability and social capital**

In Vanuatu, a key factor leading to vulnerability relating to self-recovery is low income as a resident of Tanna noted: “Access to finance is holding us back.” This is compounded by various factors such as being a woman in a traditional, patriarchal society, lack of access to knowledge and skills, and significantly, being elderly, single mother and/or widow, or having a disability. In Vanuatu, many men work overseas in Australia or New Zealand often as seasonal workers and



their families are reliant on the money they remit for recovery (see Box 8). Those who do not have such family members face financial difficulty. Many people rely on subsistence agriculture for livelihoods, such as growing kava, and after a disaster such crops are often damaged, restricting income for recovery. The shelter self-recovery experience of an elderly widower in Pentecost after TC Harold is presented in Box 9. This example also indicates that people who have family members working overseas in Australia or New Zealand are able to access more funds than most people can locally and can thus aim to build a modern-type house, which most others cannot afford. The purpose of self-recovery programmes is to firstly support people with low affordability and help them build better with the local materials they can afford; the target group is not people who have a higher level of support from overseas income.

**Box 9: The experience of an elderly widower in Pentecost**

“My house was totally damaged, it is just a traditional house. After the cyclone I cleared my house and removed all the damaged materials, but the ones which could be reused, I kept them. It took me a month to clear my damaged house, everything in it is gone. During that one month I was sleeping with one of my family, whose house has not been damaged. After one month sleeping with my family, I decided to build my house, so I cut down some *namamau* (local hardwood) which I have planted just close to my house. It took me a couple of weeks to cut them. Me and my three sons, we rebuilt our house.”

“We did not complete it yet because we used the *natangora* from the damaged house, we put them on top of the roofing of our new house, and we also used tarpaulins to cover the roof. It is not really good because the *natangora* will go rotten soon, and maybe too the tarpaulins. Then I must cut new *natangora* for the roof. But that *natangora* leaf is not yet ready to use for roofing.”

“It is hard for me right now to rebuild because I am alone at home, I have nobody to help me, plus I am a widower, my wife died. My three sons travel to work in New Zealand and Australia. It is also hard to ask the community for help because everyone has similar challenges of building back their houses. We have some external help from the government and NGOs, especially CARE gave us the tarpaulins and toolkit. I kept the tools, I haven’t used them yet; I will wait till I get my permanent materials, then I can use them.”

“I cannot really tell when I can finish building my house. I do not have the money for it at this stage. I will just have to wait for my boys to come back from Australia then we can decide what to do. My son will come back probably next year, so I think it will take me about 4 to 5 years to complete my house.”

Most of the self-recovery programmes of humanitarian organisations such as CARE aim to support vulnerable people and prioritise them, as explained by a SFP in Pentecost, who also recognised the challenges: “It is my role to help people with disability. In TC Harold, every house fell down – so it was hard to help the vulnerable, everyone had their own challenges to look after. As the SFP, I tried to check if they were ok. If another cyclone comes, we will look at these people first to make sure they are prepared, safe and ok. We have a SFP plan and people with disability are now a priority.” Vulnerability and gender considerations are embedded within the SFP role. As an expatriate shelter consultant mentioned: “In my experience, the SPF have always seen these people [the vulnerable] as the priority – even when most of the SPF are men.” This relates to the discussion in the previous section where the changing perspectives on gender roles through CARE’s interventions was highlighted. In terms of distribution of support materials, there are reports of prioritisation of the vulnerable, for example in Pentecost when a limited supply of *natangora* was obtained from Maewo, it was given to widows, people with disability and the elderly. On the other hand, there are reports of the government’s programme in Maewo where materials went to those with connections and not people who needed them.

Despite the protocols in this regard of humanitarian organisations, it was reported during a FGD in Pentecost: “There isn’t too much extra support for people with disability – one lady has diabetes and eye problems – she needed extra support to build back her shelter.” As pointed out by an organisational staff member: “[Self-recovery projects are] lower cost interventions that can have greater impact. But if we are taking that approach then of course there is the chance that we might not drill down to the most vulnerable communities, and they might get left behind.” It was pointed out by another organisational staff member that people such as widows can be sidelined; even if they have a family, the family members might need to prioritise their own recovery first before they are able to provide support. Such people may also not have access to money to afford new resources for rebuilding. A similar view was expressed by a CDCCC Chairperson in Maewo: “Most of the time they [vulnerable people] were served afterwards because everyone was suffering from a similar situation.”

In the case of the timber supply by CARE-supported chainsaw operators, the blanket agreement was that CARE would provide 7 litres of fuel for free and community members could contribute anything further if they wanted to. In some communities, not all, they added additional requirements, such as payment of 3,000-3500 Vatu for labour or the provision of food to the operator, and payment for any fuel above the 7 litres provided by CARE. Some reports indicated that not all vulnerable people were able to afford these arrangements and were left without any timber supply. However, this arrangement varied in the different communities according to decisions made by the community members - each community had a different way to deal with how to provide extra fuel and support their operators. This reflects the autonomy in self-recovery programmes that communities have in making decisions that suit their circumstances. In some communities, operators were just provided meals, in others, people only paid for extra work to process wood after the allocated 7 litres was finished. In one community a monthly fundraiser was organised where community members ran a small market, and all the profits went towards paying the chainsaw operators; the community came up with this idea together with their Chief. Here they prioritised the elderly and widows to get their timber cut first. They still had to pay, but other community members helped them with transport. Other reports indicated that, “Vulnerable members of the community are not required to pay for Chainsaw operators fee, they get free service’ and “They [the vulnerable] were the group of people the community prioritised to help. They did not pay for anything; the community organised everything for them.” Such people were sometimes supported at an individual level, for example, as the account of a SFP in Pentecost indicates: “They [vulnerable people] should be the priority, but according to my observation they have not been. For example, the decision for 3,000 Vatu to pay for the chainsaw operator applies to everyone in our community – even vulnerable groups. I have broken the SFP and Chief’s agreement once to cut some timber for free for a widow.” Another chainsaw operator reported that he processed timber for free for vulnerable people.

While the self-recovery model promotes autonomy in community decision-making, the issue of the possibility of some vulnerable people being left behind and varying levels of self-recovery within the community bears further exploration, whether there is the need for more specifically targeted support. Requiring particular attention are women with disabilities as pointed out by a CARE report after TC Harold (CARE, 2020c), who need special attention; for such people there are cumulative disadvantages associated with both gender and disability. With typically low cash

flows in the rural Vanuatu context, for some households, expenditure on recovery depletes their savings and leaves them vulnerable to future shocks and stresses. Significantly, inability to adequately recover places people at risk to future disasters, as pointed out by a resident of Maewo: “One main problem is that we will be living in a temporary house for a long time – if another cyclone comes, we will not be safe.” In this particular context of relocation, it is sometimes difficult for the most vulnerable to find the same level of support as in their own community, as narrated by an evacuee in Maewo: “The elderly, widows, they have their own special needs. They face a really hard time in accessing money here in a new community. If we were back in Ambae, and an elderly person asked for help, I could help them. But here in a community that is not mine, I do not know where to source the money to support them.”

The vulnerability of communities in Vanuatu is mitigated to a great extent by their “social cohesion” as a couple of organisational staff members suggested. As pointed out by one of them, “That is a big strength in Vanuatu” and by another, “In the Pacific people live in and rely on their communities.” This concept is also known as ‘social capital’ (that is, norms and networks that result in people acting collectively for a mutual goal). This generally tends to be manifested more strongly in rural areas compared to urban areas, evident in the largely rural research sites investigated in this project.



Fig. 9: A traditional safe house (*Nimilatan*) built after TC Pam by LRTC but needing repairs. People did not consider it safe enough for protection in a cyclone.

Social capital operates at different levels – within the family and community (bonding) and community to community/ island-to-island (bridging). The support people gain is not only for recovery, but also in other stages of a disaster. Where there is no evacuation centre or community safe *kastom* house, people seek shelter during a cyclone in the house of a relative or neighbour who has a sturdy modern-type house. In a community in Tanna, the local *kastom* house was a bit old (see Fig. 9), so as narrated by a resident, “If a cyclone came tomorrow, people would choose a modern house that belongs to a community member.” After the cyclone is over, people whose houses were destroyed seek shelter with family members (see Box 1). The support from humanitarian organisations at this stage initiates the self-recovery process by complementing the

family support, evident from the account of a FGD participant in Pentecost: “Our home was destroyed, so we went and slept with some relatives, but not for a long time - about a week, then I built a temporary shelter for us to sleep in using the tarpaulins which Red Cross and CARE have given us.”

In the initial recovery stage, the family also plays a key role - after TC Harold in Pentecost, some people received money and materials such as tarpaulin sheets from family members working in urban areas such as Santo and Port Vila or overseas. There are many reports of family members subsequently helping in rebuilding shelter. For elderly people, they receive help from their sons and daughters, and their families. Often, the family plays the most important role in the recovery process, above the wider community, as explained by another resident of Pentecost: “If we want to rebuild, the community will be very busy with their own houses, so we will need to work with our families to help us rebuild our houses.” Sometimes the family is a source for borrowing money for rebuilding, and also, the example of “small funds” shared between households was mentioned. There were many such accounts of family support in the research sites. It is important to note here that typically in the rural Vanuatu context, people do not need a lot of money to build a house – most materials are free – though they might have to pay for labour, if not always in cash, in kind, for example by providing meals. However, increasingly connections to the cash economy are growing and natural materials are not as readily available as before, especially after a disaster. This is where the “small funds” come into play, to buy some basic materials to begin the rebuilding process. Perhaps this is why some households that were interviewed suggested that receiving cash from organisations for recovery would be useful. For organisations, this is matter that deserves attention; the SCV in its recovery guidance (2020a) mentions the consideration of cash vouchers where it might be appropriate, perhaps for the most vulnerable, and a study by Oxfam (Holt & Hart, 2019) suggests that cash transfers can be feasible for recovery if assessed carefully according to the context and specific circumstances.

There is also significant ‘bonding’ social capital at the community level with many examples of mutual help and sharing of information noted during the data collection, complemented by the support from organisations such as CARE, for example shelter toolkits, which the community utilises for rebuilding shelter at the initial stage, even if they are temporary in nature. Also in Tanna, there were similar examples, where timber and *kappa* were given from the church to its congregation and the community helped in rebuilding houses. Where local builders undertake the work, the community helps in the work and sometimes provides food for the workers. An elderly person reported: “I do not build by myself; I have people from the community come to help me.” There were many reports from the field about people working hard on their own recovery, but also helping other households to rebuild their houses. As noted by a household in Pentecost: “We always work together to rebuild after all disasters and now we are still recovering.” Another comment by a resident of Tanna also captures this community spirit: “Community coming together and working as a team is the best rebuilding process because everyone joins hands together, thus making the work go fast.” This is also captured in the remarks of a SFP in Maewo, who was a CDCCC Chairperson as well: “In times of disaster, it really needs everyone to put their hands together and work together. In a *Nakamal* system [traditional customary system], everyone looks after each other. People work as a team in the community within the same *Nakamal/ Nasara*.”

Prior to recovery, there is also significant community solidarity in the immediate aftermath of a disaster. As narrated by a household in Pentecost: “After the hurricane there were trees everywhere, we then asked our families from Vila to send 200 litres of benzene for the chainsaw. We used it to clear the place. We clear the windows of houses, clear the road down to the sea. Clear the road to our gardens.” People also gather together to salvage materials or go to the bush to collect fallen *natangora* leaves, bamboo and other such materials, making sure to collect them before they become dry or rotten. A community member in Pentecost narrated her experience after the collection: “Then we sewed the *natangora* leaves together to build back the roof of my kitchen. That only took us two days to do that.”

The case of Maewo demonstrates ‘bridging’ social capital in the form of island-to-island/ community-to-community support as discussed above in section 4.3.1 (also see Box 7). Despite all the pressures of accommodating a large number of evacuees from Ambae, the helping-hand spirit is evident from the comments of some of the existing Maewo residents who participated in this research: “Our community will help each household [from Ambae] to rebuild as this is what the community has been doing for a long time now.” And: “We want all the islands to know that Maewo is ready to help – with correct organisation we can help. We do not need support from donors – we can provide food, materials for houses. We just need help with organising to make sure that the initial agreements are strong. If it is not done well, it can spoil this pathway and damage the trust.” The latter part of this comment alludes to the promises made by the government about providing free land and housing, and then not following through (see section 4.3.1). A temporary resident evacuated from Maewo expressed her appreciation for the support: “The community came together well. They sat down and discussed where we would go and made sure we all had a place. I feel like I am part of the community now.”

**Box 10: Community support by Maewo Chiefs**

“Maewo is good – our chiefs all work together from the North to the South. We work strongly together.”

“After a disaster, if someone wants to rebuild, he will not have to do a thing themselves, they will have the support of their family and community. They will not depend on the government or any external support.”

“For Ambae evacuees we (the Chiefs) divided the community and each community helped different households. This organisation made it possible for the community to help. CARE provided some materials, but the support of the community was crucial. Community leadership is critical to drive this.”

“Vulnerable people need to be prioritised. To do with housing, the community needs to support. In the community, the Chief or the full community, or the close family will care for vulnerable people.”

“Here we support vulnerable people by planting their garden, providing direct support.”

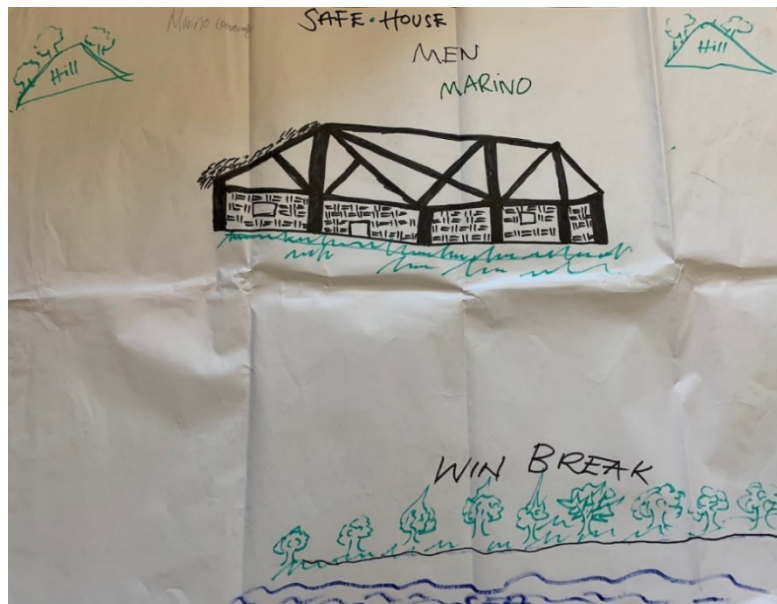
Local leadership plays a key role in this context and regarding self-recovery projects, it can help in implementation and moving it forward, often easier to organise in rural areas. The role of village Chiefs is of paramount significance in Vanuatu; to illustrate this, some of the narratives of Chiefs in Maewo in the context of self-recovery of the evacuees from Ambae are presented in Box 10. A note of caution in this regard was shared by an organisational staff member of CARE: “The community structure can be both an enabler or a constraint to the self-recovery approach, where communities are also supporting each other in order to fast track the recovery process. An example would be communal arrangements around accessing materials – if that is not supported



and endorsed by leaders in the community, and there is not strong organisation in the community, that will be a barrier to people and their own self-recovery.” Thus, while the role of Chiefs is significant, other leadership structures, particularly comprised of women, are required as balancing factors. The CDCCCs can also play an important leadership role – indeed, there were some examples in Maewo where the local Chief was also a CDCCC Chairperson.

#### 4.3.5 Shelter and disaster risk reduction (DRR)

The importance of incorporating DRR features into shelter is a key aim of shelter self-recovery programmes, as reiterated by several organisational staff members. This is often implemented as ‘building back better/safer’ strategies, as discussed in section 4.2.1. As an organisational staff member stated: “We do take a DRR approach – making sure that people rebuild in safe areas – but we prefer that people rebuild on their own within their own communities.” This points to the fact that in addition to strengthening the shelter structure, the location is also important. This was also evident from the FGDs conducted in this research, where participants expressed their views on what a safe house means: “It is not on an exposed hill, or too close to a river or the ocean. There are no big trees nearby.” They also acknowledged that trees were important to keep the house cool in this tropical climate, but it is still important to ensure that they were not too close to the house in case of a cyclone. There were examples of houses crushed by trees during TC Harold in Pentecost. On the other hand, it was observed that trees serve as a wind break by blocking the wind and lessen the impact on houses. They suggested the local Pandanus tree because they are “springy” and do not break easily. Fig. 10 shows a drawing done by FGD participants in Maewo where the awareness of a safe location is evident, a reflection of the awareness gained from CARE’s safe construction training where this location one of the four shelter safety principles promoted by SCV (CARE, 2015; Hau Meni & Associates, 2021; SCV, 2019).



**Fig. 10:** A drawing done in a FGD group activity in Maewo depicting a safe house. In addition to aspects of location (distance from the coast and hills), trees as wind breaks and cross-bracings are indicated.

In terms of strengthening the house structure, CARE's shelter self-recovery projects promoted the use of cyclone straps, cross-bracings and anchoring of footings, among other safety features; cyclone straps are included in the shelter toolkit. This is part of the training of SFPs, who then promote it in the community. As noted by a female SFP in Pentecost: "A good house needs good foundations, good bracing, these will help keep your house safe into the future" and a CDCCC Chairperson: "They should build according to a safe standard, like the foundation should be strong, if they are using a post, it should be one metre deep, and use cement with the post. They should use nails, cyclone straps, etc to ensure that their house is safe and strong." It is clear from almost all the FGDs that participants were aware of the requirement for the foundation of a footing to be at least one metre deep. Again, this indicates awareness of the four shelter principles suggested by SCV and promoted in the CARE trainings (CARE, 2015; Hau Meni & Associates, 2021; SCV, 2019). The narrative in Box 11 from a Pentecost FGD indicates the community awareness of shelter safety features.

**Box 11: Community awareness on shelter strengthening**

"The foundations must be strong – 1-metre deep. It is good to use stones and cement to strengthen them. You also need to put nails into the end of the timber post first – this will hold onto the cement in the foundations and make it extra strong."

"In the walls and roof of the house there are a lot of 'Xs' (bracing). With lots of bracing in the right places this will make the house a lot stronger. Some of the crosses should go from the roof to the sides. We didn't use to do this before the cyclone, but after the trainings we know this is important. A house must have lots of 'Xs' so that no matter the direction of the wind, the house will still be strong."

"The timber used for the posts and bracings are a strong local timber. The timber has been given time to dry properly first. If they are not well-dried, they will go rotten and be susceptible to pests. The walls are made of bamboo (woven) and also bamboo as the rafters. A cement floor is best – this will last. Even if the cyclone destroys your house, the floor will still be there."

"A house built like this can stand up strong for 4 years or so before it requires repairs."

The knowledge gained from the training is augmented by existing traditional knowledge, such as on the selection, use and treatment of timber and bamboo. There is community traditional knowledge on local construction methods and the right type of local materials to be used for DRR (see Box 12). An organisational staff member acknowledged that people know how to build their house, but cautioned that, "To expect that they can build a house which will be able to withstand a Category 4 or 5 cyclone is unrealistic." It is indeed hard to imagine to what extent a traditional bamboo and *natangora* house can withstand a Category 5 cyclone. The extensive damage to traditional shelter in TC Pam has been documented in a report by a consortium of NGOs including CARE (Save the Children et al., 2015). Therefore, while the shelter DRR efforts of humanitarian organisations incorporate a degree of safety, the limitations of traditional housing to the increasingly ferocious cyclones in Vanuatu has to be recognised.

#### Box 12: Traditional DRR shelter knowledge

Noted in a female FGD in Pentecost: “The roof and walls use bamboo but is a strong variety of bamboo – there are two different types of bamboo. One is soft and the other dries to be hard. One is good for houses [i.e. roofing] the other is good for weaving [for walls] and cooking with. It is important to use the strong bamboo for the construction of the house roof.”

Noted in a male FGD in Pentecost: “When using *natangora* as roofing, do not separate the sheets apart from each other. When they are close, it is more secure and strong - if the wind blows it will not blow the sheets out. Under the *natangora* bamboo is used as purlins. Do not separate them apart too much. Double the bamboo straps with which the *natangora* leaves are secured. It must be doubled - that means that the *natangora* leaves are also doubled, then you can use it as roofing. Most of the houses that did not double them, that is why the cyclone blew the *natangora* sheets off the house.”

“Use coconut leaves - tying two coconut leaves from both ends then put them on top of the roof. You only do this when you are preparing for a cyclone, that is, when you hear a warning from the radio. If the coconut leaves are not enough to protect the *natangora* from blowing apart, sometimes we use chicken wire over the roofing to fasten the *natangora*.”

In such a context, where there are very few purpose-built evacuation centres, the traditional safe/ *kastom* house (*Nimilatan* or *saeklon haos*) is often built with cyclone-resistant features. There are regional variations, but a typical example of a cyclone-resistant safe house consists of a low A-frame thatch roof structure with the rafters made from strong large pieces of timber embedded deep into the ground and the structural connections lashed together with rope. They are usually built in an inland location, or a valley, with vegetation and hills providing protection from wind and serve as a safe refuge during a cyclone. It is generally uncommon for houses to be built like a *kastom* house, and it might arguably prove culturally unacceptable to promote its design for domestic shelter; however, in Tanna, houses built in such a way have been recorded (see Fig. 6), and reportedly after TC Pam people were building more such houses. However, as reported by some interview respondents, much of this knowledge is being lost (also reported by the French Red Cross, 2017), and also, *kastom* houses are not common on all the islands. CARE endeavoured to introduce this idea in Maewo, as narrated by a SFP and CDCCC Chairperson (see Fig. 11): “There was a training that CARE ran to build a strong, traditional house. We know how to make a house – but not necessarily one that is safe. We learnt about location, the foundations, connections and joints of a house. These were the basic learnings from the training.”



Fig. 11: A *kastom* house under construction in Maewo.

Vanuatu is a multi-hazard context and there is the risk of multiple and cascading disaster impacts. The impacts of a range of natural hazards other than cyclones were reported in the field including flash floods, landslides, volcanic eruptions, earthquakes and tsunamis, and also too much rainfall due to La Niña effects damaging homestead food gardens. The shelter self-recovery projects discussed in this report were implemented largely with a view to reducing the impact of cyclones – in Tanna and Pentecost following TC Pam and TC Harold respectively, and in Maewo in preparedness for future cyclones – which followed structural principles of strengthening against lateral wind force. This may nonetheless have applicability for earthquakes, where lateral force is a threat to shelter structure. Some of the discussion on safe location also recognised the need for safety from coastal and riverine floods and tsunamis. Volcanic hazards have not been explored here because it was beyond the scope of the study, but it is a real threat in several of the islands in Vanuatu. Future research on shelter in Vanuatu could explore DRR within this multi-hazard scenario.

## 5. RECOMMENDATIONS

Following from the preceding sections where the key issues, opportunities and gaps in shelter self-recovery were identified and analysed, in this section a set of recommendations informed by the findings of the research are presented. The recommendations are drawn, interpreted and augmented from the commentary of research participants at different levels – community and organisational - giving them a voice in contributing towards defining the future pathway of shelter self-recovery.

### 5.1 Understanding the context

There is evidence of effectiveness of the self-recovery model in the research sites, and the work of CARE has evolved in time and according to the context. For example, the development of the self-recovery model was in a nascent stage after TC Pam in Tanna and it has been applied subsequently in Maewo and Pentecost, where it has gained traction. There is also recognition that the same model will not work in its exact form and needs flexibility in adaptation, evident in the different types of support, such as building demonstration safe houses in Tanna and Maewo, but not in Pentecost. The key lesson here is that every shelter self-recovery program is different, and there is a need to predict what will work and what will not according to the context; there is no one-size-fits all with shelter. There is a need to think about the context, about what the community wants, what they are used to, what materials and labour (skilled or unskilled) are available. Even the toolkit may need to be adapted, even small details matter, such as the inclusion of an axe as mentioned in Tanna could be applicable for that context; the necessity of including more 4- and 5-inch nails because of their extensive use as evident from Pentecost. Distribution of resources is essential, but it is important to understand exactly what the community needs and is already planning; a shelter toolkit should include what is actually needed. Ultimately, the organisation may even need to assess whether the self-recovery model may actually work in a certain context, to consider whether the constraints overwhelm the opportunities for success and thereby follow a 'do-no-harm' principle.

## 5.2 Consulting and communicating with the community

Consulting and communicating with the community for programme delivery is widely understood in the NGO community and the work of CARE demonstrates a strong effort in this regard. Much of the self-recovery work was undertaken in consultation with the community representatives – Chiefs - and communicated at the community level through SFPs and community meetings; building the knowledge of community leaders helped increase local ownership. Yet misunderstandings can occur because of differing expectations, creating dependencies, and can also result in grievances. In addition to the strong efforts invested in community consultation, it should always be explored if it can be done better. The key purpose of the community consultation process is to discuss expectations in an open and transparent manner, and seek ways to mediate, share information and manage the expectations to avoid negative outcomes. Because people might have expectations of receiving modern building materials, which may not necessarily be part of the self-recovery model, there is a need to keep discussing this with the community, talking with people and helping them to understand the benefits of safer, traditional construction techniques. There is a need to make sure adequate consultation with communities is undertaken in a way that they will understand; people have different levels of understanding, so there is a need to sit down with the community and explain the objectives and scope of the project so that everyone understands. The challenges are many – funding, time, communication, inclusion, etc – requiring the consideration of enabling factors such as access to funding, transparency, communication and coordination to forge effective partnerships with the community. Before and after a disaster, it is important that the whole island comes together – all the Chiefs are prepared to work together and develop a plan before requesting support. Community leaders need to understand the concept of self-recovery and the importance of the use of traditional knowledge and practices, so that they can promote that at the community level. The idea of self-recovery needs to be translated at the community level so that there is strong clarity and undue expectations are not created. A simple guide for self-recovery can be useful for programming and communicating with communities: If it is, say, 10 steps to rebuild – the supporting organisation should never provide support at step 1, 2 or 3. People need to take the first steps – do a significant part of the work (for example salvaging materials) – then the organisation can come in. If organisations come in at the first 3 steps and ask people to do the last 7 steps, people may not follow that; this is demonstrated by the government shelter project in Maewo. Sometimes if the way of sharing certain information does not work well, it should be looked at carefully whether it can be shared differently. Adequate communication would also help communities to feed information back to the provinces and to provide feedback to organisations in order to ensure that support is focused and tailored. The consultant has developed a framework for community consultation in post-disaster projects (Capell & Ahmed, 2021) and this could be a useful resource.

## 5.3 Drawing on community resourcefulness

There are three key areas of community resourcefulness. Firstly, the social capital that exists within communities, discussed in detail in this report. Ranging from individual family networks to community-to-community networks, this is what provides the wheels to the vehicle of self-



recovery. The high degree of self-reliance that contributes to community resilience is a tremendous resource that organisations can draw on. While the effort by organisations such as CARE has been to enhance this resource through knowledge exchange and capacity building, there is the opportunity of programmes to benefit from lessons through a case-by-case analysis of individuals and communities. Secondly, traditional knowledge. As discussed, in relation to shelter, such knowledge is under the pressures of urbanisation and modernisation and thereby declining. The self-recovery model relies on a synthesis of traditional and professional/technical knowledge, and with a declining traditional knowledge base, the foundation of the self-recovery model will be weakened. Therefore, a part of self-recovery initiatives should be to provide support and encouragement for regaining pride in traditional knowledge and documenting it for future generations, not only of the community but also organisational practitioners. Thirdly, community leadership. While the role of Chiefs is significant, other leadership structures, particularly comprised of women, are required as balancing factors. The CDCCCs can also play an important leadership role – indeed, there were some examples in Maewo where the local Chief was also a CDCCC Chairperson. Because the leadership role of Chiefs in Vanuatu is of paramount significance, organisations such as CARE work in communities with the approval and support of Chiefs, who although are male, increasingly recognise the value of the leadership role of women in self-recovery programmes within a context of traditional male power structure and support the involvement of women in decision-making and project implementation. Additionally, local SFPs can supplement and extend the power structure beyond the Chiefs' domain. While their role is not to diffuse the power of the Chiefs, which would hamper progress in self-recovery initiatives, they could definitely play a mediator role between the Chiefs, communities and implementing organisations. Furthermore, other community leaders – church leaders, councillors, politicians – can play a supporting role by disseminating information about the value of traditional, sustainable building practices and the self-recovery model. They can champion key shelter strategies and ensure that the messages shared by the CDCCCs and the SFPs are absorbed.

#### **5.4 Considering knowledge exchange needs**

Knowledge exchange through training and capacity building is a key element in self-recovery programmes and this is an area that organisations such as CARE invest significant effort into. During the field investigations, several suggestions were made by research participants, which should be considered for self-recovery knowledge exchange efforts. For example, the need for refresher trainings for SFPs was highlighted on several occasions. An evaluation of CARE's self-recovery project in Pentecost (Hau Meni & Associates, 2021) indicated a strong retention of knowledge by the SFPs there after a couple of months, but perhaps a structured and longer-term approach to periodic refresher training courses needs to be considered. Refresher trainings are provided to CDCCC representatives by NDMO and this is an approach that can be followed, although there might be gaps in that initiative as suggested by some research participants, which need to be looked out for. The SFP position can be strengthened, perhaps through certification via the SCV and/or the Vanuatu Government – something that the community would recognise and give the SFPs more credibility. Another area to consider providing guidance on is how to decide on the right kind of house – whether traditional or modern; if people want a modern concrete house, instead of going against it, the main guidance should be on how to build it well

using safe construction principles. However, it should be kept in mind that training on modern construction is not ideal; it is expensive and also promotes dependence – it reduces people’s resilience over the long run. It would be useful to have more clear guidelines on how to build a temporary structure and more support on best construction practices for both modern and traditional houses. There is also a need for more knowledge on how to protect houses built of natural materials from disasters; houses that have been rebuilt in the self-recovery projects are stronger – but they can still be damaged in a cyclone. People find physical support useful, such as building the demonstration *kastom* houses in Tanna and Maewo, and this type of support should be combined with training and knowledge exchange. There should be a balance between awareness/training and physical support - communities can be disappointed if there is only “talk” and no “action” – this is an important lesson to keep in mind. For the longer term, knowledge exchange should span beyond project confines and reach out to the private sector and strengthen the skills of carpenters and other construction workers for both traditional and modern shelter. An important consideration for the situation of dispersed islands in Vanuatu – after a disaster people often cannot find the materials they need for rebuilding - they need additional knowledge on how to source materials beyond their island; knowledge on options if they cannot self-recover within the limits of their own community or island. As the example from Maewo indicated, community-to-community/ island-to-island support is important; self-recovery can prove difficult if communities only focus on themselves.

## 5.5 Promoting the necessity of preparedness

This is another area that the importance of which most NGOs such as CARE recognise in their wider DRR programming. With regard to shelter self-recovery, specific measures for preparedness need to be promoted at the community level where people require more training and awareness before a disaster – they need to make a plan to ensure they are prepared for future disasters – preparedness planning on what to do in relation to shelter, food gardens, water supply, etc in the event of a disaster. This preparedness stage is very important. Every island needs to be ready and prepare adequate safe shelters for evacuation before a disaster strikes. All communities should be encouraged to build and maintain their own traditional safe house with contributions of the community. Access to roofing after a cyclone is a key challenge – to address it, small enterprises can be set up to enable people to rebuild *natangora* or other thatch roofing very quickly, and where possible, to have some pre-positioned stockpiled supplies ready for distribution after a disaster for shelter self-recovery. Such preparedness measures can be undertaken in coordination with local hardware stores for supplies of materials such as nails, screws and wire. There will always be a great need for *natangora* and bamboo, so if a network of suppliers is set up across different islands, it will enable people to access these materials readily. Such a network of small enterprises on multiple islands can support each other to create access to natural building materials across the islands. To date there has not been much thought given to the commercialisation of *natangora* panel construction and treatment of organic materials for durability as part of preparedness activities for self-recovery. There are numerous suppliers who supply *natangora* into Port Vila and other urban areas, these businesses can be supported to improve capacity and encourage local industry. There is the opportunity to investigate traditional construction techniques and designs with local builders and tradespersons and re-integrate them

into the present-day situation. As a community development project, it would draw on existing skills and stimulate economic activity in rural areas.

## 5.6 Supporting sustainable forestry and plantations

The supply crisis of natural building materials in Pentecost clearly demonstrates the need for attention to this issue if self-recovery programmes are to be effective. Awareness campaigns on shelter should include information on natural resource management including replanting and rejuvenating trees for timber supply, and also natural organic materials - bamboo, *natangora*, wild cane, plants for bush rope, etc - according to local building traditions of specific island contexts. In a post-disaster situation, replanting activities should be undertaken alongside self-recovery projects. An effort in this regard was already initiated by CARE after implementing the TC Harold self-recovery project in Pentecost in partnership with the government's Department of Forestry (DoF) (USAID, 2021). Sustainably managed community conservation areas would be important to ensure ongoing access to local materials. Each community should have a conservation area that is used to source seeds, which can then be cultivated in a nursery and used for replanting. This can ensure that people have future resources available for self-recovery. The government can play a key role in such initiatives through the advocacy and support of NGOs, and in partnership with communities. For example, a base in each province can be established to have a sawmill, paid by the government through the DoF, trained by TVET, and supported by NGOs. With established agreements between the customary landowner, or perhaps the government purchasing a block of land, to cultivate and harvest timber and sell it for a set agreed price - subsidised or set at a discounted price – can make it accessible to people.

## 5.7 Advocating for governmental engagement

Field investigation in this research project indicated a strong potential for NGOs such as CARE to undertake advocacy and partnership initiatives with the government, and to provide advisory support so that experiences such as that in Maewo of failed expectations does not happen; NGOs can draw upon their extensive grassroots community engagement experience for such advocacy. NGOs should be advising and helping the government to set policies and help people access skills, materials and logistics that support self-recovery strategies, and provide guidance on means of leveraging financial and institutional resources. Effective self-recovery is reliant on cooperation, collaboration and partnerships between multiple stakeholders, including the government. It is important to liaise with the Department of Local Authorities (DoLA), and Area Administrators should be supported to run training programmes and undertake community consultations, and particularly lead on the training of CDCCCs to make communities more prepared before a disaster. The CDCCCs are the main ones in the field, they are the first responders; they have been conducting remarkable work and there is the opportunity to further strengthen them. Community resilience can be built by encouraging self-recovery through training and awareness of CDCCCs. One option in relation to shelter self-recovery is to look at the geography of the islands and aim to have CDCCCs that are set up to cover multiple communities that have easy access to materials. This would make it easier to manage and implement access to building materials for recovery. The other idea would be to have a Key Informant in each community – this person would need to be included through

government structures to formalise their role; perhaps the SFPs could play this role. In partnership with NDMO, NGOs such as CARE can maintain the relationship with CDCCCs over the long term – not just in time of disaster. NDMO can be encouraged to be present in the community over a longer period of time – for example, having a yearly project with CDCCCs to run frequent periodic events to keep them active and to maintain the relationship. This will help ensure that communities are active and more prepared before a disaster. CDCCCs have an important role to play; while they should not be paid, some kind of incentive for them needs to be considered. The other area of potential advocacy to the government is education - to ensure knowledge about shelter, especially about traditional construction, is included into the school curriculum; the youth need to know all the different building methods. Finally, there is a need to review existing building standards and codes, which at the moment are specific to modern construction in urban areas, there are really no standards for traditional shelter. Standards based on modern materials are not relevant in rural areas where traditional materials such as thatching and non-standard timber is used. The work being done by the Vanuatu Cultural Centre (see Shing, 2019) in this regard could be a basis for developing standards for traditional shelter.

## **5.8 Continuing support for gender and social inclusion initiatives**

NGOs such as CARE should build on their achievements in the field of gender and social inclusion and use it as a tool for wider leverage at the institutional and community levels. They need to continue and upscale this role in monitoring and quality assurance to ensure that women, the elderly and people with disabilities have a voice in shelter self-recovery. While this is part of standard programming of NGOs, it is still important to reiterate and reinforce the message. NGOs should continue to provide this awareness and demonstrate to communities the value and role of each household member in the rebuilding process, even beyond the confines of a project. They should be involved at the community level and advocate for awareness on vulnerable groups, making sure that the community knows who these people are, and their needs supported first. It needs to be ensured that the local Chief is able to provide support so that vulnerable people have access to resources. Those at the front line of distributions (especially government workers) should be encouraged to place priority on the people that are most in need. It is important to explain to them to support everyone in the community, and if there is cyclone, all people should have somewhere safe to take shelter. Women have an important role in shelter design and their inputs should be sought on design and locations of bathrooms and kitchens, which men often do not prioritise.

## **5.9 Assessing the applicability of a cash transfer approach**

While there are potential risks associated with a cash transfer approach, the SCV recovery guidance (2020a) and an Oxfam study (Holt & Hart, 2019) mention that it needs to be assessed whether it is applicable in a particular context. Cash for work programmes in post-disaster recovery targeted specifically for women have shown positive outcomes elsewhere (Ahmed, 2018). In several household interviews during the field investigations, particularly those that were headed by a vulnerable person (elderly, widow) mentioned that a cash transfer program would be better for them; it would allow making individual choices on how to recover, which would suit their specific

circumstances. That way people can purchase the exact things they need. The shelter toolkit is useful, but it would be better in some cases if cash is also provided to support its use by allowing people to procure additional materials. The use of cash vouchers instead of fixed materials to give people more control should be explored. Furthermore, a conditional cash transfer can be tied to the application of resilience measures in shelter. At the community level, a small incentive for the community would help when they are providing support for food and building materials to other islands/communities. Adapting this model to areas where cash transfer is possible might mean looking further at trainings and access to knowledge for a self-recovery approach. It has to be understood that in Vanuatu in general, there is a low level of cash flow, and a house is often built slowly over time, and in a post-disaster disaster situation it may take longer. However, after a disaster, houses need to be repaired as quickly as possible, requiring an expedited process of cash flow, at least to undertake the most urgent repair work. There is thus the opportunity for a recovery grant process where humanitarian organisations and the government could provide cash for repairing and rebuilding housing in resilient ways with training and technical support.

### 5.10 Having an exit strategy with strong legacy outcomes

While significant effort is given to entry planning of self-recovery projects after a disaster through coordination with SCV, it is also important to plan an exit strategy after project completion with valuable legacy outcomes. What is left behind needs to be taken into account and the level of self-reliance and empowerment for future self-recovery projects needs to be understood. Projects should be seen through to a conclusion that makes sense to the community; the final result should be comprehensible to the community before the organisation leaves. If resources permit, it is important to provide ongoing support and training to people such as SFPs beyond provision of support after a disaster so that they are prepared for the next disaster. They should be encouraged to continue providing advice on ongoing shelter maintenance, for example advising on methods that will help increase the longevity of shelter, such as painting to prevent degradation/ rust and replacement of decayed and weakened materials.

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## Appendix 1: Details of the Focus Group Discussions (FGDs) and Interviews

<b>PENTECOST</b>	
<b>Community</b>	<b>Data Collection Activity</b>
Ranwas	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Female
	Key Informant Interview (KII) (Community) – Male
	Household Interview – Female
	Household Interview – Male
Londar	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Female
	Key Informant Interview (KII) (Community) – Male
Balemsi	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Male
	Household Interview – Female
	Household Interview – Male
Rangsuksuk	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Male
	Household Interview – Female
Hotwota	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
Whitewota	Key Informant Interview (KII) (Community) – Male
	Household Interview – Female
<b>TANNA</b>	
<b>Community</b>	<b>Data Collection Activity</b>
Laonaula	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Male
	Household Interview – Female
Loanalang	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Household Interview – Female

	Household Interview – Male
<b>MAEWO</b>	
<b>Community</b>	<b>Data Collection Activity</b>
Naone	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Male
	Key Informant Interview (KII) (Community) – Male
	Key Informant Interview (KII) (Community) – Male
	Key Informant Interview (KII) (Community) – Male
	Key Informant Interview (KII) (Community) – Female
Nasawa & Lolowai	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
	Key Informant Interview (KII) (Community) – Female
	Focus Group Discussion (FDG) - Male
	Household Interview – Female
Marino	Focus Group Discussion (FDG) - Female
	Focus Group Discussion (FDG) - Male
<b>Key Informant Interviews (KIIs) (Organisational) (Port Vila &amp; Online)</b>	
Governmental	National Disaster Management Office (NDMO)
	Department of Strategic Planning and Aid Policy Coordination DESPAC
	Public Works Department/ Shelter Cluster Lead
	Lume Rural Training Centre
Non-Governmental	CARE
	CARE
	Vanuatu Red Cross (VRC)
	International Organization for Migration (IOM)
	Independent Shelter Consultant
International	Australian Red Cross
	United States Agency for International Development (USAID)

## Appendix 2: Guidelines for data collection

### Focus Group Discussions (FGDs)

#### FGD workshop agenda

<i>Time</i>	<i>Activity</i>	<i>Notes</i>
10 minutes	Introductions/Starting the FGD.	Remember to complete the Consent Form (Appendix A2).
30 minutes	<b>Activity 1:</b> Icebreaker - why is it important to rebuild better?	Use post-it notes and stick them on a board or wall and collect later.
60 minutes	<b>Activity 2:</b> Shelter safety	Break-out group work with flipcharts and markers followed by a plenary.
10 minutes	Break	
60 minutes	<b>Activity 3:</b> Shelter self-recovery	Break-out group work with flipcharts and markers followed by a plenary.
40 minutes	<b>Activity 4:</b> SWOT analysis	Break-out group work with flipcharts and markers followed by a plenary.
10 minutes	Wrap-up	
<b>TOTAL 4 hours</b> (includes 20 minutes for transitions and flexibility)		

#### Starting the FGD (10 minutes)

##### *Welcome:*

- Facilitators to welcome the participants and give a brief introduction of themselves.

##### *Explanation of the research project and this FGD workshop:*

- Briefly explain the research by reading the **Participant Information Sheet** (Appendix B2) and the ways in which the discussion materials might be used.
- Explain why the participants have been selected: “You were invited to participate because you all received support from CIV and/or recovered/recovering from a disaster [disaster name].”

##### *Guidelines for participation in this FDG workshop:*

- Explain that there are no right and wrong answers - their opinions and experiences are very important to us.



- Explain that we will ensure anonymity of all participants when we make use of the material. Encourage people to speak up if they agree or disagree; we want to hear a range of opinions on the subject.
- Explain that the aim is to create an open, polite and friendly environment in which all participants feel confident to contribute to the discussion. Explain that we want you to do the talking and would like everybody to participate in the discussion.
- Explain that we will be taking notes but will not be recording people's names. Clarify that this is to help us to jog our memory afterwards and that it will be deleted once the project has been completed.

#### *Consent to participate in the workshop:*

- Remind participants that they can leave the discussions at any point.
- Ask permission to take photographs and clarify how these may be used.
- Ensure consent from the community members to participate in the discussion, using the relevant **Consent Form** (Appendix A2).

### **Activity 1: Icebreaker - why is it important to rebuild better?** (30 minutes)

**Aim:** Facilitate a brief ice-breaker discussion about why it is important to rebuild better.

#### **STEP 1**

- Hand out post-it notes and ballpoint pens.
- Ask each participant to discuss with the person next to them for 5 minutes and write down on a post-it note 3 main reasons why it is important to build better shelter.

#### **STEP 2**

- Stick the post-it notes on a board or wall.
- Reflect for a couple of minutes on the common reasons and any that are unique.
- Allow for comments from the participants.
- Remember to collect and store the post-it notes after the workshop.

#### **STEP 3**

- Facilitate a free-ranging discussion for 15 minutes on "what does a house/home mean to you?". The objective of this discussion is to get people thinking about the significance of home, what is lost when a home is damaged or destroyed, and the importance of recovering their home. To get people thinking beyond "four walls and a roof", here are some potential prompt questions:

> What spaces in the home are most important, why? Is the kitchen more important than the sleeping spaces?

- > Where do women spend most of their time? Children, where do they play, do they feel safe?
- > How do you decorate your houses (woven mats, split bamboo screens, etc.)? Why is this important? This might encourage a discussion about pride and dignity. And the relative importance of homemaking compared with durability and safety.

## Activity 2: Shelter safety (60 minutes)

### Aims:

- > Identify aspects of individual structures and settlement as a whole that make the community vulnerable to local hazards.
- > Identify what can be done to make shelter safer in the community.

### STEP 1

- Form break-out groups of 3-5 participants in each group.
- Hand out three-four A4 sheets and one flipchart sheet per group, marker pens and sticky tape.

### STEP 2

- Ask the participants to think about the houses in their community and in each group draw a rough sketch of what they think is: (a) A 'safe' house; and (b) An 'unsafe' house, in terms of the local hazards.
- It is important here to make it clear that the 'safe' house should not be linked to any expectation of a shelter provision program of any organisation; it should be a house that can generally be built in this particular community with local resources.
- Ask each group to stick their drawings on the flipchart and write 3-4 reasons why they think it is 'safe' and 'unsafe' next to the respective drawings.
- Allow 20 minutes for this step.

### STEP 3

- Ask each group to present their output to the whole group. They can nominate someone from the group or present as a group. Allow 3-5 minutes for each group.
- Ensure gender balance of the presenters.
- Provide general feedback after all the groups have presented.
- Take photographs of all the flipchart outputs and file them digitally.

### STEP 4

- Facilitate a free-ranging discussion for 15 minutes on "what does safe shelter mean to you?". The objective is to get the participants to reflect and analyse on the safe shelter issues that they identified. Here are some possible prompt questions:

- > Do you agree that the drawings on display represent the strengths and weaknesses of shelter in the face of the main hazards faced by the community?
- > What are the main shelter problems that contribute to vulnerability and the possible ways to improve shelter safety?
- > Are there any shelter safety problems that relate to more than one hazard?
- > Are any shelter improvements that help protect the community from more than one hazard?
- > If you observed any shelter safety issue in the community that is not shown in the collection of drawings, have you thought about it and whether you want to add it to the drawings?

### Activity 3: Shelter self-recovery (60 minutes)

#### Aims:

- > Identify the main aspects of self-recovery in the community.
- > Identify how external support and resources can complement self-recovery.

#### STEP 1

- Keep the same break-out groups as in Activity 2.
- Hand out one flipchart sheet per group and marker pens.

#### STEP 2

- Give each group the drawing they did of the 'unsafe' house in Activity 2.
- Ask participants to consider the impact a Category 5 Tropical Cyclone such as TC Pam or TC Harold can have on the house; ask them to categorise the extent of possible damage according to low (slight damage), medium (serious damage) or high (completely destroyed).
- Ask the participants to think about how the (hypothetical) household will undertake repair or rebuilding of the house. The following questions can serve as a guide:

- > What building materials are needed?
- > Where will they get the materials from?
- > Where will they get the money from? (Personal savings, loan, grant, etc.)
- > Who will repair/rebuild the house?
- > What are the key barriers to the rebuilding process?
- > What kind of external support will be necessary? From whom? (government, NGOs, other communities, private companies, etc.)

- > How much time will be necessary to repair/rebuild? What are the different stages from after the disaster to the time when repair/rebuilding has been completed?
- > What improvements can make the 'unsafe' house a 'safe' house?

### STEP 3

- Ask the participants to use the template below to list their outputs on the flipchart.
- Allow 35-40 minutes for Steps 2 and 3.

Extent of damage	Low	Medium	High
Building materials			
Source of materials			
Source of funds			
Who will repair/rebuild			
What are the key barriers			
External support – what type, from whom			
Time required			
Improvements			

### STEP 4

- Ask each group to present their output to the whole group. They can nominate someone from the group or present as a group. Allow 5-6 minutes for each group.
- Ensure gender balance of the presenters.
- Provide general feedback after all the groups have presented.
- Take photographs of all the flipchart outputs and file them digitally.

## Activity 4: SWOT analysis (40 minutes)

**Aim:** Capture community perceptions by brainstorming Strengths, Weaknesses, Opportunities and Threats (SWOT) of a specific model, process or approach.

### STEP 1

- If conducting this session as one big group, you will need a flipchart sheet that is visible to the whole group.
- If conducted in small break-out groups give each group a flipchart sheet and markers.
- Use the first diagram below to explain the SWOT process.

### STEP 2

- Go in order of the SWOT acronyms, beginning with Strengths. The facilitator should urge participants to list as many entries as they can think of for each of the four categories.
- There is no need to discuss each item someone wants to add to the list, this can be done later, though the facilitator can ask for more context if necessary.
- This step can be conducted quite quickly, if the intention is to do some analysis later.
- Try to include internal and external factors, e.g. an external threat to the effectiveness of the self-recovery model could be a future disaster or rising sea levels limiting available land to grow building materials.
- Use the diagrams below as a guide.

### Focus of SWOT analysis

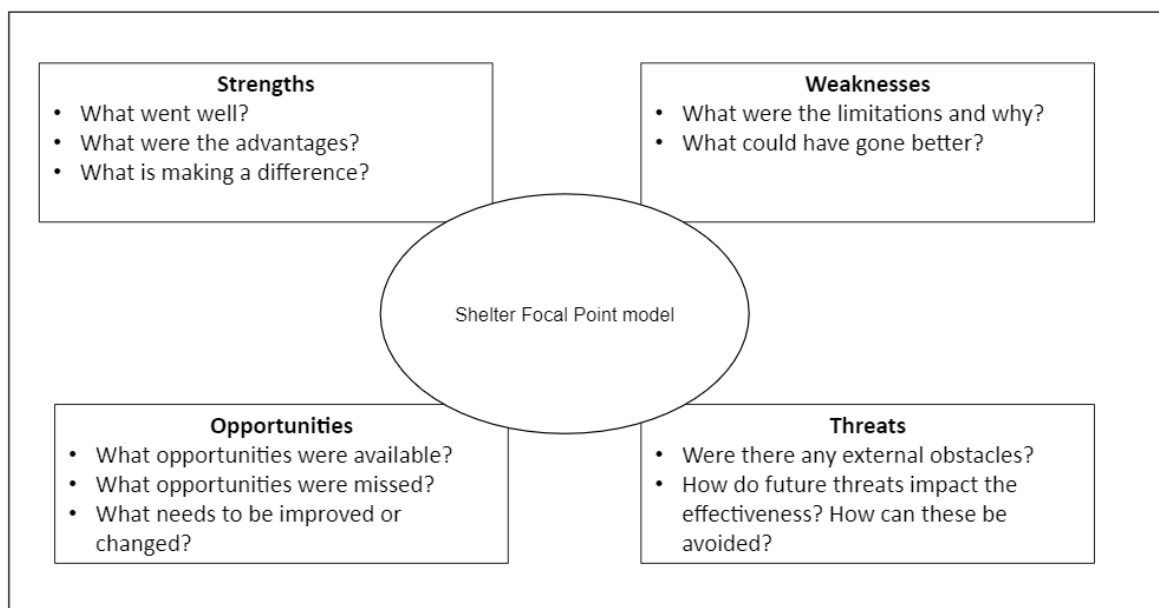
Focus of this discussion should emerge from the previous discussion (with prompts if required). The example in the diagrams below shows Shelter Focal Points as the focus of analysis, however, this can be changed to include alternative topics, four of which are included below. These four approaches/models should be explored as the focus of SWOT analysis in the FGDs in the different communities to allow gathering a range of findings relating to these approaches/models that drive the self-recovery process.

- > **Shelter Focal Point / Shelter champions:** Also explore the links to CDCCCs (Community Disaster and Climate Change Committees), particularly in Maewo and Tanna;
- > **Training:** Not only from CARE, could also be technical training from other NGOs or government including carpentry, training from Rural Training Centre, etc. Keep the focus on training related to shelter.
- > **Access to material support/shelter kits support:** This could refer to kits received at household level or material received at community level, could refer also to support to access timber, roofing materials, etc. Do not focus only on support

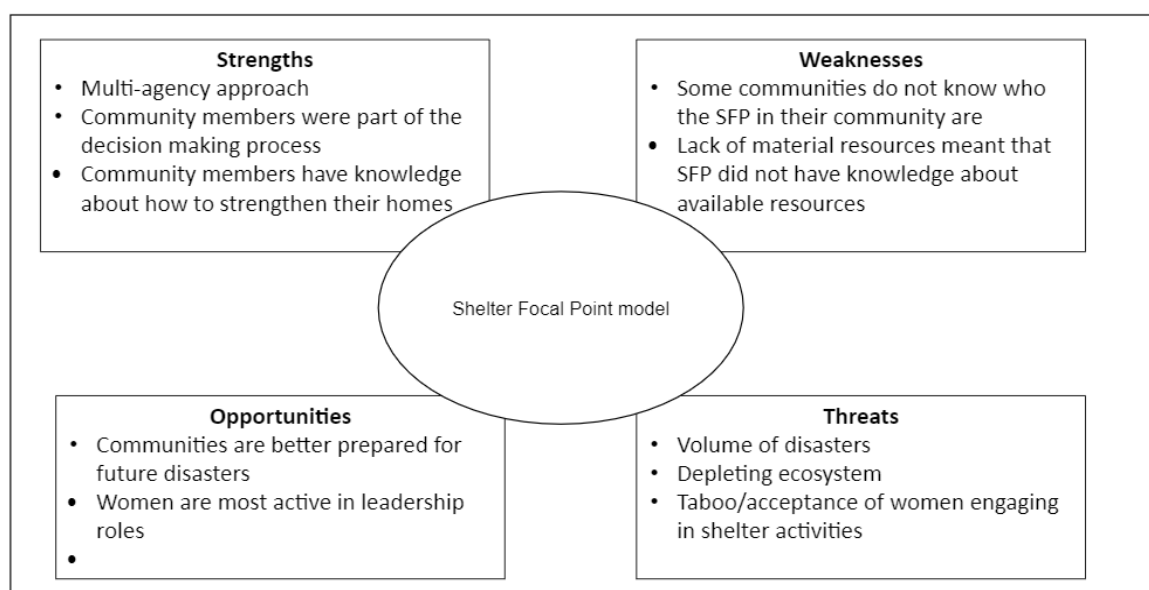


from CARE, but explore other support, for example from local leaders, family, other communities, etc.

- > **Community support:** Explore the capacity of a community to organise together as a coping strategy/model, which might be undertaken through community labour, community fundraising, working together, etc. Influential factors here can be churches, chiefs, *kastom* culture, etc. This will be relevant particularly in the case of Maewo (hosting support).



*Diagram showing the first stage of SWOT*



*Diagram showing the second stage of SWOT*

### STEP 3

After the list of SWOTs is generated, take the remaining time to do one or more of the following tasks:

- > If the time is short or if people are restless and want to move on quickly, ask people to decide on the most important single strength, weakness, opportunity, and threat.
- > If people are leaving and/or getting bored, you can choose also to say simply that you will study the results later.
- > If you have set aside enough time, ask people what surprised them the most about the SWOTs listed. Allow a discussion to evolve, using prompt questions.

### Wrapping up (10 minutes)

- Thank people for their time and contributions.
- Offer them the opportunity to ask you any questions that they may have.
- Explain that after the focus group, it is ok to talk to people about the topics discussed here, but it is not ok to talk about other people's responses and opinions. This is very important. We ask that you keep comments made during the focus group to yourself and do not discuss these outside of the meeting. We want people to feel comfortable sharing their opinions on any sensitive issues that may come up and know that these opinions will not go any further.
- Take photographs of all the flipchart outputs and file them digitally.

## Semi-Structured Interviews: Instructions

### Introduction, information and consent

- Briefly explain the research (using the respective **Participant Information Sheet** in Appendices B1, B2, B3, B4, B5) and the ways in which interview material may be used.
- Explain that we will ensure anonymity of individuals and organisations when we make use of the interview material.
- Ask permission to record the participant, clarify that this is to help us to jog our memory afterwards. If they say no, then assure them that this is absolutely fine and put the recording device away.
- Remind participants that they can stop the interview at any point. Remove the recording device from obvious view to maintain a more informal atmosphere.
- Ensure written consent from the participant to conduct the interview (use the respective **Consent Forms** in Appendices A1, A2, A3 and A4).

### Interview guidance

- Use the respective interview questionnaires with prompts for discussion (see 4.2. 4.3 and 4.4 below).
- Allow the participant the time to express what they want to say on the topic. Be flexible in terms of the order that questions are asked to maintain natural conversation. If they go significantly off topic, find ways to bring them back to the theme without damaging rapport.
- Because this is disaster research, some topics may be sensitive. If someone starts to become distressed, then offer them the opportunity to end the interview. If they decide to stop, then reassure them that this is fine. Or simply give them a little time to relax and let them lead into the next discussion point.

### Wrapping up

- Thank the participant for their time.
- Offer them the opportunity to ask you any questions that they may have.
- Ask them if there is anything you didn't ask that they think you should have or if they have anything else to add.
- Ask if there is anybody that they think that you should speak to about disaster recovery in Vanuatu how the support for recovery after disaster has changed. Ask for an introduction or a contact name and address.

### After interview

- Make notes on observations that help to put the participant's responses into context and any general observations about the participant and their responses (i.e. obviously emotionally invested in the area/passionate or not, etc.).

## Semi-structured Key Informant Interviews (KIIs): Community Level

**Aim:** Learn about the interaction between external assistance and self-recovery, and support structures within the community.

### Questionnaire

Name and contact information			
Gender	Female	Male	Other
Date			
Time working in this field (years)			
<b>RQ1: Understanding self-recovery</b>			
<ul style="list-style-type: none"> <li>• Tell us about yourself and your role within the community?</li> <li>• What does the term 'self-recovery' mean to you?</li> <li>• What is your role and experience in supporting the recovery of the community?</li> <li>• Do you feel communities have recovered after [insert disaster name]? If not, why?</li> </ul>			
<b>RQ2: Multiple disasters – then and now</b>			
<ul style="list-style-type: none"> <li>• What disasters happened here and how did people recover from them?</li> <li>• If you have experienced several disasters, are there differences between the community's recovery each time? Can you explain why?</li> <li>• What did the community and households do by themselves to recover from [insert disaster name]?</li> <li>• What support did community members receive to repair their houses? (Probe for technical, financial, community roving team)</li> <li>• What changes have people made to their homes after [insert disaster name]? Why?</li> </ul>			
<b>RQ3: Knowledge exchange, the role of different communities and shelter DRR</b>			
<ul style="list-style-type: none"> <li>• How does the role of xyz [e.g. Shelter Focal Point, Chainsaw Operator, CDCCC member, Chief] work and what are the best and worst aspects of the role?</li> <li>• How has your role impacted community recovery and shelter repair/rebuilding?</li> <li>• In what ways has this role impacted your own recovery?</li> <li>• What methods of communication did you find most effective?</li> </ul>			

- In your experience, what do you see as the benefits (and limitations) of the Shelter Focal Point model/ CDCCC? What information and training did you receive to pass on to other community members?
- Has there been any changes in gender roles during the rebuilding process? If so, how?
- Have the shelter needs of vulnerable people such as the elderly, widows and people with disabilities addressed? How?
- Do people feel safer in their houses since they made alterations/ changes you suggested/ enabled?
- What do you feel would have helped the community during the rebuilding process?
- What else would make people's houses safer/more prepared for the future?

#### Follow up questions

- Is there anybody or any organisations that you feel we should talk to?
- Is there anything that you think we should have asked but didn't?
- Is there anything you need to better understand to support your community's recovery?
- Do you have any questions for us?



## Semi-structured Household Interviews: Community Level

**Aim:** Capture people’s stories of self-recovery experiences and shelter rebuilding through in-depth interviews, with a focus on the most vulnerable.

### Questionnaire

Name and contact information			
Gender	Female	Male	Other
Date			
Time living in this area (years)			
<b>RQ1: Understanding self-recovery</b>			
<ul style="list-style-type: none"> <li>• Tell us about your experience of the disaster [insert name] and how you recovered afterwards:             <ol style="list-style-type: none"> <li>a. Where did you take shelter/refuge?</li> <li>b. How did you manage at that time? Financially, emotionally?</li> <li>c. When did you return to your home?</li> <li>d. What was your first priority when you came back?</li> <li>e. What steps did you take to repair/rebuild your house?</li> <li>f. Who helped repair/rebuild your house? Family, neighbours, paid contractor/ builder/ carpenter?</li> </ol> </li> <li>• What does the word ‘self-recovery’ mean to you? Do you feel you have recovered or not?</li> <li>• Where did you buy/obtain building materials from? What materials?</li> <li>• Do you consider your house to be finished? What else needs to be done?</li> <li>• What has been the challenges in your recovery?</li> <li>• Do you have any special needs (e.g. elderly, widow, person with disability) that caused difficulties for the recovery? How were they (or should be) addressed?</li> </ul>			
<b>RQ2: Multiple disasters – then and now</b>			
<ul style="list-style-type: none"> <li>• What were the past disasters in your community and how have you recovered from them?</li> <li>• What was different after [insert name of disaster] compared to this disaster [insert name]?</li> </ul>			

- If you have lived through many disasters, are there differences between your recovery each time? Can you explain why?
- What changes have you made to your home after [insert disaster name]? Why?
- Do have any special needs (e.g. elderly, widow, person with disability) that face challenges after each disaster cycle?

### RQ3: Knowledge exchange, the role of different communities and shelter DRR

- Did you receive any information about the disaster? (e.g. why it happened, what to do)
- Did you receive any information about local environmental hazards when rebuilding? (if so what, when and from whom?) How did this information impact how you have rebuilt?
- Did you receive any information relating to any special needs that you have (e.g. elderly, widow, person with disability)?
- Did you receive any support to repair your house? (probe for technical, financial, community roving team)
  - What technical advice did you receive/ from whom?
  - Did you follow it? If not, why?
- Do you feel safe in your house since making these alterations/What do you think would make your house safer? Is it safer than it was before?
- What kind of help have you received? And is that what you expected?
- Has there been any changes in gender roles during the rebuilding process? If so, how?
- Have you or your family helped other community members to rebuild?
- How did community networks and information sharing affect the way the community recovered from the disaster?
- What would have helped you/the community better during the rebuilding process?

### Follow up questions

- Is there anybody or any organisations that you feel we should talk to?
- Is there anything that you think we should have asked but didn't?
- Is there anything you need to better understand to support your own recovery?
- Do you have any questions for us?

## Semi-structured Key Informant Interviews (KIIs): Organisation Level

**Aim:** Understand how self-recovery is perceived and supported by organisations and to learn how the self-recovery support model has developed over time in Vanuatu.

### Questionnaire

Staff member name and contact information		
Date		
Shelter practitioner?	Yes	No
Interview type?	In person	Online
Time working in Vanuatu (years)		
KII type (INGO / Government / Cluster)		
<b>RQ1. Understanding self-recovery</b>		
<ul style="list-style-type: none"> <li>• Tell us about yourself and your work.</li> <li>• Have you come across the term 'self-recovery'? What does self-recovery mean to you? Have you come across it in your work?</li> <li>• What is the role of shelter rebuilding in the self-recovery process?</li> <li>• How do you see other aspects playing a role in self-recovery? (e.g. livelihoods, health, social cohesion)</li> </ul>		
<b>RQ2: Multiple disasters – then and now</b>		
<ul style="list-style-type: none"> <li>• What is the role of your organisation in supporting recovery?</li> <li>• How have organisational practices developed over time to incorporate self-recovery?</li> <li>• Who are the main actors in self-recovery? Who do you think has ownership of self-recovery?</li> <li>• How much input from practitioners do you think self-recovery implies, particularly for shelter rebuilding? (Probe for issues surrounding safety and exclusion)</li> <li>• Do you feel communities have recovered after [insert name] disaster? If not, why?</li> <li>• Are there any gender or inclusion concerns for self-recovery, especially for the most vulnerable including the elderly, widows and people with disabilities?</li> </ul>		

- What are the types of knowledge that you see as being relevant to self-recovery? (Probe for technical, hazard, cultural/local, academic)
- What do you see as the benefits of supporting self-recovery? And the limitations?

### **RQ3: Knowledge exchange, the role of different communities and shelter DRR**

- To what extent are the people that self-recover represented in the decision-making process relating to support for self-recovery?
- Has community based DRR evolved since the creation of the CDCCCs? If so, how?
- How do you think the self-recovery model interplays with social networks and structures?
- What lessons can be learned for better integrating shelter self-recovery in DRR practices?
- Do you think the self-recovery approach has impacted community resilience? How?

### **Follow up questions**

- Is there anybody or any other organisations/institutions that you feel we should talk to?
- Is there anything that you think we should have asked but didn't?
- Is there anything you need to better understand to support self-recovery?
- Do you have any questions for us?