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A review of prospects and challenges of shelter-self recovery in New Caledonia

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Abstract

In the Pacific region, where the impacts of disasters are particularly pronounced, and acknowledging the effectiveness of shelter self-recovery initiatives in countries like Vanuatu, this study conducts a concise narrative literature review to evaluate Shelter Self-Recovery and post-disaster recovery capacity in New Caledonia. Objectives include exploring both scholarly and grey literature to gain a comprehensive understanding of shelter self-recovery efforts. The methodology involves a thorough library database search and desktop review, organizing information thematically. The study's value lies in reviewing the existing literature on New Caledonia's recovery capacity and providing a blueprint for future investigations on the topic. Despite New Caledonia's collaborative efforts with external stakeholders, a significant knowledge gap persists in understanding shelter self-recovery initiatives. The study highlights the potential to improve communication and share lessons from successful shelter self-recovery experiences in Vanuatu with other countries in the Pacific region, which can also inform media reports regarding recovery after disasters.

Keywords: *New Caledonia; Lesson Sharing; Communication; Shelter; Self-recovery; Local capacity; Pacific.*

INTRODUCTION

New Caledonia is exposed to several natural hazards due to its geographical positioning near the Pacific Ring of Fire, a set of volcanoes in the Pacific Ocean that aligns with the Pacific Tectonic plate and known to cause seismic and volcanic activity within the area (Chin et al., 2022). The country's exposure to hazards includes bushfires, cyclones, earthquakes, flooding, landslides, and tsunamis which have been deemed higher in the Isle of Pines, Loyalty Islands, and the east coast of the main island (DFAT, 2023). New Caledonia's exposure to such hazards is well-documented; however, very little is known about the country's shelter self-recovery capacity, and more broadly, post-disaster institutional recovery capacity baseline or initiatives. This review aims to investigate scholarly literature on shelter self-recovery and post-disaster recovery capacity in reference to New Caledonia and what exists in the domain of grey literature to gain further insight into New Caledonia's capacity.

The largest island is known in French as the 'Grande Terre', which is 40km wide by 400km long forming an elongated and narrow shape located midway between Fiji and Australia (Figure 1). The majority of the island consists of mountains, plains, valleys, and piedmont slopes located on the west side, and on the east coast, the highest summits are located (Mont Panie 1,639m, Mont Colnett 1,514m). A coral reef surrounds the entire Island, forming a 15km wide lagoon (Lagabrielle et al., 2005).

Due to New Caledonia's geographical proximity to the Pacific Ring of Fire, a collection of volcanoes that outlines the 'Pacific' tectonic plate in the Pacific Ocean, the nation's exposure to tsunamis (OCHA, 2022), cyclones, earthquakes, flooding, landslides, and bushfires is extremely high (NCEI, 2023). New Caledonia according to the World Risk Index (WRI), which assesses disaster risk among 193 UN member nations, rates 'negatively second highest' within Oceania for WRI 12.63; exposure to disaster 7.7; 'negatively highest' for vulnerability to disasters 20.88; susceptibility 18.44; lack of coping capacities 11.82; and lack of adaptive capacities 43.74 (Atwii Et al., 2022). Moreover, a total of 12 tsunamis have occurred since 1875. The largest tsunami to impact New Caledonia on record occurred on 28 March 1875, when a tidal wave of 2.5 meters caused mass destruction destroying homes and killing 25 people (NCEI, 2023). This level of risk necessitates comprehensive research in the specific shelter self-recovery capacity of the country. This paper has the potential to inform communications and media reports in a post-disaster context in relation to recovery.

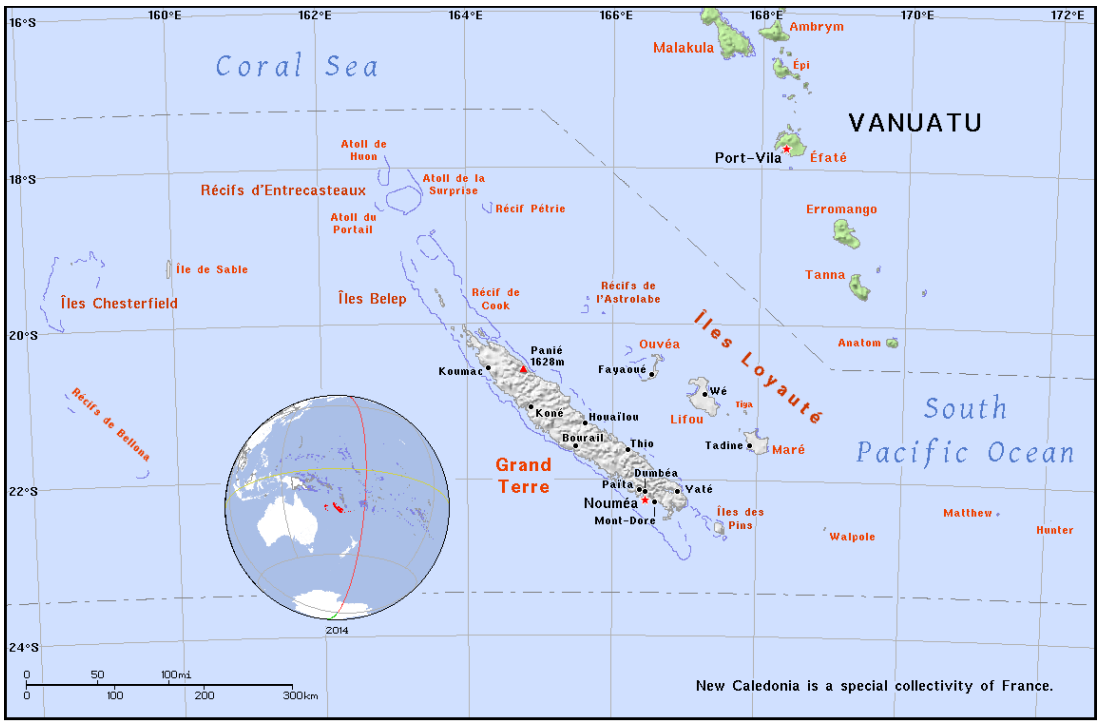

Figure 1: New Caledonia (copyright-free map source: https://ian.macky.net/pat/map/nc/nc.html)

The initial concept of shelter self-recovery had arisen from the repeated challenges experienced by international humanitarian agencies in post-disaster and recovery initiatives resulting in the development of a progressive dialogue between humanitarian consultants and researchers to gain a deeper understanding of *what* self-recovery involves and *how* to transfer that understanding into effective programmes and policies for implementation post-disaster and recovery (Ahmed & Parrack, 2022; Twigg, 2021). The very term 'self-recovery' in the reconstruction process itself is deemed broad, ambiguous, and not well-understood, all the while encompassing a variety of processes and activities referring to self-reconstruction and self-repair, it is therefore not surprising that practitioners and researchers have approached the concept from different aspects (Twigg, 2021).

The first recorded humanitarian shelter initiative whose strategic objective was identified as supporting shelter self-recovery occurred after Typhoon Haiyan (Philippines) in 2013 in response to international support of this disaster (Twigg, 2021; Maynard et al., 2017). Since then, the strategic objective of shelter self-recovery has been included in various other humanitarian-driven post-disaster shelter initiatives and has seen rapid growth in humanitarian programming and discourse in response to recent disasters, Cyclone Sidr (2007, Bangladesh) and Cyclone Nargis (2008, Myanmar), flooding (2011, Pakistan) and earthquakes (2009, Indonesia) (Twigg, 2021; Maynard et al., 2017). Individual countries have also progressed their self-recovery ambitions by leading in-country workshops and attending international forums and conferences to continue the self-recovery dialogue to strengthen and improve knowledge and understanding of shelter self-recovery (Twigg, 2021). The initiative for 'Promoting Safer Building' 2016-17 had attracted a strong following from development and humanitarian organisations, government and policy institutions, scientific and academic institutions, private sector, and grassroots organisations (Twigg, 2021). The *Pathways Home* publication by the Global Shelter Cluster (2022) is an attempt to capture the wide-ranging knowledge and experience in the shelter self-recovery field.

Two key concepts that have bearing on shelter self-recovery is that of 'Build Back Better' (BBB) and 'Build Back Safer' (BBS) (UNDRR, 2015). The BBB concept advises governments and aid agencies to recognise the capacity of families and communities to control and direct their own self-recovery efforts after disasters (Twigg, 2021) and relates to one of the four priorities (Priority 4) of the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015). Since then, the BBS concept was developed and is held more favourably by the humanitarian shelter sector over BBB due to a preferred focus on structural integrity, safety, and resilience (Flinn, 2020).

Although humanitarian aid organisations have been able to support over 10 million people with their shelter needs every year, millions more remain unassisted (Global Shelter Cluster, 2021). Although some people have been able to receive aid, the aid is not comprehensive, and therefore, people tend to seek assistance from their

community, government, civil society and diaspora remittance (Global Shelter Cluster, 2021). Yet, overall, disaster-affected people often do not have their basic needs met nor receive sufficient support to recover from large-scale and frequent disasters that have become widespread (Global Shelter Cluster, 2021).

CONCEPTUAL FRAMEWORK FOR REVIEW

The literature search parameters and process involved locating peer-reviewed journal articles and associated grey literature to investigate the state of shelter self-recovery, and more broadly, post-disaster recovery focusing on the scale of capacity first from a global standpoint followed by a South Pacific region and New Caledonian perspective. Given the ambiguous nature of the term shelter self-recovery, a conceptual framework was created to ensure the literature search included shelter self-recovery aspects that are contained within other concepts or described using alternative terms.

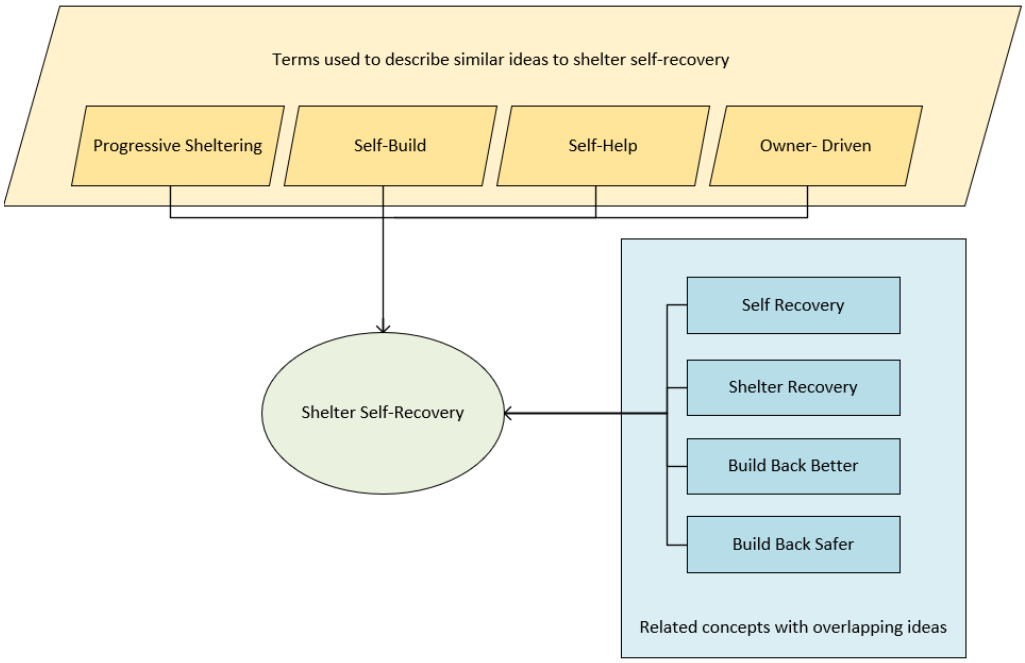

Figure 2: Conceptual Framework (Author Supplied)

Several online databases were searched to locate peer-reviewed publications, material type ‘articles’, language ‘English’, year ‘left open’ on New Caledonia status of ‘self-recovery’, ‘shelter-recovery’ and ‘capacity’ post-disasters, search key word terms included ‘New Caledonia’; ‘Capacity’; ‘Self recovery’; ‘Shelter recovery’; ‘Build Back Better’; ‘Build Back Safer’; and ‘Disaster Recovery’. A Google, institutional and government website search was undertaken to locate grey literature in reference to government reports, statistics, conference papers including non-written resources (infographics, posters, and info-sheets). The key terms that were discovered in the literature review search that referred to shelter self-recovery included ‘incremental’, ‘self-build’ and ‘self-help’ and was found to be used

extensively prior to Parrack et al (2014) regarding housing development approaches (Civis, 2010; Maynard et al., 2017). The terms 'owner-driven' and 'rapid' reconstruction (Jha & Barenstein, 2010; Maynard et al., 2017), and 'progressive sheltering' following the 2015 Typhoon Pam in Vanuatu have also been terms used (Global Shelter Cluster, 2015; Maynard et al., 2017).

Shelter Self-Recovery

Among the early literature of its kind to use and discuss 'self-recovery' in reference to humanitarian settlements and shelter was written by Parrack et al. (2014), *Getting the Message Across for Safer Self-recovery in Post-disaster Shelter*. Since then, there has been a rapid growth in 'self-recovery' literature (Parack et al., 2014; Flinn et al., 2017; Maynard et al., 2017). Other significant literature includes an evidence synthesis on 'The Effectiveness And Efficiency Of Interventions Supporting Shelter Self-Recovery Following Humanitarian Crises' by Maynard et al. (2017), an evidence review evaluating the knowledge status intersection between support for shelter self-recovery, building back safer and the multidisciplinary field research undertaken to investigate the processes of self-recovery in the Philippines and Nepal (Twigg, 2021; Maynard et al., 2017). Such literature has provided not only a comprehensive evidence synthesis on self-recovery planning and implementation to date to support self-recovery efforts on the ground, but also provided self-recovery practitioners with strong evidential 'best practice' garnered from case studies with the potential to support active self-recovery efforts now and well into the future.

A series of recent reports to improve practitioner shelter-recovery effort, relief and community capacity has been found summarised in a series of Global Shelter Cluster (GSC) reports aimed at highlighting self-recovery strategies, case study insights and principles for consideration of best practice. The latest report from the Agenda Global Shelter Cluster Annual Meeting 2022, GSC Strategy 2018-2022 (Maynard et al., 2017) provides the global shelter cluster strategy for shelter recovery efforts (Global Shelter Cluster, 2023). The Shelter Projects 8th edition report on case studies of humanitarian shelter and settlement responses 2019-2020 (Global Shelter Cluster, 2018) sought to highlight the evidence of self-recovery being conducted in the various countries around the world carried out between 2019-2020. The 'Shelter Projects Essentials' report published in 2021 is a summarisation of the Shelter Projects 8th edition to distil the recurring messages from existing shelter project case studies. Twelve key findings were found and highlighted as they each reinforced and inter-connected between one another cohesively (Global Shelter Cluster, 2021a).

1. Context is everything.
2. Shelter and settlements assistance is part of a process and has long-term impacts.
3. People are active participants in their own response and recovery.
4. Shelter and settlements assistance must be inclusive.
5. There is a balance between scale, coverage, quality, and impact.
6. Security of tenure underpins all shelter response.

7. Shelter and settlements go hand in hand.
8. Shelter and settlements assistance must link to other sectors and priorities.
9. Local environmental damage is long-lasting.
10. Locally appropriate technical solutions work best.
11. Good projects reduce the impacts of future shocks.
12. Effective projects are coordinated and planned.

In addition, two further seminal reports that have been of great significance to self-recovery efforts on a global scale, the *Pathways Home: Guidance For Supporting Shelter Self-Recovery 2022* (Global Shelter Cluster, 2022), and the summarised version of this full report published by GSC, the *Pathways Home: The Fast Track, Summary Guide For Humanitarian Practitioners, Donors And Others Interested In Supporting Shelter Self-Recovery 2022* (Global Shelter Cluster, 2022a). Both reports are the first attempt to provide an outline of the rationale, key concepts and building blocks of self-recovery aimed at exploring, supporting, and describing shelter self-recovery and, in the offering of practical guidance and support in reference to post-conflict and post-disaster contexts (Global Shelter Cluster, 2022). One of the many key challenges that hinders self-recovery at a global level according to the GSC full report is the disconnect that exists at the discussion level and what can in fact be achieved by organisations on the ground in practice (Global Shelter Cluster, 2022). The implications for self-recovery efforts on the ground at a global scale stems from the two reports' focal aim to explain a revolutionised vision of shelter assistance that focus recovery efforts on an authentic people-led approach whereby the recovery efforts in terms of control and power remain in the affected people's hands (Global Shelter Cluster, 2022). This will further support the shelter self-recovery approach and the ability for humanitarian organisations' potential to action more, all the while with less resources (Global Shelter Cluster, 2022).

Most journal articles and papers published on the topic of shelter/self-recovery since the aforementioned publication by Parrack et al. (2014) has divulged an increase in interest for conducting further in-depth discovery investigations on post-disaster relief efforts undertaken on a global scale to further expand post-disaster knowledge and to shape the way forward for successful future shelter/self-recovery practices on the ground. In Hayles (2010) an exploration of key challenges that non-governmental organisations (NGOs) faced in times of decision-making in the housing reconstruction post-disaster stage revealed the important role that NGOs play at each stage of the 'disaster cycle' for housing recovery (emergency shelter, temporary shelter, temporary housing, and permanent housing). A review by Harriss et al. (2019) undertook an investigation on post-disaster shelter programmes and their evidence to support 'building back safer', 'shelter self-recovery' and improve hazard resistance revealed overall, that technical support (such as safer construction techniques) was a key program feature, yet its impacts and attributes of other programs for building safety was overall not ascertainable. The review found that such program studies and reports continued to lack sufficient detail particularly regarding assessment outcomes and on hazard

resistance to contribute towards growing evidence in post-disaster shelter programmes (Harriss et al., 2019).

A considerable amount of grey literature such as reports and discussion papers, have also been developed over the last decade that continue to evolve the understanding of the shelter self-recovery knowledge base. A series of examples can be seen in Twigg & Lovell (2017), a published working paper providing insight into an interdisciplinary perspective of self-recovery from disasters and, the critical analysis on the concept of self-recovery showing the steps communities follow post-disaster/recovery irrespective of whether these communities received humanitarian shelter assistance or not (Schofield & Morel, 2017). A further discussion for self-recovery carried out by Flinn et al. (2017) discussed self-recovery in reference to non-displaced communities that had potential for displaced populations and provided a new perspective on the growing global concern. A further study investigated designing for behaviour change methodology with the aim to illicit people's reasoning behind the choices they made during the reconstruction stage; this provided greater insights for disaster practitioners into people's behaviour when making post-disaster choices for recovery (CRS, 2015). In Serlet (2015) a practical guide for decision-makers, project managers and leaders were developed to improve practitioners' evaluation of local construction cultures and to improve population resilience. In the Shelter and Health Multi-sectoral Learning Day event in 2020 that provided a platform for the health and housing sectors to come together, attendees had exchanged ideas and discussed ideas to increase the development of knowledge and connection to promote practitioners' adoption of a wider environmental health scope in humanitarian action that could actively progress this vision (Webb & Weinstein, 2020). This workshop report was later followed up by the Mindful Sheltering report that highlighted the key insights and findings of the event itself to support best practice (Webb & Weinstein, 2021). Overall, the literature on self-recovery on a global scale has had a predominant focus on investigating specific post-disaster events and relief efforts in the hope to further progress and expand post-disaster knowledge to shape the way forward for future shelter/self-recovery practices on a global scale.

South Pacific Region

The countries within the South Pacific Region continue to face significant disaster and climate change risk, increasing social inequalities, degradation of the environment, rising urban informal settlements displaying low-quality housing, including rapid urbanisation and population growth that is challenged by a lack of visibility in global development discourse (Vahanvati et al., 2023). Irrespective of these findings, literature on self-recovery and capacity within the South Pacific Region continues to be sparse with very few studies successfully conducted on specific countries within the Pacific to enlighten the status of self-recovery and capacity within the region. In Vahanvati et al (2023), one of the most recent papers to analyse the development and contents of three country shelter guides within the Pacific Region on Fiji, Solomon Islands and Vanuatu between 2019-2022. It was found that irrespective of a strong influence of regionalism within the Pacific (technical expertise, financial capabilities,

and advocacy), the advancement of policy, frameworks, and regional strategy (i.e. Boe Declaration in 2017, Resilient Development in the Pacific (FRDP) and the 2050 Strategy for the Blue Pacific Continent) grave concerns were raised by the Heads of State and their nominated delegates of the Council of Regional Organisations of the Pacific (CROP), CROP being the peak political organisation in the Pacific that facilitates decision-making and initiatives on a regional scale (Vahanvati et al., 2023).

The key areas of concern that were raised at CROP argued a lack of endorsement for an urban development framework at a regional scale; the Pacific Islands Forum Secretariat's (PIFS) limited capacity for governance in national/sub-national bureaucracies within PICs (Pacific Island Countries); technical experts sent from Global North to the PICs to provide assistance to local communities without first comprehending PICs values, customary knowledge and local strengths; and the Framework for Resilient Development in the Pacific (FRDP) (and other regional documents) do not provide a focus on a housing regional strategy that considers those community members marginalised from the formal housing sector and residing in informal settlements outside of the urban area (Vahanvati et al., 2023). From this comparative case study, four key themes were proposed to address the concerns that were raised, (1) A capabilities-based approach to assist self-recovery; (2) Resource considerations for shelter assistance (financial and material resources); (3) Gender and disability inclusion; and (4) Resilient shelter as an incremental process.

In addition, Trundle & Organo (2022) argued that the governance of most PIC cities and towns operate in a policy vacuum regarding strategic planning that has prevailed since the 1960s and 70s national independence movements in the region. Such regional bodies as the CROP actions have become deeply entrenched in spearheading and in the facilitation of advocacy, technical assistance and training that has resulted in national and sub-national capabilities, strategies and policies that has often led to significant detriment to urban inhabitants where power derived by the state and affiliated expertise has been used to facilitate the 'urban elites' interests (Trundle & Organo 2022). A further issue that arose and found to have occurred in Vanuatu, the successful progress in post-disaster relief efforts was hindered when women were unnecessarily burdened by an inequitable and gendered system that poorly acknowledged women's experience, voice and skills in disaster resilience, recovery, and reconstruction (Clissold et al., 2020). Furthermore, in Fiji, a 'Training of Trainers' (ToT) event run to strengthen the capacity of rural women in disaster resilience had resulted in the attendee women becoming more confident and knowledgeable about hazards, how to map them and prepare their families and their communities at the pre-disaster stages of an environmental hazardous event (Giggins et al., 2018); the initiative inspired the local policewomen trainers to run further such trainings.

The South Pacific Region itself has six active global shelter cluster operations in the Pacific Region, Fiji, Papua New Guinea, Solomon Islands, Tonga, and Vanuatu (Global Shelter Cluster, 2023), and an Emergency Telecommunications Cluster (ETC) that acts as a global

network of organisations in collaboration to provide communication services during a humanitarian emergency (Emergency Telecommunications Cluster, 2023). It has been discovered that not all PICs have joined as shelter cluster members nor established a shelter cluster within their country. A guide made available since publication in 2013 to support the Pacific Region's self-recovery efforts, the 'Emergency Preparedness & Response Plan: A guide to inter-agency humanitarian action in the Pacific' acts as a guide to inter-agency humanitarian action in the region, providing a consolidation of information referring to humanitarian architecture, services, and tools of the Pacific Humanitarian Team (PHT) (Pacific Humanitarian Team, 2013). To date, very little is known as to how PICs have actively utilised the guide for the Pacific region in response to disaster events. Moreover, a shelter self-recovery research project undertaken in Vanuatu aimed at exploring Vanuatuan communities lived reality when recovering from major disasters to further understand humanitarian interventions and their impacts, had developed a series of recommendations for disaster practitioners for when they undertake their relief work, where the findings stressed the importance in understanding the context of the community's wants and needs; to consult and communicate with the community; and finally, to draw on community resourcefulness to name a few (Ahmed, 2021).

Overall, literature on self-recovery and capacity within the South Pacific Region continues to be sparse with very few studies successfully conducted on the various PICs to enlighten the status of self-recovery and capacity within the region. Yet, of the few research projects that have been undertaken on the various PICs, such documented insights if considered by practitioners, it is anticipated will provide significant insight and support for self-recovery planning and implementation within the region and is simply yet another key area of interest that requires further research and investigation.

New Caledonia Context

To date, there has been no literature published on 'shelter self-recovery', nor associated 'capacity' to address post-disaster recovery specifically focusing on New Caledonia. There were however, a range of publications on New Caledonia that referred to other topics such as New Caledonia's membership in terms of the Pacific regional architecture, policy platforms, and actors (Vahanvati et al., 2023); New Caledonia's early warning systems (Gardner-Stephen et al., 2019; Tabor & Holland, 2020; Winter et al., 2020); hazard perception mapping (Thomas et al., 2021); environmental disaster and hazard management (Chin et al., 2022; Jullien et al., 2020; Kerbaj et al., 2020); disaster risk management and prevention policy in a global warming context (Le Duff et al., 2020); modelling present and future climate risk of dengue outbreak (Ochida et al., 2022); fauna, flora, environmental case studies, and mining investigations (Brisset et al., 2021; Pillan, 2021; Cluzel et al., 2020; Le Meur et al., 2021), and New Caledonia's vulnerability ranking to food security threats and ocean acidification (Hay, 2013).

During a desktop review and investigation on New Caledonia, no government reports, statistics, conference papers, non-written resources (infographics/posters), or statistics were

located on the government websites that referred to self-recovery, shelter recovery, capacity, or disaster management. Otherwise, the country has made some significant strides in terms of participating in both regional and international conferences to address disasters within its borders. In 2022, President Louis Mapou, was invited to the United States by President Joe Biden to the first-ever Pacific Island Country Summit to exchange ideas and address challenges on illegal fishing, climate, and Covid-19 economic consequences (Government De La Nouvelle-Caledonie, 2022a). Minister Joesph Manute, in September 2022, attended the Asia-Pacific Ministerial Conference on Disaster Risk Reduction and presented on New Caledonia's risk management policy underlining that in response to a disaster, the government of New Caledonia can offer the Countries of the Region technical and logistical support (Government De La Nouvelle-Caledonie, 2022b).

In addition, other home-based conferences were run in 2022 to address civil security stakeholder concerns regarding pre-during-post disaster stages (CLIPSSA regional research project) run in partnership with the French Red Cross and the Directorate of Civil Security and Risk Management of New Caledonia (DSCGR) (OCHA, 2022a). In the same year, the DSCGR organised at the Pacific Community (SPC) its first proposed conference to take place in New Caledonia to discuss the country's exposure to tsunami risk, roles, and responsibilities for each of the government departments in disaster management. It included tsunami warning sirens and risk mapping, stakeholders/actors consultation and the country's desire to join UNESCO's voluntary, international community certification program 'Tsunami Ready' which is a community performance-based program that promotes active participation from local community members and coordinated with authorities from a local, regional and national level to strengthen local community capacity to deal with tsunami risk (OCHA, 2022a). A conference was also held to discuss the trajectory for designing housing according to Pacific Island urban lifestyles with a range of stakeholders (Government De La Nouvelle-Caledonie, 2022).

Moreover, in 2012, a gender checklist for disaster risk management developed by 200 specialists from the Caribbean and Pacific regions at the 4th session of the Pacific Platform for Disaster Management and Pacific Regional Water and Sanitisation Consultations was launched that considered the direct disaster impact that men and women experience living in small island countries (UN Women, 2012). New Caledonia has also partnered with the World Health Organization (WHO), which supports the country's government in the national strategic priorities outlined in the Country Cooperation Strategy 2018-2022 (World Health Organization, 2023). Although New Caledonia does not presently have an established shelter cluster program, the country does hold a membership with the Pacific Resilience Partnership (PRP) and have adopted the 2050 strategy for the Blue Pacific, Oceania Continent (Government De La Nouvelle-Caledonie, 2022b) and partakes as an active member of the Pacific Islands Forum (Pacific Islands Forum, 2023). Furthermore, a selective range of public notices in the form of reports have been drafted and made publicly available for community feedback on the New Caledonian government website, however, none of the reports refer to

shelter, disaster management, or community capacity in disasters (Government De La Nouvelle-Caledonie, n.d.2).

DISCUSSION

Strengths and Challenges of Shelter Self-Recovery

It could be argued that the first step in the post-disaster recovery stage is initiated by disaster-affected people themselves, who are found to actively begin to seek shelter and rebuild their homes without any formal support or external assistance, the people's 'self-recovery' (Flinn et al., 2017). The overall strength of shelter self-recovery continues the 'self-recovery process' by further promoting the 'survivor-led' self-recovery in offering support to enhance the survivors' recovery to re-establish a safe home and improve the survivors' overall quality of living conditions (Global Shelter Cluster, 2023). Although the shelter self-recovery process has been heralded as having the potential to benefit survivors, maximise sustainability and goals, reinforce, complement, and accelerate survivors' efforts to repair, rebuild, reduce vulnerabilities, and strengthen resilience, the process itself is not without its challenges (Ahmed, 2021; Global Shelter Cluster, 2023). The most noticeable challenge is the lack of capacity that humanitarian agencies have to reach community first responders and the lag in speed at which agencies are 'on the ground' and ready to offer support and services to repair and rebuild damaged homes (Twigg, 2021).

Moreover, humanitarian support has rarely reached more than 30% in shelter support during the first-year post-disaster (Twigg, 2021; Flinn et al., 2017). An example of this can be found in the case of Bangladesh after Cyclone Sidr in 2007, where only 1% of shelter support was met (Schofield & Morel, 2017). Furthermore, most rebuild projects can take years for several reasons that include people's need to build their homes according to their everyday needs, economic status, occupations, cultural patterns, traditional construction techniques, and means (which is often a critical constraint) (Twigg, 2021; Flinn et al., 2017).

A further critique of shelter self-recovery is evidenced by recent case studies undertaken on the experiences of CARE (a humanitarian agency) in the Philippines and Nepal in response to Typhoon Haiyan (2013) and the Gorkha earthquake (2015) respectively, whereby two key themes in practice and theory arose. The first highlighted that community first responders, indeed disaster-affected households themselves, do not wait for external assistance to begin self-recovery; therefore, an opportunity to expand post-disaster recovery pathways could be explored, yet, very little is understood on such opportunities as the focus of existing documentation has been on post-disaster livelihoods intervention and/or self-recovery initiatives once the disaster event has occurred (Schofield & Morel, 2017). The second theme refers to the need for disaster-affected communities, households, and individuals to become more active in their self-recovery efforts and enact a more strategically aligned use of humanitarian assistance that coincides with self-recovery efforts, which can change the dynamics of a more bottom-up rather than top-down approach to shelter self-recovery opposed to industry, 'delivery-driven' humanitarian aid, one-size-fits-all approach

that leaves little room for assimilation of individual/community needs (Schofield & Morel, 2017). Another significant challenge that community first responders face after disasters is that of recognition to gain direct access and acceptance to receive humanitarian support and services, raising the issue of limited permeation of build-back-safer measures hindering safety that exposes people to similar housing disaster outcomes when the next disaster occurs (Flinn et al., 2017).

The Role of Shelter-Self Recovery in the South Pacific Region

The Sixth Assessment Report on the impacts, adaptation, and vulnerability of small islands by the Intergovernmental Panel on Climate Change (IPCC) confirms that the small islands located in the Pacific will continue to be affected by the increase in temperature, storm surges, droughts, sea level rise, coral bleaching, invasive species, tropical cyclones and changing precipitation patterns all of which will have a considerable effect on the islands' already challenged ecosystems, food and water supply, coastal reefs, migration, cities, and settlements (IPCC, 2022). The existing barriers to adaptation involve constraints in governance arrangements, human resource capacity, financial resources, and legal and institutional systems to manage large-scale settlement relocation, the lack of up-to-date baseline data, the sheer diversity of temperatures/scenarios preventing local-to-regional observed/projected climate impacts for small islands and finally, a lack of climate model data in reference to current scenarios to model communities within the Pacific (IPCC, 2022).

As stated earlier, in the South Pacific Region, as per the findings outlined in the 2022 world risk index report, Melanesia (12.63 WRI) was the most susceptible to disaster compared to Micronesia (2.29 WRI) and Polynesia (3.15 WRI) (Atwii, 2022) and because of these findings, it is anticipated that the six shelter clusters were established within the region. One shelter cluster encompasses the Pacific Region itself, followed by individual shelter clusters initiated independently by each country for Fiji, Papua New Guinea, Solomon Islands, Tonga, and Vanuatu (Global Shelter Cluster, 2023). The shelter cluster objective is to meet needs of the affected populations more effectively by strengthening leadership, coordination, and accountability in the humanitarian shelter sector (UNHCR, 2023). It is unknown as to why no other PICs have formally set up shelter clusters for their individual countries. What can be seen in the four countries within the South Pacific Region that already have established shelter cluster programs, such developments were only entered into *after* a significant disaster occurred (Global Shelter Cluster, 2023). Nonetheless, the existing shelter clusters do extend their outreach beyond the specific country they are based in; for example, the Fiji cluster is a 'regional office' and provides support to other countries in the region that do not have a direct cluster presence,

The findings from a synthesis report that investigated urban response to disasters and the degree of area-based initiatives that were in place and utilised in Fiji, Solomon Islands, and Vanuatu, it was identified that effective coordination and governance structures were imperative to area-based initiatives (Waqabitu, 2021). Examples of the positive outcomes in

the establishment of shelter clusters within these countries included, the development of the National Disaster Management Plan (NDMP) in the Solomon Islands; the effectiveness of the disaster management 'cluster' system at a national level in reference to promoting sector collaboration/multiagency strengthening in Vanuatu; and the investment improvement in disaster management that strengthened pre-existing relationships and structures between response agencies in Fiji (Waqabitu, 2021). It is anticipated that such success could also extend to other PICs within the South Pacific Region to enhance their disaster adaptive measures and address the effects of disaster events.

The role of Shelter Self-Recovery in New Caledonia

New Caledonia is one of the many PICs that have not yet established a shelter cluster, nor is it known whether the country will do so in the near future. The country is included in the Pacific Region shelter cluster already established within the region by the Global Shelter Cluster (GSC), through an Inter-Agency Standing Committee (IASC) coordination mechanism to support people affected by disaster events (Global Shelter Cluster, 2023). It is unknown how the shelter cluster initiative would proceed in a New Caledonian context given that the Pacific Region shelter cluster's support and services have not yet been enacted for the country pending a post-disaster event occurrence and given the country's overriding connection to France. A plausible reason as to why no shelter cluster program has yet been established within the country may stem from the fact that despite the country's high exposure to possible tsunamis, earthquakes, and cyclones, overall, New Caledonia has not yet experienced a level of high death rates or extreme disaster impacts like that of other PICs that have shelter cluster programs established. Very few deaths have occurred after an environmentally hazardous event within New Caledonia since the earthquake that reached 8.0 in 1875, where fatalities reached 25 and such an event has not occurred since (NCEI, 2023).

Furthermore, the political landscape whereby New Caledonia is a French *Territoire d'outre mer* (overseas territory of the French Republic) (Bequette 1997), it is highly likely that should New Caledonia befall an environmental hazard that develops into a disaster, the country will receive full support and assistance from France, such as could be seen amidst the COVID-19 pandemic, whereby international flights were approved between France and New Caledonia for sanitary evacuation and freight (Kerbaj et al., 2020). It is also worth adding that France does not currently have an established shelter cluster program either. The shelter cluster system is essentially a consortium of non-governmental humanitarian agencies that is mainly active in the Global South where governments lack adequate resources, whereas in countries such as France, post-disaster recovery is primarily undertaken by the government. New Caledonia is not included as a member state of the United Nations, and therefore, it is presumed that because of New Caledonia's 'overseas territory' status with France, New Caledonia may be deemed to fall under the inclusion of France as a member of the United Nations (Atwii, 2022).

It is also unknown whether the New Caledonian government departments and authorities responsible for the country's response to disasters and severe weather conditions (DSCGR) are in fact, aware of the Pacific Region shelter cluster program or have been fully informed of the shelter clusters' range of objectives to offer shelter assistance to safeguard the security, privacy, dignity, and health of the overall community (livelihoods, psychological, social and lifestyle areas) pre-during-post disaster (Global Shelter Cluster, 2021). Moreover, the baseline status of capacity in New Caledonia in a pre-during-post disaster context is presently unknown, as very little research has been conducted on the country's capacity (strengths, attributes, resource availability for stakeholders) to address disaster at the various levels of government, industry, and community levels. Capacity in this context referred to as the "*combination of all strengths, attributes, and resources available within a community, society or organization that can be used to achieve agreed goals*" (United Nations Office for Disaster Risk Reduction, 2024), and Scott et al.'s (2016, pp. 412-422) key definition of capacity in reference to disaster risk management capacity defined as "…*the process by which people, organisations, and societies strengthen and sustain their abilities to take effective decisions and actions to reduce disaster risk*".

CONCLUSION

New Caledonia's locality within the South Pacific Region places the country at a significant level of exposure to natural hazards that can readily result in disaster. This narrative literature review confirmed a significant gap in knowledge on the current baseline of New Caledonia's status in terms of shelter self-recovery and post-disaster recovery capacity. New Caledonia has been quite active in attending regional and international conferences and meetings with other governments to discuss climate-related matters; however, it remains unclear as to the direction the New Caledonian government will take to address post-disaster self-recovery and institutional and community capacity building within its country and collaborative efforts with its PIC neighbours and international stakeholders for that purpose.

Moreover, New Caledonia has not officially joined the 'Pacific Region's' Shelter Cluster membership, however, due to the country's location, New Caledonia does fall within its boundaries. It is also unknown whether New Caledonia will consider the uptake in actively establishing a shelter cluster similar to that of its PIC neighbours Fiji, Papua New Guinea, Solomon Islands, Tonga, and Vanuatu. The role that shelter self-recovery can play within the country's post-disaster recovery capacity could certainly be enhanced by the uptake for establishing a shelter cluster. Such an entity should be based on the capacity of internal and external stakeholders, contribute towards knowledge gaps, and contribute towards promoting other PICs in the uptake of shelter clusters. This will reinforce the capacity of the entire region's post-disaster recovery initiatives and communications, and overall, will prove New Caledonia's strong commitment to forging collaboration and communication with other

PICs and international stakeholders in support of self-recovery and capacity development efforts pre-during-post disaster recovery efforts.

A more nuanced understanding of shelter self-recovery within New Caledonia is increasingly relevant, particularly outside the urban centres and major residential areas. Shelter self-recovery could be particularly important in the North Province and the Loyalty Islands where housing often does not comply to building codes, there are more traditional architectural styles, and there are different livelihood priorities. Unlike Noumea and surrounding urban areas where formal housing structures dominate, other regions feature informal dwellings which often reflect the cultural heritage and traditional building techniques. An increased understanding of shelter self-recovery could contribute to recognising and preserving this distinct architectural identity which is pivotal for maintaining cultural continuity and upholding social capital and related communication initiatives.

Furthermore, the varied livelihood priorities in these regions necessitate an understanding of shelter self-recovery that goes beyond the standard institutionally driven reconstruction approaches. While urban centres may prioritise commercial and industrial recovery, other regions may place a higher emphasis on agricultural and subsistence-related rehabilitation. Tailoring shelter self-recovery strategies to align with these localised livelihood priorities ensures a more sustainable and effective recovery process. Given the increasing susceptibility of the region to hazards, such as cyclones and earthquakes, an increased understanding and better communication of shelter self-recovery is not just beneficial but imperative. This review has highlighted a lack of research within New Caledonia, however, research focusing on Vanuatu (Ahmed, 2021) could serve as a blueprint for further inquiry and provide lesson sharing and communication opportunities.

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