Social Dimensions of Climate Change: Pacific Series

Local Responses to Climate Change and Disaster-Related Migration in Solomon Islands

Research Paper 2

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Table of Contents

List of Figures

List of Maps

List of Boxes

List of Acronyms

COVID-19	Coronavirus 2019
FPIC	Free Prior and Informed Consent
IDMC	Internal Displacement Monitoring Centre
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
NGO	Non-Governmental Organization
PACCSAP	Pacific-Australia Climate Change Science and Adaptation Planning Program
PIC	Pacific Island Country

Acknowledgements

This guidance note is the second research paper in the *Social Dimensions of Climate Change: Pacific Series.* This paper synthesizes the results from primary research carried out in Solomon Islands in 2021. This research paper was prepared by a World Bank research team comprising of Sonya Woo (Program Leader, Sustainable Development, PNG and Pacific Islands and Task Team Leader), Darian Naidoo (Economist), Rebekah Ramsay (Social Development Specialist), John Cox (Lead Research Consultant), Lachlan McDonald (Consultant), Ruth Maetala (Consultant), and John Clemo (Consultant).

The work was conducted under the overall guidance of Benoit Bosquet (Regional Director for East Asia and Pacific), Susan Shen (Practice Manager, Social Sustainability and Inclusion for East Asia and Pacific), and Annette Leith (World Bank Resident Representative for Solomon Islands).

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Executive Summary

This guidance note is the second research paper in the *Social Dimensions of Climate Change: Pacific Series.* It builds on findings from the first research paper in the series, *Local Insights into Social Resilience and Climate Change in Solomon Islands*, to provide insights and guidance on how development finance institutions (DFI), government, and non-governmental organizations (NGOs) in small islands states in the Pacific region can better understand and support communities in addressing the challenges of disaster-related displacement and climate-induced human mobility (collectively, climate-related migration). These findings from this second note have several practical applications for strengthening social resilience to climate change in the Solomon Islands, and the Pacific more broadly.

In the Pacific region, thousands of people are displaced annually as a result of the devastating impacts of sudden and slow onset disasters, including weather related hazards like cyclones and floods, and geophysical hazards such as earthquakes, tsunamis and volcanic eruptions. Pacific small island developing countries bear the greatest displacement risks relative to their population sizes. About half of the Pacific population live within coastal areas at risk of slow-onset events including sea level rise, coastal erosion, and saline intrusion. This rese arch paper seeks to identify pathways and learnings that are driven by and are embedded in the world views of community members, and to understand local adaptive capacities and strategies. The paper draws on mixed methods research in five Solomon Island communities identified as vulnerable to the effects of climate change. The principal findings in relation to climate-related migration are:

First, climate change and natural hazards represent one of several factors driving human migration in Solomon Islands. People living in locations exposed to climate hazards use temporary and permanent migration as a means of managing a host of social, economic, and environmental pressures. Climate change and natural hazards are one of several factors that influence local initiatives to either maintain and secure their physical presence at an at-risk location, or to migrate to access better services and opportunities. The role that climate change and disasters play in local people's displacement or migration journey is ultimately predicated on the extent of household social, economic, and environmental vulnerabilities. Addressing climate-related risks and impacts must therefore consider multiple "push" and "pull" factors that inform people's decisions to stay or leave a locality over time.

Policy and programmatic responses that seek to address climate-related migration need to go beyond environmental or physical adaptation measures and support whole of community development. Recognizing this in practice requires DFIs and governments to support an integrated multisector approach capable of supporting physical adaptations to climate change, and simultaneously building, strengthening, and sustaining communities' social resilience. This approach has the potential benefit of optimizing sustainability and creating economies of scale by reducing administrative costs,

making the proposal more viable to governments and external donors.

Second, social capital and informal networks are critical resources for managing the risks and impacts of climate-related migration. People are not limited by geographical boundaries but are connected into wider social-spatial systems and draw first and foremost upon their kinship networks to manage shocks, including those related to climate change and natural hazards.

Government and externally funded adaptation indicatives, including planned relocation processes, may have unintended impacts where the role of social capital and informal networks is not understood or anticipated. Planning processes miss opportunities to build on the strengths of existing adaptation practices, or conversely, exacerbate pre-existing structural inequalities and produce unintended negative impacts for vulnerable or marginalized people at the periphery of a network. The study also demonstrates limitations to locally led adaptation practices with implications for climate-related migration, in-migrants and host communities facing structural barriers that constrain their capacity to address land access and security of land tenure as populations navigate redistribution of finite resources.

Third, the study raises important questions about climate-related migration and the intangible losses and damages experienced by communities whose collective identities and social capital are grounded in deep cultural connections to customary land or ancestral "homelands." The study articulates peoples' intention to return to, or remain on, ancestral lands for cultural and spiritual reasons. The findings of this study indicate that, in Solomon Islands, physical relocation planning in the context of climate change (1) can start years and decades ahead of displacement; (2) needs to explicitly recognize and grapple with intangible losses to individuals and groups who are displaced from their "homeland," or ancestral land; and (3) should account for potential voluntary immobility and understand the reasons for this, should resettlement planning efforts fail. This study calls upon governments and external actors to rethink and reenvision climate-related migration displacement and resettlement policy and practice to identify, recognize, and support local priorities, insights, and social dynamics that meet the cultural needs and expectations of people whose continued connection with their ancestral homelands is threatened by climate change.

1. Introduction

Climate-related displacement is one of the world's biggest humanitarian and sustainable development challenges. For decades, the Intergovernmental Panel on Climate Change (IPCC) has sounded the alarm that one significant impact of a changing climate may be the involuntary displacement and relocation of populations from uninhabitable areas. The IPCC predicts that sea level rise, salt-water intrusion and coastal flooding will cause severe economic and human impacts to small island developing states in the Pacific (IPCC 2022). Such displacement has profound implications for individuals and communities whose lives and livelihoods are fundamentally altered, and people may lose physical connection with their ancestral homelands. Climate-related displacement is of critical importance to citizens, governments, and the international development community.

Solomon Islands is one of several Pacific Island countries at the forefront of this climate challenge. Since 2008, weather-related events have triggered around 26,000 displacements (IDMC 2021:9). Two single events—Cyclone Uli in 2010 and the 2014 flash flooding in Honiara—were responsible for displacing 15,000 people. Rising sea levels have already submerged five of the archipelago's islands in the last 50 years. The combination of high exposure to severe weather-related shocks and underlying vulnerability means that the risks of climate-related displacements are growing. Modelling by the Internal Displacement Monitoring Centre (IDMC) indicates that sudden-onset hazards–including both climate-linked shocks as well as other events can be expected to displace on average 4,028 people (3 percent of the current population) per year. Flooding and cyclones are responsible for the majority of recorded human displacement though there are wide confidence intervals around this estimate. At its worst, a single cyclonic event could displace up to 68,000 people at some point in the next 50 years.

Reflecting their acute exposure to the effects of a changing climate, Pacific Island Governments are leading proactive policies for climate-related migration worldwide. Discussions of climate-related displacement often focus on state-supported relocations of whole communities away from exposed locations where environmental hazards have made continued residence untenable. A more nuanced consensus is emerging, however, among countries and development partners that three people-centered principles should guide such relocations: 1) that they be a measure of last resort; 2) that they be voluntary; and 3) that they be developmental, meaning that conditions in the new location should offer better services, livelihoods and opportunities to thrive than were possible previously (Bilak and Kälin 2002; Clement et al. 2021; Georgetown University, Brookings Institute

and UNCHR 2015). In the Pacific, these important principles are already being recognized in policy documents by the governments of Fiji and Vanuatu (Government of the Republic of Fiji 2018a and b; Government of Vanuatu 2018). Solomon Islands is set to launch its own policies and guidelines in coming years.

Local perspectives are an essential input into assessments of the drivers of displacement, including communities' risk exposure and their vulnerability. Communities across the Pacific are engaged in a host of often-innovative locally managed short to medium term coping strategies to manage risk, including relocation. The effectiveness of these strategies or "adaptation practices" in sustaining resilience, and thus holding off displacement, is mediated by underlying local socioeconomic factors. Attempts to strengthen the social resilience of communities to the impacts of climate change in the Pacific have had mixed results, largely because they have been dislocated from local realities and/or lacked sufficient local engagement (McNamara et al. 2020).

This analysis draws primarily on the perspectives of people living in vulnerable locations and aims to improve policy and practice around climate-related migration within Solomon Islands and the Pacific region more broadly. This research paper is informed by mixed-methods primary research, incorporating qualitative and quantitative data collection in five selected communities, plus data from relevant secondary sources. The analysis seeks to address a key information gap: local perspectives on climate-related vulnerability and experiences of migration.

The research paper is structured across six sections. Following a brief introduction, Section 2 details important context about climate-related migration in Solomon Islands as well as broader patterns of migration. Section 3 outlines the adopted methodology. Section 4 synthesizes the research findings and is organized across three key findings: first, climate change and natural hazards exacerbate pre-existing local vulnerabilities and represent one factor of displacement and migration among many; second, social capital plays a significant role in how local people adapt and respond to climate-related migration; and finally, the significance of intangible loss and damage associated with migration from one's customary land or "homeland". Section 5 draws conclusions relating to the importance of understanding how people in vulnerable situations use migration as a means of adapting to climate-related challenges.

The following section provides a brief description of the Solomon Islands country context and experience with climate change and disaster related migration. The purpose is to situate the findings and recommendations of this research paper.

2. Background and Context

2.1 Country context

The population of Solomon Islands is highly fragmented: physically divided by oceans and a challenging topography. Solomon Islands is scattered across some 900 islands in a vast tract of the southwest Pacific Ocean. The population of 721,000 inhabitants is concentrated on the six largest islands, but around 350 islands have human settlements. The difficulties that people face in traversing water, or steep and rugged terrain divides communities within and between islands. The country is also culturally diverse, with some 80 indigenous languages spoken by Melanesian and Polynesian Solomon Islanders, as well as more recent migrants from Kiribati who were resettled by the British colonial government in the 1960s.

As described in the first research paper in this series, communities in Solomon Islands are acutely vulnerable to the effects of climate change. Solomon Islands has some of the highest rates of sea level rise in the world and is already recording coastal erosion, saltwater intrusion, and severe weather events such as drought, tropical cyclones, and flooding. These threaten coastal areas where more than 80 percent of the overall population live. Moreover, most services, infrastructure, and agricultural production are located along coastal areas. Coastal areas are particularly vulnerable to high winds, flooding, and storm surges produced by cyclonic systems. Tropical cyclones are predicted to increase in severity (PACCSAP 2014), with higher ocean temperatures. In the past decade, Solomon Islands and neighboring countries have suffered through severe cyclonic damage: the 2014 flooding in Honiara which displaced some 10,000 people, the two category 5 Tropical Cyclones Pam and Winston in 2015 and 2016 respectively, and Tropical Cyclone Harold in 2020. As the effects of climate change manifest with increasing severity and frequency, the prospect of needing to relocate vulnerable communities to permanent sites of resettlement looms as an imminent possibility.

Low-lying islands occupy an iconic status within global understandings of climate change as they are extremely vulnerable to rising sea levels, coastal erosion, salinification of water lenses, and drought. In some atolls, such as Ontong Java in Malaita Province, villages have lost significant amounts of land and people face the prospect of losing their ancestral homelands, livelihoods, and important cultural sites such as cemeteries. Many people from Ontong Java have made new homes in Honiara at the Lord Howe settlement, where they face other social and environmental challenges (McEvoy 2020). Other coastal areas also face severe climate-related environmental threats, particularly the lagoon islets of Lau and Langalanga lagoons in North and Central Malaita (Monson and Foukona 2014).

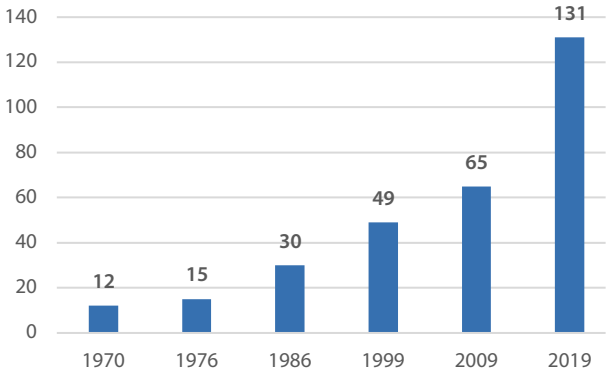
Land has deep cultural significance and is tied to identity and livelihoods. While predominantly Melanesian and nearly uniformly Christian, the primary cultural identity of many Solomon Islanders is highly localized and based on place, kinship, and language with deep historical connections to land. These localized identities endure regardless of where an individual resides and are often more significant than national identities (World Bank 2018). Culturally, land is encoded with stories of who people are as a community, and so is central to collective identities. In Solomon Islands, this is formally recognized in the legal system, with the Constitution and Land and Titles Act ensuring that most land remains under customary tenure. In this

sense, "land" is better understood as a "living relational entity with strong spiritual elements which underpin individual and group identity" (Campbell 2019:3). Connection to land is also the basis of informal social protection systems.

Customary tenure is particularly important in rural areas where the majority of the population reside. According to 2019 Census data, around 74 percent of the population lives in rural areas. The predominant form of livelihood activity in these areas is small-scale and uncommercialized agricultural activities using land held through customary tenure. Customary land accounts for 87 percent of all land in Solomon Islands and is predominantly located outside of the main urban centers. In contrast, private ownership of land is most common in urban areas, particularly the capital Honiara, the hub of private and public wage employment (SINSO 2019).

Despite deep cultural attachments to land, there is a distinct spatial shift underway from rural to urban migration and livelihoods. Growth in the urban population has been particularly fast over the past 20 years, averaging 4.8 percent per year; a pace among the fastest in the world over that time, and well above any other Pacific Island Country (PIC). The result is that the urban share of the population has risen, from 16 percent in 2000 to 25 percent in 2020 Honiara has been the chief recipient of urban migrants (Figure 1), with the population doubling in the past 10 years. This demonstrates a sharp acceleration in the rate of population growth and indeed the most rapid change in the country's history. This rapid rate of growth has lifted Honiara's share of the national population to 18 percent, up from 12 percent in 2009.

Figure 1: Honiara population
Total; thousands



Source : SINSO 2019

Geographic disparities in development are a large driver of the movement from rural communities into urban areas, but other factors, including natural disasters, play a significant role. Honiara is the nation's economic and administrative hub. The city offers people better employment opportunities, and access to education, health care, and other services that are not always available in rural areas. Migration to the plains of Guadalcanal and other places where oil palm and coconut plantations are located follows similar reasons.

While these socioeconomic needs and aspirations may not be articulated as responses to environmental changes, slow and rapid onset climate hazards amplify other vulnerabilities. Climate-related displacement as a result of natural disasters is already occurring, including relocation of whole populations from low-lying atolls to urban areas, as well as some rural-to-rural migration (Birk and Rasmussen 2014; Monson and Foukona 2014).

2.2 Climate-related migration in Solomon Islands

The Solomon Islands Government recognizes the significance of climate change as a present and future challenge to sustainable development. The current *Solomon Islands National Development Strategy (2016-2035)*, the *Solomon Islands National Climate Change Policy (2012-2017)* and the earlier *National Adaptation Plan of Action* (2008) all emphasize the objective of "ensuring that the people, natural environment and economy of the country are resilient and able to adapt to the predicted impacts of climate change" (MECDM 2012: 13). The National Climate Change Policy proposes a range of adaptation and mitigation activities but does not mention climate-related migration. More recently, The International Organization for Migration (IOM) has prepared draft Relocation Guidelines for Solomon Islands as a framework for managing future internal resettlement of people displaced by the effects of climate change.

Solomon Islands has a history of government-planned relocations in response to deteriorating environmental conditions. In the 1960s and the 1970s, Tikopia and several other atolls faced drought and land scarcity and had alternative population centers established in Makira, the Russell Islands, and other places where there were plantation labor needs. People from these outlying atolls and islands have Polynesian cultural backgrounds, and colonial officials

regarded them as racially more suited to work in the modern economy, following a racist typology that devalued the work and cultural practices of Melanesians (Larson 1970; Macdonald 2000). More recently, villages in Guadalcanal and Malaita have been relocated within their provinces (e.g., Guadalcanal Weather Coast villages to north Guadalcanal following an earthquake), but on humanitarian grounds, rather than on economic imperatives (Monson 2010; Monson and Foukona 2014).

State-led relocations have included international resettlement schemes. Solomon Islands also has experience with international migration as a receiving or host country. The failure of a 1930s internal resettlement scheme in the Gilbert and Ellice Islands Colony (now the independent states of Kiribati and Tuvalu) led the British to move thousands of Kiribati residents from the Southern Gilbert Islands to several locations in Western Province, Choiseul, and Guadalcanal. Despite poor preparations and cultural differences, over the past sixty years the Solomons Gilbertese have integrated well into broader Solomon Islands society; at the same time retaining their distinct cultural identity and strong family and community links to Kiribati (Tabe 2019).

In more recent years, some Solomon Islands atoll communities have established their own community-led settlement schemes independent of the government. Atolls are vulnerable to slow-onset sea level rise and are prone to drought: conditions which will worsen with climate change. People from Sikaiana atoll have been buying land in Guadalcanal since the 1980s and have established a village near Tenaru that provides an alternative community hub with strong ties to their home island (Donner 2002). As will be elaborated in the findings of this research paper, the inhabitants of the urban settlement Karaina (urban study site) had originally come from Pileni atoll in the Reef Islands and are creating a hub in Honiara. Similarly, the Tuwo community (atoll study site) has substantial numbers of people dispersed across urban and other locations beyond their original atoll homeland. Other communities have also resettled locally (to nearby rural locations) with little or no involvement from government. For example, following severe cyclones decades ago the Walande village in Small Malaita and three Langalanga villages moved from islands on the lagoon's fringing reef to nearby locations on the Malaita coast (Monson and Foukona 2014). These examples demonstrate the iterative, long-term, and adaptive community-driven relocation efforts that have been adopted in response to deteriorating environmental conditions.

Notwithstanding that permanent community resettlement has occurred, most human mobility in the Solomon Islands involves short-term or circular migration. As is typical across many Melanesian cities, the maintenance of close social, cultural and economic connections between migrants and their home villages helps underpin a pattern of circular migration of many groups in Solomon Islands (Connell and Lea 2002). For instance, even as they make new homes in urban settlements, many Ontong Java people regularly return to their home atoll, especially during beche-de-mer harvest time (Christensen and Gough 2011).

The prospect of whole of community resettlement raises complex questions of property rights which may threaten customary land ties. The prospect of being able to return to a home village for communal support and subsistence remains important for most Solomon Islanders. This was demonstrated by many Honiara residents who returned to the provinces after losing their livelihoods because of the restrictions imposed due to the COVID-19 pandemic. The collective identity that stems from intergenerational attachments to customary land cannot easily be replaced where people have no option but to abandon their ancestral homelands (Campbell 2019). Land is often culturally bound and not simply a tradeable or leasable commodity, therefore relationships between the state, landowners, and migrants must be handled sensitively.

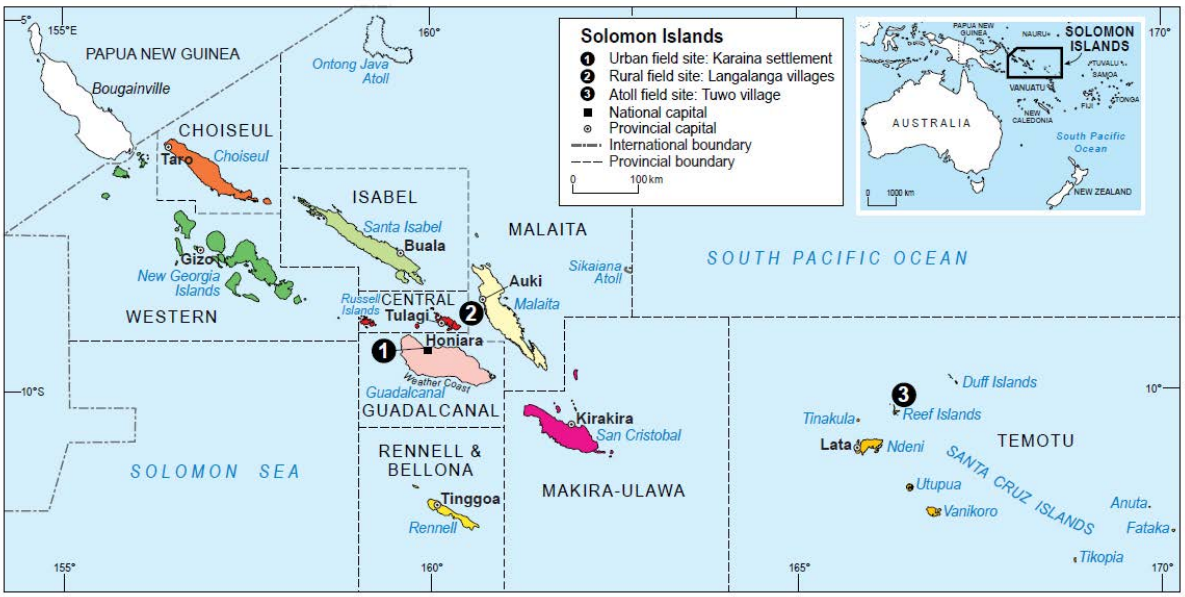
In Solomon Islands poorly managed land acquisition and resettlement has generated conditions for violent conflict. Local grievances have escalated and merged into wider and ongoing debates regarding political decentralization, the extent of provincial control over natural resources, and the distribution of resource rents (Monson 2017). Colonial governments attempted to alienate land for administration and economic development, particularly coconut and oil palm plantations, but the official legitimacy of such arrangements in law did not prevent traditional landowners from making claims for redress or the return of land. In 1998, long-standing grievances between Guadalcanal landowners and the state erupted into armed conflict with settlers from land-poor Malaita, many of whom had lived on Guadalcanal for decades. These events, known as the "Tensions", had severe consequences for national unity and the functioning of the state, contributing to a coup, widespread disorder and the collapse of services

over the period 1998-2003. Despite an extended law and order, and state-building program led by Australia (with contributions from other Pacific Island Countries and New Zealand), Guadalcanal landowners' demands have never been fully satisfied and the potential for further conflict remains (Allen 2012).

3. Method

This research paper focuses on the role of environmental change in human migration dynamics across five coastal communities in Solomon Islands. The five communities are identified as vulnerable to the effects of climate change, and are spread across three settings: urban, rural, and atoll. (Map 1).

Map 1: Research setting and sites across Solomon Islands



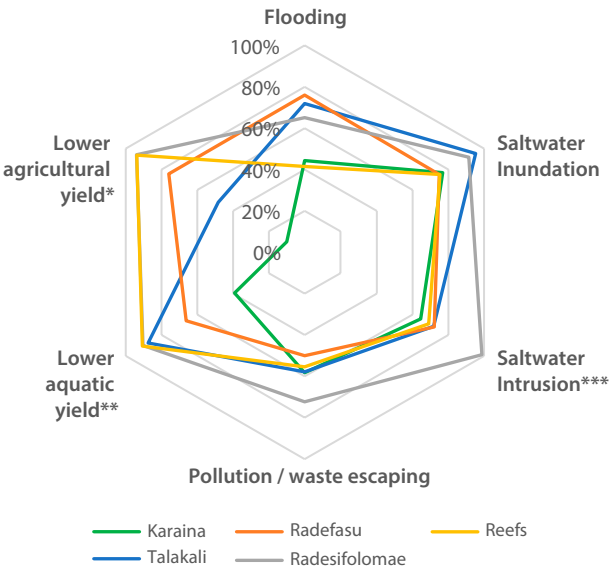
These settings reflect the different ways that communities in Solomon Islands are likely to be experiencing, and adapting to, the impacts of climate change (Figure 2). Repeated climate-related shocks and the absence of effective external support are combining to exhaust the social resilience of people in the selected field sites. As shown in the first research paper in this series, *Local Insights into Social Resilience and Climate Change in Solomon Islands,* these communities are regularly buffeted by a variety of increasingly worsening natural hazards linked to climate change. The field sites were also selected based on the criterion of having hosted some external program activity addressing climate adaptation. Each field site and its characteristic climate change impacts is described below:

1. **Urban:** Karaina settlement, West Honiara: an informal settlement within Honiara known to be vulnerable to slow-onset hazards including sea level rise and coastal erosion, as well as rapid-onset hazards such as storm surges.

2. **Rural:** Radefasu, Radesifolomae, and Talakali villages in Langalanga Lagoon, Malaita Province. These neighboring communities have a history of being relocated from lagoon islets decades earlier, following severe cyclones. They presently experience slow-onset sea level rise and coastal erosion, as well as seasonal rapid-onset flooding and storm surges.

3. **Atoll:** Tuwo village, Fenualoa atoll in the Reef Islands, Temotu Province: exposed to the vulnerabilities characteristic of many low-lying atolls, including coastal erosion and saltwater intrusion.

Figure 2: Shock experience
(% of houseolds; by community)



* = Lower crop yields than expected/spoilage of crops; Less fruiting on plantations
**= Declines in reef/seagrass bed health; Lower fish and seafood catch than expected
*** = Saltwater intrusion into soil/gardens; poor water quality from wells, standpipes, etc.

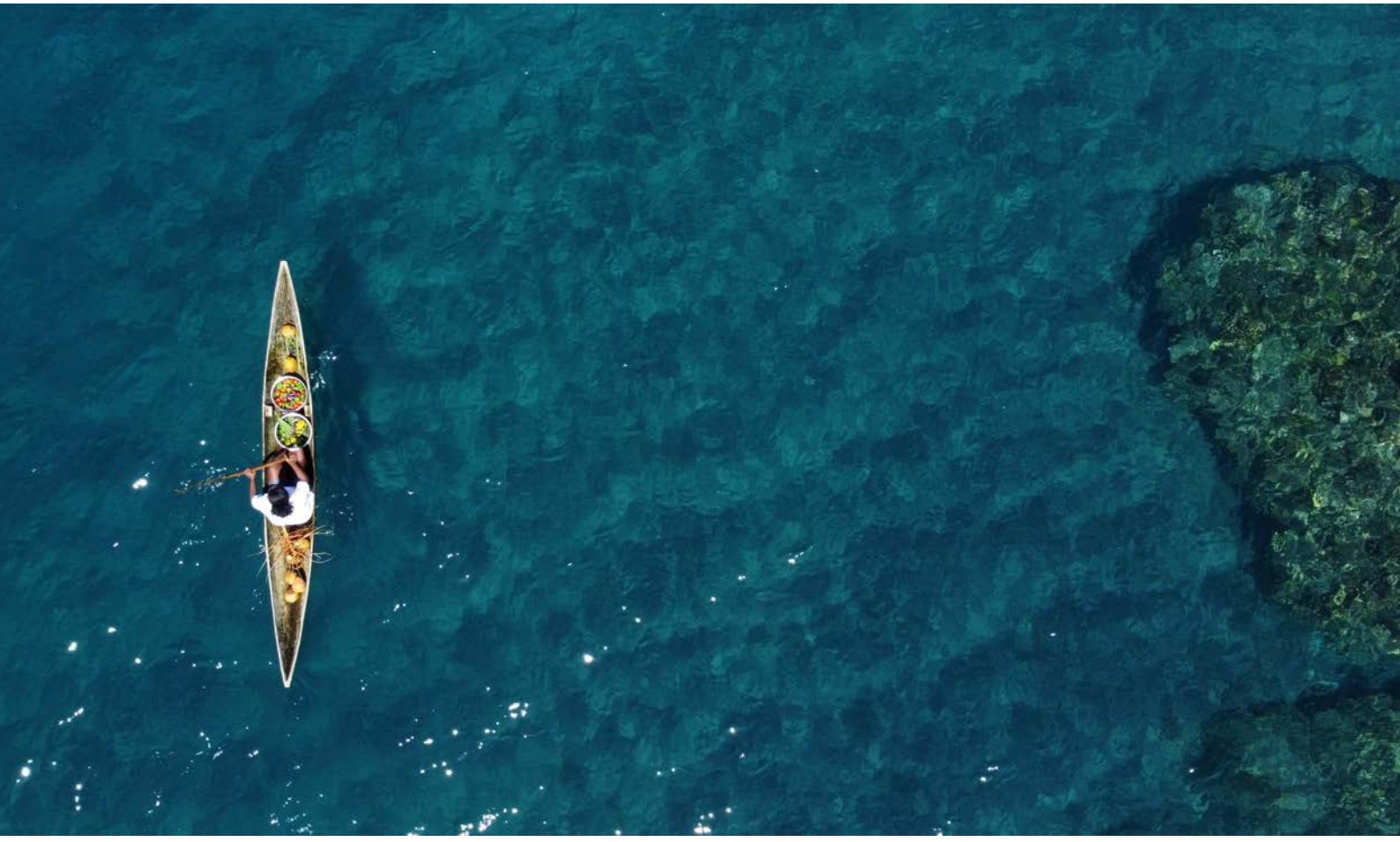
The study adopted a mix of quantitative and qualitative methods, including household surveys, key informant interviews, and focus group discussions. The study team conducted a total of 394 household surveys (219 women, 172 men, 1 nonbinary, and 2 undisclosed respondents, with a maximum of 104 surveys and a minimum of 64 surveys in each community; 20 focus groups (four per village divided into groups of older women, older men, young women, and young men; and 32 key informant interviews (17 women, 15 men) across the three field sites. While the analysis and primary data presented within this research paper is primarily drawn from village research participants, representatives from government, donor agencies, and NGOs responsible for climate adaptation programs (mostly Honiara-based) were also consulted for context. All individuals quoted have been deidentified to protect anonymity. This research paper is intended to capture insights, observations, and trends that are typically underrepresented in the literature on climate change in the Pacific region. The study does not intend to provide a statistically representative analysis of all three environmental settings. In addition to the research aims, a secondary objective of the study was

to pilot the development of relevant and appropriate data collection instruments, including guidelines, questionnaires, and protocols.

The study instruments seek to build understanding of community level perceptions and experiences with climate-related hazards and approaches to managing the associated risks and impacts. The study instruments were tailored to capture human migration dynamics, including forced displacement and migration on a temporary or permanent basis. This included information on the extent of climate change and disaster related migration in addition to the experience of households in villages sending emigrants and receiving immigrants. The research protocol split the household survey into two distinct parts: one that included a set of questions designed for villages or settlements that receive immigrants, and a separate part that included a set of questions designed for villages or settlements that send emigrants. The research assumed that, while the urban and remote communities stood at either end of the migration spectrum (being largely receiving and sending communities, respectively), the rural communities in the Langalanga lagoon, given its history, were likely to experience both inflows and outflows of migrants (Figure 3).

Figure 3: Treatment of migration in the research by location type

Location type and community	**Urban (Honiara)**	***Rural* (Langalanga lagoon)**			**Atoll / Remote (Reef Islands)**
	Karaina	*Talakali*	*Radefasu*	*Radesifolomae*	*Tuwo*
Migration questions	Just in-migration questions	Both in-migration questions and out-migration questions.			Just out-migration questions



4. Results

The following section presents three key findings which are then discussed in the subsequent sections. The findings relate to the following: (1) how local people understand the role of climate change and natural hazards in the decision to migrate; (2) the role of social capital and informal networks as a climate change adaptation strategy; and (3) how local people understand and navigate land access and relocation.

Finding #1: Climate change and natural hazards exacerbate current local vulnerabilities.

Environmental vulnerabilities in each of the surveyed communities overlap with other hardship, poverty, and gender inequalities. For example, in addition to environmental shocks, study participants at all sites reported limited access to essential services including healthcare, education, and banking. Educational attainment was low, with only 60 percent of working adults attending secondary school in urban Karaina, and 48 percent elsewhere. Female illiteracy was prevalent at all sites. Only 49 percent of households in Karaina had a bank account and 38 percent elsewhere, suggesting low levels of financial inclusion. Communities also reported having poor access to satisfactory sanitation. Many of the people surveyed reported severe food insecurity. Between 12 percent and 40 percent of respondents experienced at least one day without food during the past 12 months. Climate change and disasters represent just one of several drivers of human migration in the urban, rural, and atoll study sites.

People inhabiting sites vulnerable to slow-onset climate risks and sudden-onset natural hazards are already highly mobile. At the urban Karaina site, 83 percent of survey respondents and 46 percent of respondents in the rural Langalanga lagoon villages identified themselves as migrants.

Household study respondents had diverse views on the significance of climate change as an explicit driver of migration. Environmental shocks did not provide a comprehensive explanation of rural to urban and circular migration trends. These trends were also driven by people's aspiration for better education and employment opportunities, including in places that had suffered severe environmental shocks (Box 1).

Box 1:
Climate Debates and multi-dimensional drivers in urban Solomon Islands

At Karaina, the informal settlement in West Honiara, most residents originally came from Pileni, a low-lying and drought prone atoll in the Reef Islands (Temotu Province—Map 2, Insert A). Despite the environmental vulnerabilities of their home island, in interviews, many Karaina residents saw migration to Honiara, not as an adaptation to climate change, but primarily as a way of seeking better economic and educational opportunities. While very crowded and poorly serviced, Karaina provides a hub from which to access the work, education and other lifestyle benefits that Honiara as a capital city offers. Indeed, this role of providing a community hub for Pileni families in Honiara is fundamental to the story that Karaina residents tell about themselves. One long term resident explained the origins of the settlement as follows:

> *Matthias [the founder, originally a caretaker for an expatriate who owned the land] stayed here and his relatives stayed in Honiara for school and employment with other wantoks. He felt sorry for his immediate nieces and nephews and brothers and sisters and invited them to come to the fence. He called his family to come. Some even looked for him and found him, so he invited them to stay. That's how they came in: NOT climate change. NOT climate change. They came and asked if he has the right to stay in this property and at that time yes, he was the caretaker after Smith was deported, so they came and stayed with him. Matthias was the last born of the family of his brothers and sisters and that is why he felt responsible to bring his family to live with him in the fence. When he had the right on the land, he felt sympathy to his nephews and nieces and then asked them to come and live with him. He didn't want them to live all over the place with other wantoks who were not family and hence he felt to bring them together. (Aliki, older male leader, Karaina)*

Despite this recent migration history, the environmental conditions in the Reef Islands remain a reference point for many of the people interviewed. Pileni is a low-lying atoll where there is great pressure on fresh water supply, poor soil and vulnerability to cyclones and drought (McNaught et al. 2011). Many Karaina residents refer to the conditions there as a contrast from their own situation in town. For example, one elderly male respondent described the environmental vulnerabilities at Karaina as akin to those in Pileni. He saw the lack of government involvement in relocation as a source of anxiety and a driver of conflict over land.

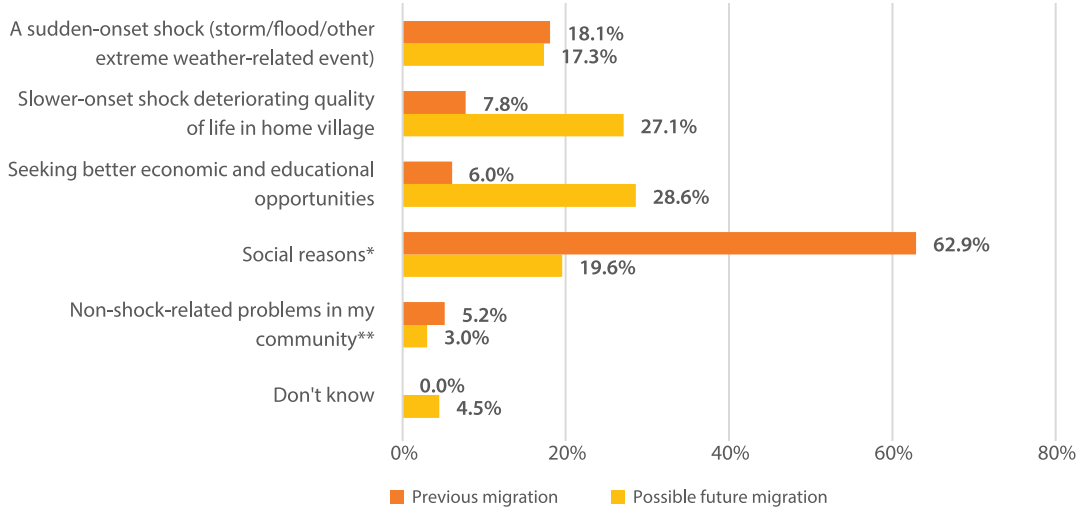
> *Yes, they are so worried because we came from small islands and came to live here and cyclone and high seas cause damage to this place and so we do not have any place to evacuate to, so we are worried if any hazard occurs. We have experienced it from our islands in Pileni because of the smallness of our islands which caused us to move to this place. It is the resettlement or relocation that the government did not do for us and that is why we are still worried. Even this place itself has some issues that people argue about, the land [scarcity] issue is the problem. (Richard, older male leader, Karaina)*

The importance of climate change as an underlying driver is also apparent in perceptions of the quality of life in the atoll homeland. Many Karaina respondents, across generations, mentioned environmental deterioration in the Reef Islands as a reason not to return permanently, although survey results indicate that 79% of self-declared migrants have a desire to return to their original home at some point. Most regarded conditions in Karaina as easier than outer island living, and no residents were considering a permanent return to the Reef Islands. Most of the young people interviewed had grown up in Karaina and did not have the subsistence skills needed for life in the atolls.

Seen through the lens of climate adaptation, these apparently conflicting accounts of reasons for migration into Karaina can be explained as a difference between an historical account of the initial founding of the settlement and the understanding of drivers for newer arrivals.

Despite being aware of harsher environmental conditions, people may attribute migration to other causes. Among the rural communities in the Langalanga lagoon, the majority of self-described migrants (84 percent) indicated that their previous migration was planned for reasons unrelated to environmental shocks. Most people identified social reasons, including family unions, marriages, and disputes that pushed people apart as the main cause of migration (Figure 4).

Figure 4: Main reasons for migration
(only Langalanga lagoon research sites)



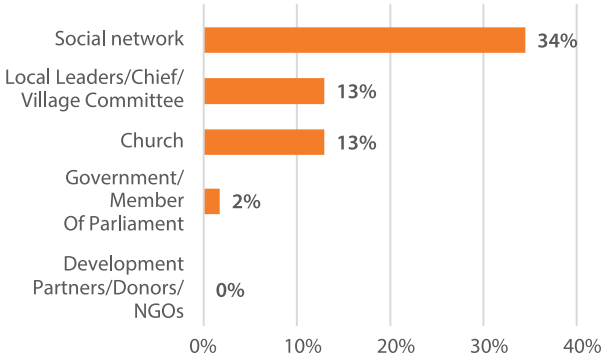
* Family reunification, marriage, dispute w/family; following other members of my community
**increased crime; reduced cohesion; persecution (religious/ethnic/political)

Affected people perceive climate as one exacerbating factor of human migration; the role climate plays in displacement or migration is predicated on a range of related factors underpinning their vulnerability and undermining resilience. Climate change can be an overriding factor but, more often, it is one of many "push" and "pull" factors, and acts as an amplifier of pre-existing vulnerabilities and disadvantage. While explicit accounts of reasons for human migration may focus on proximate drivers such as education, employment, and other services, rural-to-urban migration should now be understood as having a climate dimension where people are moving from environmentally vulnerable situations.

Finding #2: Social capital plays a significant role in how people adapt and migrate in response to climate-related vulnerabilities

Solomon Islanders draw upon their social capital, including strong and weak social ties, to negotiate climate-related migration. As indicated in the urban site (Karaina) example in Box 1, the settlement is a kinship-based attempt to consolidate a community of people from Pileni atoll in Honiara. At the rural sites located around the Langalanga lagoon, survey respondents also indicated that their movements between villages, the provincial capital Auki, and Honiara were mediated through existing connections with relatives. Survey data shows that while external support for migration is not common, the main source of support is always provided by migrants' own social networks. After family, migrants reported that local community leaders, including village chiefs, committees, and churches also assisted them. Very few migrants had received support from the government, and no one received support from development partners or NGOs (Figure 5).

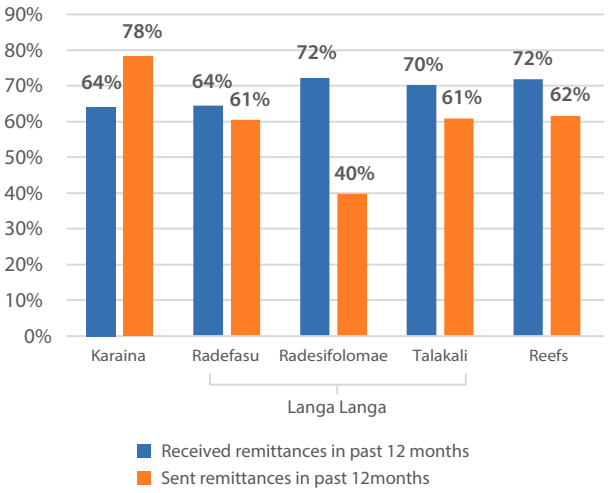
Figure 5: Sources of support for in-migration among self-described migrants: Langalanga



*Answers are non-mutually exclusive: respondents mentioned more than one source of support

Against the backdrop of hardship and vulnerability, informal social safety nets appear to be an effective mechanism for sharing resources between and within locations. Receiving remittances in the form of cash and/or gifts from friends and relatives was widespread (Figure 6). Such remittances flowed both in and out of rural and urban areas. Rural communities indicated that they received remittances primarily from Honiara, while residents in Honiara indicated that they received cash and goods from people outside the city. This is consistent with the finding that large proportions of surveyed households at all sites indicated they sent cash and/or gifts to kin including migrants, albeit in slightly lower proportions than those that received them. Movement of people and goods between geographic hubs can relieve population pressure in environmentally precarious places. Migration also supports villagers by establishing remittance economies, which in turn support the maintenance of social networks and relationships between kinsfolk.

Figure 6: Remittance flows by community (percentage of houseolds that received and sent remittances the past 12 months)



The importance of social capital among geographically dispersed communities was well-illustrated in the atoll site Tuwo, in the Reef Islands. Tuwo people described a network of kin spread across several hubs within Solomon Islands. Migration is an important element of community life in Tuwo. 86 percent of survey respondents in Tuwo indicated that they knew someone who had migrated out of the community in the past 5 years. Many residents had left seeking opportunities for paid employment and improved access to services, particularly education. Most migrants (61 percent) had relocated to another rural area within Temotu Province – most often Kala Bay on the large volcanic island of Santa Cruz, where several Tuwo families own land used for farming (Map 2). Some Tuwo residents relocated to other parts of Santa Cruz, such as the provincial capital Lata for work and school, or to the Russell Islands for employment on plantations. A further 35 percent relocated to urban areas, mainly Honiara, again largely for employment and education. The most common settlement location for Tuwo people in Honiara is east of the Lungga River near the coast in the Henderson area. Having the broader Reef Islands community spread across urban and atoll sites supports migrants in maintaining close connections with their families in Tuwo, who send remittances in cash and often goods including rice and other food. These reciprocal exchanges flow both ways, with workers from the diaspora sending money or commercial goods back to Tuwo and Tuwo people producing dried breadfruit (*nambo*) for relatives in Honiara and elsewhere (Box 2).

Map 2: Temotu Province

Box 2:
From famine food to social connector:
Nambo in the Reef Islands

Dried breadfruit (nambo) was originally a famine food stored away for times of drought but has now become a sustaining element of community connection. A staple of the Tuwo diet, nambo keeps for up to a year and is valued as an alternative to cabin biscuits (Birk 2010: 16; *Pacific Breadfruit and Seed Program* 2016:46). In focus groups, women noted that nambo is a standard food stock that they include in emergency bags when preparing for cyclones or other threats.

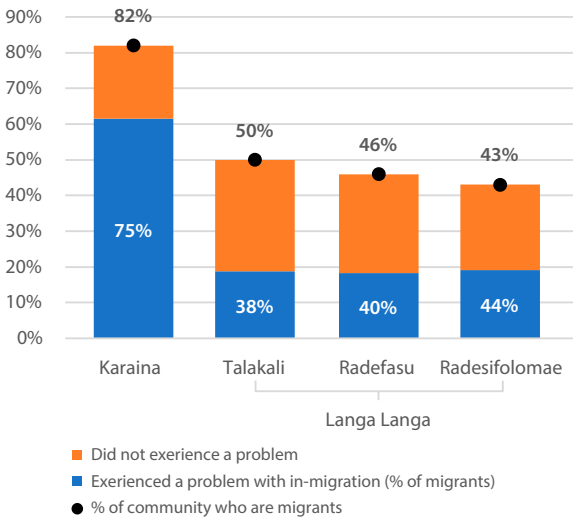
Nambo has a social significance as a food used in greeting people, as is indicated in the very name nambo, which means 'eat first or welcome food' in the Aiwoo language. Women in particular take pride in the work of preserving breadfruit and see it as a core part of their provisioning role with their families. As one older Tuwo woman remarked in an interview:

> Older woman: *"If a woman is lazy and does not prepare, she is prepared for her family to go hungry."*
>
> Interviewer: *"What does this mean?"*
>
> Older woman: *"It means, she will have to go around to other families begging for preserved nambo when she could have preserved some for herself and her family."*

In the precolonial past, nambo was traded for prized red feather money from Santa Cruz. Now the exchange of nambo between the homeland and diaspora has adapted into an important way of sustaining social capital among kinsfolk (Photo 1). Nambo is central to flows of remittances and has a high social significance beyond the value of the goods and money that are exchanged.

Migrants who relocated through family or relational ties to customary landowners had better resettlement outcomes than those who had relocated by other means. Migrants in the urban and rural sites indicated that they experienced problems in their new settlement (Figure 8).

Figure 8: In-migration and associated challenges
(by community and % of houseolds)



The challenges encountered during migration included the inability to meet basic material needs, access land for food gardens, and address insecure land tenure (Figure 9). Migrants at the urban site also noted overcrowding, conflict, and violence, as well as an inability to maintain cultural identity, as significant problems. The difference between urban and rural outcomes is explained by the fact that the urban informal settlers of Karaina have no customary claim or connection to their occupied site. By contrast, most rural site migrants are connected (through kinship

Nambo being weighed for transport to Honiara.
Photo credit: John Clemo.

or marriage) to the customary landowners in the Langalanga villages. This finding suggests that migrants with existing social ties to customary landowners had better settlement outcomes than those occupying freehold land in the urban site (McEvoy, Mitchell, and Trundle 2020). Migrants to the rural site were much more likely to maintain their cultural identity and experienced less violence and conflict than migrants to the urban site (Figure 9).

Insufficient access to land represents a key structural barrier and cause of conflict for climate-impacted people seeking to relocate elsewhere. Survey participants found that obtaining permission to buy or occupy land in a long-term arrangement remained very challenging, even when negotiated through personal or church connections. In the rural

Figure 9: Challenges associated with In-migration1
(limited to those that identified experiencing problems in Figure 8)

	Karaina	Talakali	Radefasu	Radesifolomae
Overcrowding/pollution	92%	8%	58%	25%
Conflict/violence	90%	8%	0%	25%
Difficulty meeting basic material needs	50%	83%	16%	56%
Inability to maintain cultural identity	48%	0%	16%	13%
Difficulty accessing land for gardening	46%	42%	79%	69%
Insecure land tenure	40%	0%	53%	44%
Difficulty securing employment	31%	8%	5%	13%

1 Answers not mutually exclusive; respondents were asked to nominate up to three main challenges associated with migration.

Langalanga communities, several interviewees spoke of their desire to access land from neighboring clans, or to relocate permanently inland in response to climate change and natural hazards. Resettling to higher ground away from the coast in Langalanga is extremely difficult due to lack of available land. Participants in the Radesifolomae women's focus group discussion stressed the lack of land options for relocation, noting land disputes with neighboring Kwara'ae people. Conflict had arisen previously, because Radesifolomae people did not own the land where they were cutting down trees and planting gardens and had overstepped the permissions for use that they had been granted by customary landowners. In Talakali, one key informant noted the interest in moving inland, but there were barriers to doing so:

> *Now, one problem with moving away, unless you have somewhere you can move to. But as you go inland, there is a different owner, that is a problem. They won't just let you move inland. Because we want to move, we must talk with them.*
>
> **Talakali key informant.**

In response to these structural barriers, study participants at all sites managed land scarcity by mobilizing relationships with land owning groups on a temporary, incremental, and informal basis. Other flexible and informal options included marriage and adoption practices, as well as customary forms of land transfers, leasing, and payments. In Tuwo focus groups, both older and younger men mentioned long-standing practices of seeking intermarriage with people who own land on higher islands. This is a common strategy in other vulnerable Solomon Islands communities (Monson and Foukona 2014: 300). One older man saw intermarriage as a means of reducing pressure on land and resources in Fenualoa:

> *Currently, those of us who are older try to encourage our youngsters – of both genders – to intermarry on bigger islands. Here, it is small. Our home is like paradise. Because, you understand, we are born here and always love to be here. But the population is determining this. That is the issue.*
>
> **Abraham, village elder, Tuwo**

In conclusion, building and maintaining relationships with landowners in other localities is an important adaptation strategy used by urban, rural and atoll communities to gain access to new land, both on a temporary and long-term basis (Trundle 2020).

Finding #3: Locally driven migration helps alleviate population pressure, but communities seek to maintain ongoing connection to customary land or "homeland."

People living in climate-impacted areas often migrate and relieve local population pressures, but nonetheless maintain connection with their "homeland". Abraham (quoted above) sees intermarriage as a means of creating durable relationships that will allow for access to more land and exchanges between geographical hubs. As an alternative approach to managing population size, several Tuwo interviewees, both women and men, also expressed a strong desire for the resumption of regular family planning programs from the village clinic. In the past, such programs had helped to educate community members on the use of contraception and birth control. Both intermarriage and family planning are adaptive strategies that respond to population pressures and local peoples' desire to maintain a presence and connection to their homeland.

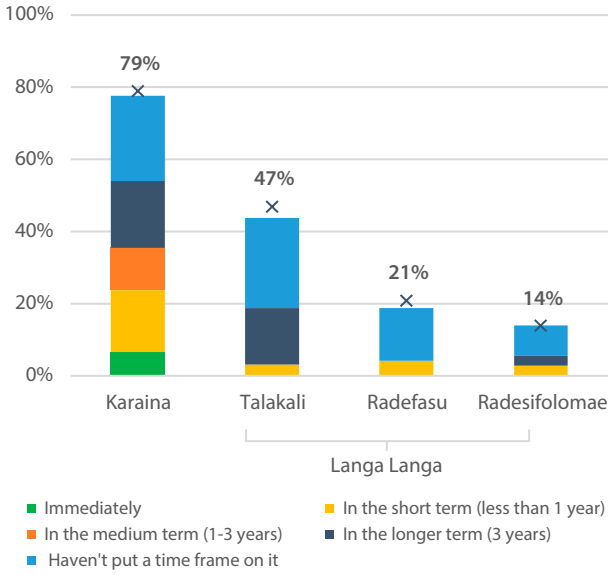
Household survey responses indicate that migration and displacement activities are most often temporary and in response to a shock rather than permanent. Migration experiences included returning to the original place of residence following temporary displacement (e.g. cyclone impacts), or involved cyclical migration, for example, after periods working in urban centers. Temporary displacement for climate-related environmental hazards and other non-agricultural impacts was particularly prevalent in the urban site Karaina. Around 60 percent of households reported being temporarily displaced, including moving to an evacuation center or to higher ground. Temporary displacement was less common in rural areas but did still occur. In Radefasu and Tuwo, around 15 percent of respondents reported being temporarily displaced. A noticeable difference exists, however, in the spatial impacts of temporary displacement. In Karaina, most affected households did not consider displacement to have had a significant impact on their livelihoods and living standards, whereas, in rural and remote communities, people reported that displacement caused a severe or moderate negative impact on household wellbeing.

Regardless of whether migration or displacement had occurred on a temporary or permanent basis, study respondents expressed a desire to return to their homeland. In the urban site, nearly four-fifths of self-declared migrants to Karaina indicated their desire to return to their original homeland. Of this group,

around 30 percent stated they wished to return soon (immediately or in the short term). Talakali had the strongest desire to return among the rural communities (44 percent), though most saw a return as something that may happen a long way in the future. None of the migrants in the rural Langalanga communities (which were between 50-43 percent of the respondents, depending on community) expressed a desire to relocate immediately.

Figure 10: Desire to return homeland and timeframe

% of self-declared migrants; by community



Across the urban, rural, and atoll sites, people-maintained attachments to their homelands, and employed adaptive strategies that enabled ongoing physical connection to customary and ancestral lands. Attachments to people's ancestral place are associated with relationships to customary land or high levels of "place belongingness" (Yee et al. 2022). Most atoll and rural participants have maintained customary connections to their land, but residents of the urban site do not have land tenure or customary connection to the site they occupy. This may explain why, unlike the atoll and rural sites, 79 percent of survey participants at the urban site expressed a desire to return to their original location. Despite the increasing frequency and intensity of environmental and climate hazards, 79 percent of atoll and 74 percent of rural site study participants indicated that they *have not considered the possibility of permanent relocation*. These findings suggest that, while people seek to secure migration pathways for a growing population, they also want to maintain connections to their homeland or customary land. The potential for displaced people to experience intangible losses and damage as a result of disconnection from their homeland is discussed in the next section

5. Conclusions

First, disaster and climate-related impacts represent one of several factors driving human migration. This study highlights that, in Solomon Islands, vulnerable people in locations exposed to climate hazards are using temporary and permanent migration as a means of managing a host of social, economic, and environmental pressures, including climate-related impacts. Climate change and natural hazards are one of several factors that motivate local initiatives toward strengthening people's ability to either maintain and secure their physical presence at an at-risk location, or to migrate to access better services and opportunities. In this sense, climate change is not a standalone push factor, but rather an amalgam of environmental, social, economic, and political factors. From the local viewpoint, the "problem" of climate-related displacement is therefore not just about addressing climate change, but also broader issues of multidimensional vulnerability.

Addressing climate-related migration requires investment in whole of community development and consideration of multiple "push" and "pull" factors at once. External actors have traditionally identified entry points for addressing the impacts of climate change through physical adaptation measures including sea walls and "climate proofing" of infrastructure. This study suggests that such measures are inadequate as standalone initiatives. Physical adaptation initiatives cannot address the underlying issues of multidimensional vulnerability (O'Brien et al. 2007). Donor support should also be directed at building social resilience by addressing structural barriers in addition to local level risk reduction initiatives. In building social resilience, local people are better able to enact appropriate strategies for managing risks, including the vulnerabilities that drive climate-related migration (Arnold and de Cosmo 2015; Arnold et al. 2014).

Second, local people adopt migration as an adaptation strategy to mitigate the negative impacts of climate risks and other factors. People living in climate-impacted areas rely heavily on their social networks to manage related risks including rapid- and slow-onset displacement. Communities participating in this study know their socio-spatial networks and the relationships that spread across localities both domestically within Solomon Islands and internationally. External donors can better support affected people by recognizing that conceptions of "community" should not be limited to a geographically bound local grouping but may include a much broader network of households connected across multiple sites and with homeland and diaspora hubs. Moreover, "communities" also have their own internal politics and limitations and may not adhere to the logic of an idealized common good, as is often assumed in community development programming. A strengths-based approach to addressing disaster and climate-related migration should build upon the practices that affected people and their socio-spatial networks already use to survive and flourish against climatic shocks.

Adopting a relational, small-scale, and locally negotiated land access approach may be a more effective solution to the problem of land scarcity. Land scarcity in Solomon Islands is a function of limited land availability and barriers to obtaining user rights and tenure; most of the land or 87%, is held in customary tenure with only 13% converted to freehold land (Monson 2017). Widespread acquisition of freehold land through the market-based system is therefore unlikely to be an option available to donors or governments seeking to support relocation of at-risk or displaced populations. A "relational" land access approach involves working through household kinship networks to identify new options for land use or

occupation. Such an approach requires inclusive planning and engagement with migrants and displaced people, as well as support to host or receiving communities. This is because relational land access is a process driven exercise built upon respect, reciprocity and obligation between migrants and host communities. Such an approach is unlikely to fit within donor project preparation models which rely on restrictive social assessment methods and tight timeframes linked to funding cycles. Relational land access requires locally affected people to drive the process, which potentially involves ongoing (re) negotiations, ceremony, and exchange of non-monetary resources. A "successful" outcome would be defined and dependent upon the actors and context in each case.

State and donor efforts to support locally led adaptation strategies must address the potential for unintended impacts and structural barriers that constrain effective responses to climate-related migration. Policy and planning efforts directed at addressing climate-related migration may have unintended impacts where the role of informal networks is ignored or misunderstood. External forms of project intervention at the community level are documented in the literature as a common cause of conflict (Higgins and Maesua 2019). Relocation planning may fail to adequately assess the full spectrum of options for affected families or villages when narrowly conceiving of a geographically located village as a "community". Interventions that fail to understand how resources flow across a network may exacerbate existing structural inequalities among groups or exclude vulnerable people connected at the periphery of a network. External actors often misread flows of resources or remittances as economic transactions and miss the significance that such exchanges have for building and sustaining social capital. The capacity of a social system to respond, moderate or avoid the negative impacts of climate change depends on a range of factors including access to information, available financial resources, infrastructure, and technology in addition to social resources (Barnett and Webber 2010).

Third, the study suggests the importance of understanding the potential for intangible losses and damages associated with migration from one's "homeland". Study participants expressed a strong desire to maintain a physical presence in their customary or ancestral lands. This has implications for what will happen to communities if their land becomes uninhabitable due to sea level rise or other climate-related hazards. This research paper has argued that addressing the negative impacts of climate-related migration requires relevant stakeholders to focus on multidimensional vulnerability in addition to mitigation of climate hazards. This study also recommends that government and donor agencies adopt strengths-based and relational approaches to alleviating population pressures and the diminishing quality of life in places experiencing environmental hazards. This paper is to encourage government, donors, and other relevant stakeholders to recognize the importance of the intangible losses and damage that affected people may experience if whole of community relocation is deemed necessary.

Planned relocation for climate-related impacts should acknowledge and address the damages and intangible losses associated with displacement from one's "homeland." The term "homeland" is used here to describe the relationship between people and their land, ancestors, and community as well as the shared identity and belonging that people derive from this relationship (Yee et al. 2022). As described by Campbell (2019), loss of ancestral or customary land is a critical issue given that land not only provides Pacific Islanders with material security, but also emotional and spiritual wellbeing. The Fijian Planned Relocation Guidelines (Government of the Republic of Fiji 2018a) is one example of existing guidance recognizing the importance of integrating indigenous knowledge, conserving traditions, and cultural practices through planned relocation. Nevertheless, how project proponents and affected communities meaningfully interpret and adopt this guidance in practice requires further research.

Potential solutions toward grappling with damage and intangible losses are present within communities' exiting adaptation strategies. When people are already on the move and creating new hubs that interact with each other and the homeland, they are beginning to mitigate intangible losses by establishing alternative cultural bases. These cultural bases comprise family members who can continue more or less securely as a distinct people. Recognition of this community-driven strategy requires a reframing of informal settler communities as "squatters" or "illegal settlers" within the urban context. The state, donor

community and other relevant stakeholders can proactively engage and support in-migrants to establish new hubs and maintain connections to homelands as an adaptation strategy for climate-related migration.

Existing Pacific policy and community driven relocations may also provide insight into how people address damage and intangible loss. In addition to Fiji's planned relocation guidelines, the Government of the Republic of Fiji recently launched the *Climate Change Act of 2021* which provides the legal framework for a whole of government response and approach. Vanuatu's 2018 national policy on climate change and disaster-induced displacement represents another detailed policy in the region. Indeed, Pacific Governments are leading proactive policies for climate-related migration worldwide, and examples of community driven relocation already exist within the Solomon Islands. Further research is needed to better understand the methods and processes that affected people use to manage damages and intangible losses.

International involuntary resettlement guidelines and practices may support further development of planned relocation approaches in the context of climate-related relocation. Robust international guidelines for involuntary resettlement in the context of infrastructure projects has been trialed and tested over decades. With respect to damages and intangible losses, international safeguard standards currently address the potential for losses and damages associated with intangible cultural heritage. The standards recognize Indigenous Peoples' attachments to the customary or ancestral lands in the form of Free Prior and Informed Consent (FPIC). How this guidance may (or may not) apply within the context of climate-related displacement and relocation deserves further attention and remains an area of important work for Development Finance Institutions, in collaboration with governments, civil society actors, and affected communities.

"Voluntary immobility" is one potential outcome of planned relocation processes that fail to adequately address the significance of people's connection to homeland. Where household or community land is ultimately destroyed or uninhabitable due to climate-related impacts, relocation planning should anticipate that people may nonetheless choose to remain (Yee et al. 2022). Voluntary immobility is a legitimate coping strategy that people have used to strengthen cultural and spiritual agency among those facing the loss of their homeland (Farbotko and McMichael 2019). Policy makers and planners can better acknowledge and understand voluntary immobility by investigating the reasons for it, understanding the nature of community, and holding discussions with affected communities about land tenure and adaptation options. Indigenous communities do want to maintain material, cultural and spiritual connections with their ancestral homelands, even when they may be living elsewhere through permanent, temporary, or circular arrangements. These connections to place are fundamental to people's collective identity and social resilience (Farbotko and McMichael 2019).

In the context of climate-related displacement, people should have their right to stay and enjoy continued access to land and sea acknowledged and supported. Ultimately, this may take the form of a small remnant population residing in the homeland, with the majority of the community living in hubs elsewhere. Ideally, in the case of a homeland becoming completely uninhabitable, a complete "last resort" relocation should take place only in the wake of sustained efforts to resource the preservation of cultural knowledge and practices, so that emigrants living in diaspora retain their distinct identities and connections to their "place".

6. Recommendations

This research paper highlights the importance of understanding the local contexts in which populations with multiple vulnerabilities are responding and managing the risks and impacts associated with climate-related migration. Ultimately, communities at risk of displacement, and the communities hosting them, must be seen as people with rights, agency, and capacity. Involvement of affected persons will need to go beyond consultation and involve community driven planning and action, as well as recognized local authorities, civil society, government, and the international donor community. The following recommendations seek to provide these stakeholders with guidance on how to practically support affected communities in their displacement and migration experiences.

PRACTICE

- **Adopt social assessment tools that account for an expansive mapping of household social and cultural capital to inform policy and program formulation and planning.** A variety of social assessment tools can be used to better understand kinship networks, relationships with material objects such as cultural heritage and immaterial aspects such as ancestors, spiritual beliefs, and traditional knowledge. Established approaches include Participatory Rural Appraisal or Participatory Learning and Action methods (e.g. stakeholder and kinship mapping). Such approaches facilitate bottom-up planning, while allowing the participating households and communities to articulate and analyze their own strengths and challenges, identify assets, and prioritize solutions in a language and manner that is culturally appropriate.

- **Consider the importance of working with both formal and informal local institutions.** Environmental risk, cost-benefit and impact assessments are usually conducted by national governments and external actors to determine the viability of investments and programs. However, there is limited evidence that traditional planning approaches involve in-depth social assessments—including by community members themselves—to understand evolving changes in the environment, and impacts on livelihoods, access to services, and customary traditions—all of which are considered essential factors for initiating or planning relocation. Local (formal and informal) institutions have greater community legitimacy than higher levels of government or external parties but need support to be able to collect and present local knowledge in ways that can inform and guide program assessments and design.

- **Recognize the role and responsibility of civil society organizations.** In the Pacific region, this includes churches and faith-based organizations, given the role that they play in building community cohesion and brokering relations between affected households, displaced communities, and communities hosting resettled groups.

POLICY

- **Adopt a "whole of government" integrated and multisector approach to addressing the impacts of climate-related migration.** Governments and donors should respond to the call to integrate climate-related migration into national and local development planning and institutionalize a whole of government approach to ensure comprehensive, coordinated action by all relevant authorities.

- **Support community-led adaptation strategies that relieve the impacts of climate-related hazards, such as temporary and permanent migration and relational land access.** Governments and the international donor community can adopt strengths-based approaches and enhance the contribution that existing migration can make to adaptation efforts.

- **Plan for integration of migrants and host communities.** Governments and donors can help address limitations of locally led adaptation by responding to migrant and host community needs. For example, governments and donors can address structural barriers faced by migrants through collaborative measures to clarify property rights, including land access and user agreements among current and potential host populations. Programs implemented by states or donors to assist connecting children and adults with educational opportunities and short-term employment can help new migrants to establish themselves. Promotion of cultural awareness, understanding, and linkages between migrant and host populations can contribute to building and brokering peace between them (Barnett and Webber 2010). States and donors may further support recognition of urban informal settlements as part of community-led adaptation to disasters and climate-related impacts in other parts of the country.

- **Pay attention to places and practices of cultural significance as well as to traditional forms of livelihoods in determining the level of "adaptability" and resilience of affected communities.** Nearly all communities in the Pacific have indigenous cultural claims to land and sea. Governments and external actors will need to support displaced people to address intangible losses and damages. First and foremost, such understanding must be generated through meaningful consultation and dialogue between stakeholders over time.

FUTURE RESEARCH:

- **Further research can focus on learnings and good practice examples of government and community driven planned relocation in existing sites in Solomon Islands.** Further research on the gendered social and cultural norms around climate-related migration, and current permanent and circular migration patterns and practice is needed. The social dynamics of these migration patterns need to be better understood, analyzed, and correlated to improve policy and practices for governments and external actors.

- **Articulation of the intangible losses and damages that arise where people lose connection to their homeland is another important area for further research.** Methods and mechanisms for assessment of climate-related loss and damage remain largely undeveloped for small islands (IPCC 2022). According to the IPCC 2022, no robust methodologies currently exist to infer attribution of damage and loss, including how to assess the economic costs of loss and damage, or the gendered experiences of loss and damage across socio-economic groups.

- **Identify synergies and learnings between existing planned relocation and climate-related displacement policy and guidelines and DFI safeguard policies and standards.** Researchers and the international development community are calling on relevant stakeholders to "shift from a predominantly humanitarian approach to internal (climate-related) displacement to a primarily development-oriented approach" (Bilak and Kalin 2022: 9). Pacific governments are leading policy formation and guidance in this vein and may provide a basis for approaches in other countries, including Solomon Islands. In the field of development-induced displacement, safeguards policies adopted by most DFIs have facilitated planned relocations as development interventions for decades. Recognizing that DFI safeguards policies are not fit for purpose, key learnings and principles may nonetheless be distilled to better inform planned relocation activities in the context of climate-

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