Climate resilience through sociocultural mobility: Reframing the Pacific's urban informal settlements as critical adaptation pathways

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The Boe Declaration on Regional Security puts climate change front and centre in the vision of Pacific regionalism set out by Pacific Island Forum leaders, with explicit consideration of and focus on the threat that climate-related shocks and stresses pose to the livelihoods, security, and wellbeing of its inhabitants. Unstated, however, is the risk posed by climate change to the Pacific's cultural and societal fabric – attributes that underpin community-level climate resilience. Also not addressed are the ways in which these sociocultural attributes are intertwined with an established history of movement and migration within, across, and beyond Pacific Island Countries. These omissions have occurred despite being issues of acute geopolitical concern as they sit at the nexus of humanitarian responses to disaster-driven displacement, widespread exertions of state-based control and border securitisation of wealthier nation states, as well as the resurgence of nationalistic political agendas globally. Despite limited efforts to support, engage with, or understand these forms of resilience by development actors and government agencies, these informal attributes are shown to be critical sources of both cultural and community resilience.

This paper draws upon research into community resilience in six migrant communities in two Melanesian capital cities: Port Vila, Vanuatu and Honiara, Solomon Islands.

Emerging evidence of climate-induced migration within Melanesia suggests that the translocation of rurally derived community resilience into Pacific cities can play a critical role in supporting climate adaptation pathways within Pacific Island Countries. This concept fundamentally challenges norms applied in international development, requiring a multifaceted decolonisation of urban systems, processes and regulations. As the impacts of climate change continue to worsen, these social and cultural sources of community resilience need urgent consideration by international development programs and regional planning policy frameworks if stability is to be maintained within and across the Pacific.

An emergent security concern: climate-induced migration

Climate-induced migration suffers from misaligned scales of analytical and geopolitical interest. The broader narrative of the 'climate refugee' attracts both popular and political attention through speculative concerns associated with mass migration and displacement as prospective threats to security and the control of the state. Analysis and research, however, draw upon empirical evidence relating to the incremental movement and mobility of localised groups who seek proactive or responsive actions to enhance or preserve the security of households and their livelihoods.

Contemporary evidence of the latter is masked by the complexity of attributing both overarching migratory rationales and the climate shocks and stressors embedded within them. Where mass displacement has occurred, climate signals are often obscured by or intertwined with other drivers or pull factors, in addition to specific climate-related shocks stresses. Climate-induced migration can also be exhibited as a response to speculative climate futures, complicating assessments derived solely from recently observed climatological events.

This discursive contestation and complexity parallels critical considerations of the nature of migration itself. Human mobility is a phenomenon that is at its core a 'normal practice interwoven with the everyday' (Barnett and McMichael 2018). It is also at odds with transnational concerns of state-based security and geopolitical stability, leading to a 'territorial trap' that is 'constantly reproduced by populist politics and the media' (ibid). In the case of the Pacific's larger archipelagos these nationalistic narratives can also be observed sub-nationally, with urbanisation and urban identities themselves facing active sociocultural and political resistance (Keen and Connell 2019). The former is evident in recurrent narratives of incentivising the return of young people to depopulated rural areas, while the latter is reflective in the more passive persistence of 'home-island' identities in third and fourth generation urban-born residents of Melanesia (McEvoy, Mitchell and Trundle 2020).

The consideration of climate-induced migration focuses on the attributes of community resilience that can be transferred from rural to urban citizens by migrating individuals and households. These considerations are framed through localised notions of human security, as well as their implications for maintaining national and regional resilience, as reflected in the Boe Declaration and other regional architecture such as the Framework for Resilient Development in the Pacific.

Urban resilience and the Pacific migrant dialectic

Mobility and movement have long been central to the resilience of Pacific Islanders. Bertram and Watters, in their initial proposition of the South Pacific 'migration, remittances, aid and bureaucracy' (MIRAB) economic model, argued that within Oceania the:

> movement of individuals takes place without severing the links binding them in their kin group of origin … allowing [them] to colonize and exploit economic opportunities across a wide range of economic environments' (1985:499).

This fluctuating and interconnecting flexibility resonates strongly with theorisations of socioecological resilience. In

Holling's early writings on resilience, it was notable that he identified it to be the determinant 'persistence of *relationships* within a system' [author's emphasis] despite recurrent disturbances or fundamental instability within the ecological system in question (1973:17).

Paradoxically, although urban centres facilitate much of the migratory and fiscal movement referenced by Bertram and Watters, the systems that govern and service the Pacific's cities and towns starkly contrast with this flexibility and resilience. This is despite urbanisation and mobility across most Pacific Island Countries having increased substantially during the intervening three-and-a-half decades during which investments in and development of urban infrastructure and governance has broadly failed to match population growth (Jones 2016). Many colonial-era, municipal boundaries remain unchanged despite peri-urban 'overflow' in cities such as Port Vila and Honiara now comprising between 40–50 per cent of their populations and surrounding local governments lacking the regulatory jurisdiction or bureaucratic infrastructure to provide urban services (Trundle 2020a). Basic infrastructure and services such as potable water, sanitation, solid waste collection, and electricity are also falling well short of demand or even into disrepair (Gero, Kohlitz and Willetts 2017). Equally problematic is the 'orderly' release of urban land for occupation, given the share of urban inhabitants across the region living informally has been estimated at 24.1 per cent in official UN figures without recalculation since 1990 (see, for example, UN-Habitat 2016:86).

With limited formal urban governance and a focus of international development efforts in rural areas (Kiddle et al. 2017), the Pacific's urban resilience in the face of recurrent climate-related and other shocks and stresses points to a local, endogenous influence (Trundle, Barth and McEvoy 2019). These hybrid, dialectic forms of urban inhabitance provide alternative capacities to cope with climate-related shocks and stressors beyond those usually evident within urban systems and disaster risk governance. Additionally, they enable adaptation pathways for future climate-induced rural migrants, while at the same time securing key social and cultural assets through their urban translocation.

Translocating community resilience through informality

The primary data collected as part of this research consisted of semi-structured interviews with informal migrant households across the six settlements shown in Figure 1 (n=57) cross-referenced with interviews with representatives of institutions engaged in climate resilient development activities in each city (n=26). Follow-up workshops were also conducted with each community to explore interview data, with secondary socio-demographic and policy analysis also integrated with these primary research findings. In each context, research was conducted after a major climate-related shock event (the April 2014 Floods in Honiara, and the impact of Tropical Cyclone Pam on Port Vila in March 2015), which provided a point of reference for both community and institutional engagement.

Figure 1: Case study communities in the cities of Port Vila, Vanuatu and Honiara, Solomon Islands
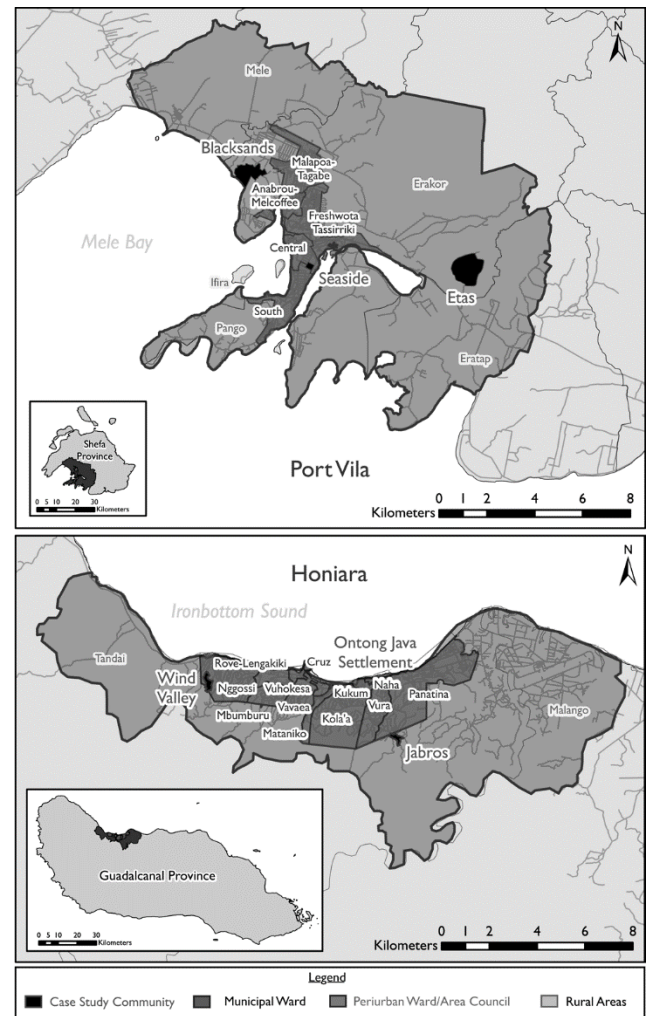
Source: Author.

When asked about sources of security support received in response to a climate-related shock or stress, respondents across all six communities demonstrated that formal government support played only a secondary role at a community level. Two-thirds of all households responded negatively, noting that 'place here, *hemi olsem* the government no look' (BSHH5), or that 'if you *votem* for him *lo* lose, [the politician who lost], *em* winner him no help you [the winning MP won't help you]' (WVHH7). Of those responses that viewed government engagement in the community positively, awareness raising activities or ad hoc infrastructure interventions that had limited effects on household-level security or long-term development pathways were viewed as most beneficial. As one respondent noted:

> after Cyclone Pam, [we] received tanks, ropes, food, tarpaulin, water. But the things we really want [from] the government … is a good road for when it is rainy, water supply and light (ETHH7).

In contrast, resilience within these areas was recognised by community-members and institutional representatives alike as being drawn from informal community structures and hybridised, translocated traditional knowledge and *kastom*. As one institutional representative in Vanuatu noted:

the chief works very closely with the council [and] island associations. So those island associations provided security … I think we [need to] start praising those local systems and see how we can integrate or … put them together (VUE7).

Another reflected that when Tropical Cyclone Pam hit Port Vila there were:

all those impacts on some modern infrastructure, housing [but] some more traditional housing was very much intact … we need to relook at how we package some of those initiatives or deliverables that we label in terms of resilience (VUE2).

When discussing the urban features, functions and actors that supported resilience at a household level, community respondents referenced informal, community attributes such as chiefs, customary practices, and the *wantok* system twice as often (n=849) as those associated with the state (n=323) and civil society (n=98) combined. Critically, these attributes reflected translocated traditional, rural practice, often combined with urban resources, economies and the interplay between differing cultural backgrounds. As one institutional respondent reflected, 'people that migrate to the urban … they come with all this traditional know-how, all these rich techniques and information on how to survive through a natural disaster, be it flooding, a cyclone, whatever. But … access to that material, or the equivalent of that material in the modern [context] is their big dilemma' (VUE12).

Food security was also found to hinge on a vast network of predominantly informal food production systems, driven similarly by informal land tenure, markets and labour. 'Gardens' accounted for 17.3 per cent (n=155) of all references to informal community-level activities across the 57 household interviews. Despite encompassing a variety of tenure types and garden typologies (ranging from backyard *sup sup* gardens to small scale agriculture in peri-urban 'bush garden' areas), these sources of food production and informal income operated almost exclusively outside of the recognised functional purposes of both of the two cities irrespective of their municipal or peri-urban classification. Of the households interviewed, 68.4 per cent had a garden, however access to arable land varied depending upon the proximity of settlement areas to the town boundary and relationships with customary land owner groups, consistent with findings in other studies (Komugabe-Dixson et al., 2019; Savage, Bambrick and Gallegos 2020).

Land tenure was found to have a more complex relationship with community resilience and household security, reflective of the diversity of occupation arrangements evident within even the six settlements in question, with informality noted to persist elsewhere in each city (McEvoy, Mitchell and Trundle 2020). Nonetheless, the capacity to establish either informal extended family clusters within formal allotments or to expand upon existing informal housing footprints in unleased areas was found to generate both critical forms of local resilience, and to enable a greater level of mobility to and from each city in support of responses to external and localised shock and stress effects. The sharing of informal urban services (such as potable water sources, sanitation and washing facilities)

across households showed potential for scaling up and extending government and development led interventions to enhance security. However, this would require informal governance structures to be better integrated with these formal institutions.

The lack of understanding of these endogenous sources of climate resilience presented a critical security risk. The continuing pressure of urban expansion on peri-urban areas was observed to be a major 'non-climate' pressure that was impacting the food security and household income and productivity of many informal inhabitants, with some households noting that they had to walk hours to either access arable land or collect water. The lack of formal frameworks for engagement between peri-urban expansion of informal settlements, the government, and customary landowners is also widely recognised as being a critical contributing factor to the Ethnic Tension in Solomon Islands, providing a cautionary historical demonstration of the potential impact of a lack of engagement with these informal structures (Foukona 2015).

There is no 'Pacific B': Climate security without urban adaptation pathways?

Barnett and McMichael set out two key considerations of climate induced migration: the process of cumulative causation; and the diversity of spatial and temporal scales that differentiate mobility from migration (2018). In the case of migration to Pacific cities, informal settlements play a critical integration role that would otherwise be inhibited by the formal constructs of cities. Through analysis of these characteristics and functional arrangements, lessons can be learnt to enable future adaptation pathways as the impacts of climate change accelerate across the region.

The capacity for informal settlements to respond to cumulative pressures is enhanced by wantok networks, which enable ongoing rural–urban linkages. As one respondent explained of one of the earliest such settlements in Honiara:

The first person to settle here is a fisherman … in the beginning there were only men who came to settle here. As time goes on, the fisherman go back home, they get married, then they bring their spouse here to live. [More] people migrate into Honiara …to farm, some came to school, some to live with those who already live here. So the village has grown from there, and expanded (OJHH1).

Equally, maintaining island ties enables movement back to home islands in response to crises within the urban domain – a process that is intertwined with circular patterns of movement that maintain and facilitate these inter-island kinship systems.

More complicated, however, are questions relating to the scale and irreversible nature of population shifts necessitated by the impacts of climate change. This is particularly the case as related to slow-onset stresses such as sea-level rise, ocean acidification, saline ingress and shifts to growing seasons for crops and livelihood products. While the Pacific is often cited in reference to its vulnerability to climate

change impacts, its diversity of geographies, livelihood arrangements, and even localised climatological and geological impacts means that the climate 'signal' is often unclear.

Although many interviewed households identified searching for employment as the primary reason for migrating to the city a more detailed interrogation uncovered critical secondary pull factors instigated by state policies. More than half of the households (33 of 57), identified needing to pay school fees as the underlying rationale for their shift into the city in search of employment. Respondents also noted that once school payments were no longer required they intended to return to the islands. As one representative from the community of Blacksands, Port Vila explained:

> *Bai mi stap* here, *Twofela* boy *blo* me secondary [school], so *mi stap lo completem* school. Suppose *mi* go back to Tanna, *mi* work where? So *mi* must *stap* here so many years, until they *completem* school, then *mi* go back' (BSHH6).

A further five households had migrated to the city for study directly.

Climate-related drivers of urban in-migration were less uniformly evident across the case study communities. However, in Honiara's, Ontong Java Settlement, there was a clear demonstration of climate-induced migration with the community's home island Ontong Java Atoll experiencing severe coastal erosion, incremental sea level rise, and saline ingress into water supplies. Even in this instance, climate-induced migration was noted to be intertwined with other factors. As one community leader explained during workshop consultations:

> with migration … people are experiencing problems with food security, because the gardens are being affected by sea water encroaching into the freshwater lens. [So] people come over seeking medical attention amongst other things and don't go back (Ontong Java Settlement Workshop Respondent, November 2019).

Limits to these endogenous, community-based forms of resilience highlighted a need for government, donor and/or civil society partnership and support. While circular patterns of migration enable urban adaptation pathways, this heightened mobility can also obscure adaptation planning which needs to be led by government and other actors. In the case of Ontong Java atoll, this was already happening, with one interview respondent noting that 'land where we can resettle *lo* Malaita [island], government and the church are looking for, working for *mifala relocatem* (OJHH2).

Conclusion

The sociocultural resilience of Pacific Island communities, often classified as one of the world's most climate and natural disaster exposed regions, has long been lauded as one of its greatest strengths. Limits to mobility across and within the Sea of Islands are increasingly becoming evident as the onset of climate-related shocks and stresses forces communities and ecosystems to relocate and adapt. By focusing on the community attributes that underpin this

resilience rather than simply individuals or households, policymakers can better understand how to support the 'positive' translocation of these sociocultural attributes into new settings.

Informal settlements in the Pacific have been both understudied and broadly left to emerge without formal government or civil intervention, and as such have endogenously adapted traditional governance structures and customs with relatively high levels of tenure security in many Pacific Island Countries. These Pacific 'urban villages', while lacking in government services and infrastructure, contain attributes that would benefit from support from within urban systems, and from being more widely encouraged within the formal domain. In doing so, a greater breadth of urban adaptation pathways can be both identified and established, enhancing the security of both the community and the state in the face of the impacts of climate change.

Notes

1 Melbourne Sustainable Society Institute/Connected Cities Lab.

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