

# PACIFIC CLIMATE MOBILITY COUNTRY REPORT SUMMARY - TONGA



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

## PURPOSE

The purpose of this summary report is to highlight the key climate mobility insights from the research run in Tonga, and with input from the Tongan population overseas. Around 450 participants were engaged via survey, talanoa and future scenario activities, with representation from all key island groups in Tonga. Research participants ranged from senior leaders in government, nobles, business and church leaders through to youth, fisher people and farmers. Key insights here are paired with high-level policy implications/opportunities. Given the richness of the findings from this project, the reader is invited to explore these high-level findings in more detail through the range of research 'products' (reports) available at <https://www.waikato.ac.nz/research/research-enterprise/research-at-waikato/pacific-climate-change-mobility-research-tonga-and-samoa/>. This research was funded by the Ministry of Foreign Affairs and Trade through New Zealand International Development Programme climate finance. The views expressed are the contributing authors' alone and not necessarily the views of the New Zealand government.

## INSIGHT

**INSIGHT 1** - Tonga faces increasing climate hazard exposure, though limited mapping offers only a partial picture of climate stress

**INSIGHT 2** - Climate related mobility is already happening in Tonga and could be the reason for ~40% of internal mobility in the next five years

**INSIGHT 3** - Those facing relatively higher climate stress may not be the ones to mobilise first, and may be the ones more likely to experience involuntary immobility

## INSIGHT DETAIL

Sea level may rise in Tonga by ~30cm by 2050 (CSIRO and SPREP, 2021). Less conservative estimates suggest that projections of one, even two metres should be considered when planning for time horizons of more than 30 years (ADB, 2021). There is a limited geographic area of Tonga - greater Nuku'alofa and Lifuka, Ha'apai - that has been mapped so far for sea water inundation/flood modelling. Of the areas mapped, Popua and Tukutonga areas are projected to be partially or majority inundated at 0.5m sea level rise, and at 1m sea level rise, large aspects of Ma'ufanga, Kolofo'ou and Kolomotu'a are inundated. Scenarios of 0.5m sea level rise paired with storm conditions suggest up to 42% of the population of Tongatapu – or 31,169 people - would be exposed to at least 0.2m of flooding (ADB, 2021). Tonga may also see stronger tropical cyclones, with damage contributing significantly to future displacement (IDMC, 2021).

Rough estimates suggest that ~1,600 people annually have recently undertaken climate-related mobility (from sudden and slow onset hazards).<sup>2</sup> Looking to the next five years, this number could increase to ~3,650 annually.<sup>3</sup> In survey, 'Escaping the impacts of climate change' was the most common reason for planned mobility.<sup>4</sup> The most common direction of planned climate mobility was from low-lying urban areas to rural, coastal to inland<sup>5</sup> and low-lying to higher areas.<sup>6</sup>

Those in areas under relatively higher climate stress (based on exposure to sea water/coastal flooding) may not be the ones undertaking mobility, at least initially.<sup>7</sup> The research found that those reporting current efforts or plans to undertake climate-related mobility were not in areas identified as facing higher relative risk, first, rather were living in e.g., low lying urban areas and had access to resources or networks that supported mobility efforts. Further, populations identified as being more exposed to sea water flooding while also having high vulnerability appeared to be the groups more likely to face involuntary immobility (reporting a lack of resources, alternate land, housing or other income options).

## POLICY IMPLICATIONS

1. Better awareness raising is needed of the risks of climate related impacts, including improving the translation of scientific language for the 'average Tongan', shifting from a focus on risks to impacts, and improving specificity (e.g., specific impacts, timing for who/where).
2. Current studies show some villages and populations may be under sea level related climate stress before others. This existing information needs to be interpreted for a wider audience, and more widely shared to support family/community decision-making.
3. Sea level inundation maps for a wider area of Tonga are reportedly being developed.<sup>1</sup> Once done, they need to be interpreted, shared with key stakeholders to support decision-making.

1. Explore options to systematise data capture of climate related mobility.
2. The research suggested that those living in relatively low-lying urban areas are planning climate mobility. Targeted and scale engagement is needed to further understand how climate stress translates to mobility planning, for whom.

1. Consider more consistent capture of data on internal mobility to track patterns, scale, decision-drivers and enablers to improve responsiveness and planning.
2. Consider the approach to assessing climate vulnerability and the application of this assessment for drawing conclusions around climate mobility (or involuntary immobility). Some current vulnerability assessments factor in gender, house ownership, employment for example but should (also) consider relevant context – such as access to alternative land, family care obligations etc.<sup>8</sup>

1. As part of PARTner-2 (NIWA, SPC) 2. Factors in survey results of reported climate related mobility however there were demonstrated misunderstandings of climate change (e.g., some believed climate change increases tsunami frequency). 3. IDMC (2021) and survey numbers i.e., 4% of total survey participants reported moving recently to 'escape the impacts of climate change', and 7% had plans to move due to climate impacts in the coming five years. 4. See research product 'Mobility Willing and the Steadfast Stayers (Survey One) 5. Those reporting plans to move urban to rural due to the impacts of climate change were residing in Ha'ateiho, Kolomotu'a (multiple), Tofoa (multiple), and Hala'ovave (Kolomotu'a). 6. This included those living in Houma (Nukunuku), Ha'ateiho, 'Anana and Halaleva (Kolofo'ou). 7. Mobility is often less a function of immediate stress resulting from the onset of a natural disaster than a proactive diversification strategy taken in anticipation of future events, or to cope with long-term declines in livelihood (Bardsley and Hugo, 2010) 8. Proposed criteria (Tonga Housing Recovery and Resilience Policy, 2020) includes women-led households as a vulnerability factor.

## INSIGHT

**INSIGHT 4** - Plans for climate mobility within Tonga appears to be linked to plans to also move overseas

**INSIGHT 5** - People undertaking climate mobility tend to move as a household, are hosted by family, and can experience levels of dispersal

**INSIGHT 6** - Food insecurity is a concern now, and was highlighted as a specific driver of current climate mobility

**INSIGHT 7** - Land availability for housing and food growing appears to contribute materially to involuntary climate immobility in Tonga, and may become an increasing issue

## INSIGHT DETAIL

Many who reported plans for climate mobility or who were already in the process of mobility reported working towards long-term internal relocation while also planning a short- to medium-term (10-15 year) relocation overseas to fund the internal relocation.<sup>1</sup> Assuming there is a connection between plans to move internally due to climate impacts and plans to (also) move overseas in the coming five years, one could extrapolate this proportion out to suggest up to 5,000 people could be planning climate driven overseas mobility in the next five years. One head of household undertaking mobility reported that having access to resources to build in an elevated area would keep their family in Tonga.

In recent climate and environmental mobility, people were moving as a household. On relocating (or following displacement) internally, families were reportedly dispersing members across multiple households, with household members also moving out to accommodate those moving in. Some who relocated following the Hunga Tonga-Hunga Ha'apai eruption opted to stay in a church hall rather than with family to reduce the burden on family or due to overcrowding in family homes.

Food insecurity is an issue in Tonga, with many reporting practical challenges with planting, growing, and harvesting food due to less predictable seasons. Issues included missing entire crop plantings, unsuccessful crops, lower crop yields, and smaller sized root crops. Issues with growing food was also identified as a driver of current climate related mobility. One head of household living in an urban area of Tongatapu reported having invested in the lease of land in an elevated area to grow food to feed his family as a tactic to delay (though not prevent) climate mobility.

Several people in climate stressed areas (e.g., Patangata) reported that they are experiencing major climate impacts already (e.g., regular flooding of their homes) though they will not move due to a lack of resources and/or access to alternate land. In Ha'apai, communities exposed to sea water flooding and land loss from erosion have not been told to move due to a lack of land for relocation.<sup>2</sup> Some reported proactive efforts related to land, with some having built a home on their tax allotment as an option for relocation.<sup>3</sup> Some senior government leaders suggested there is little appetite to free up diaspora-held land in Tonga though some diaspora engaged in the research said they would be happy to make their land available to others in Tonga for relocation should they need it. Some expressed concerns around land availability, now and in the future, including instances of non-ethnic Tongans leasing food growing land for long periods of time, to grow food to export. Further, contention around land was assumed to be a central cause of future conflict (including between land holders and 'settlers'). Many times, one particular area in Tongatapu - Mata ki 'Eua - was identified as the target destination for internal relocation.

## POLICY IMPLICATIONS

1. Further engage those planning or who have undertaken climate mobility to sharpen understandings of connections between internal and overseas climate mobility.
2. Explore ways to capture new data (e.g., emigration data) to sharpen understandings of climate related overseas mobility.
3. Test options to increase choice for those planning concomitant internal and overseas mobility, including financial and non-financial support options.

1. Future policy should recognise that families or households will likely mobilise together and should consider support or services for receiving families to meet additional costs.
2. Consider community-level accommodation support measures that integrate other services e.g., connection to income opportunities, and explore partnership options with churches (see insight 12).

1. Explore practical, contextual and timely approaches to reducing the impacts of food insecurity at a household level, testing these options with those affected by food insecurity.
2. Pilot and identify options to scale this support to improve choice around climate mobility.

1. Review land tenure systems in the context of likely increasing climate mobility, including opportunities for flexibility to accommodate those impacted first or most severely by progressive climate change.
2. Consider increasing transparency around land flexibility options for relocation or food growing to support household planning and decision-making.
3. Further explore innovative approaches to freeing up land for relocation or re-allocation to those most impacted by climate change (e.g., land swaps per Ha'apai) and opportunities to scale these approaches.
4. Consider further diaspora engagement to explore the degree of openness to making land available for the purposes of (national, island-level or community-level) relocation planning.
5. With so many identifying the small area of Mata ki 'Eua in Tongatapu as a target destination for relocation, planning should be considered for the management of this land in a climate change context.

1. Noted in a series of one-on-one talanoa, as well as in survey results where 15 people reported these dual plans, though sample size limitations are acknowledged. 2. As reported by the Governor of Ha'apai, Dr Pita Taufatofua. 3. Approximately half of households in Tongatapu do not own a tax allotment (2021 Household Income and Expenditure Survey, Pacific Community (SPC) and Tonga Statistics Department, 2023).

## INSIGHT

**INSIGHT 8** - Women may be facing higher relative barriers to mobility, with most who presented with an apparent high desire to move - but no plans to move - being women

**INSIGHT 9** -Tongans appear less inclined to move overall, and when moving, appear to favour both impermanent mobility and overseas mobility due to land, social and emotional barriers

**INSIGHT 10** - New Zealand was the most common overseas destination of choice and Australia a more distant second for those in Tonga

**INSIGHT 11** - The role of the Royal Estate is a critical element in considering climate mobility decision making and outcomes

## INSIGHT DETAIL

Women have unique roles in Tongan society, including as wealth creators/holders of family koloa (e.g., woven mats, ngatu), and are highly socially connected. Many shared that fears of acceptance in new places or challenges to their social status created real barriers for mobility. In a group<sup>1</sup> indicating the strongest desire to be mobile 'now' - internally and overseas, but with no concrete plans to move, most were women. Women expressed a lack of options, particularly based on their limited land holding rights, or due to care obligations. Others expressed practical concerns about moving with their koloa.

Many shared that if they were to move overseas it would be for a short period (a few months to a year), saying they prefer to live on their own land for 'free' and emphasised the importance of living with that sense of freedom. Beyond land availability within Tonga, a range of reasons for remaining in place were volunteered, including changes in social status in the community and church, challenges to one's self-identity, beliefs about one's capacity to earn an income in a different context (e.g., fisher people not wanting to have to work as farmers) and having a strong sense of obligation to family and to the land itself (e.g., to remain to honour and care for it). In general, people in Tonga appeared less inclined to be mobile compared to people in Samoa, and when considering mobility, seemed to favour overseas mobility over internal.

In survey, about three-quarters of those in Tonga planning overseas mobility in the coming five years noted Aotearoa New Zealand as their planned destination, and just 13% noted Australia. The overwhelming reason for choosing their destination was that 'family are there' (46%). The next most common reason was for 'good work opportunities' (19%).

Following the Hunga Tonga-Hunga Ha'apai eruption, the communities of Mango and 'Atataa (who were residing on Royal Estate land) were relocated to newly established villages on different islands. Some noted that the experiences of these two communities<sup>3</sup> differed over time, as did rules set around e.g., re-access to their original land.<sup>4</sup> Some highlighted that in contrast, those in a similar geographic area on government land were not required to relocate.<sup>5</sup> 18 months after relocation, those in Mango and 'Atataa reported ongoing concerns, including around the cost of services, access to housing or land,<sup>6</sup> income continuity and self-identity.<sup>7</sup> Receiving communities voiced issues around perceived delays in the relocated community's social and economic integration.

## POLICY IMPLICATIONS

1. Consider review of land tenure policy in the context of future climate mobility, including risks of differential vulnerabilities.
2. Further sharpen understandings of contextual barriers that women uniquely face, and test options to improve (or at least ensure equal) choice in future climate mobility scenarios (e.g. review of land holding rights or the safe storage of koloa) recognising that an increasing number of households are now women-led.

1. Policy should recognise the social, financial and emotional barriers that Tongan people face to internal mobility in particular, that this may impact (proactive) practical planning and decision making for future mobility, and, may also drive higher rates of overseas versus internal mobility in future.

1. Aotearoa New Zealand in particular should consider the implications of these destination preferences, particularly under scenarios of high climate mobility. Māori should be engaged early in any discussions, decision making and planning.<sup>2</sup>

1. Consider a standardised, contextually-sound assessment for decision making on relocation in future. An assessment may factor in ongoing risk (of staying) balanced with the risks of relocation, including economic, social, psychological and spiritual impacts (potentially over time/generations).
2. Consider embedding monitoring and evaluation following relocation to assess outcomes, respond to changing needs and capture lessons for future environmental/ climate mobility decision making.

1. Note sample size of this group was relatively small (<20). While recognising the limitations of sample size, and though not necessarily related to climate drivers, one could assume that those facing mobility barriers generally may also face climate mobility barriers in future. 2. See research product 'Six Kōrero'. 3. Including reports of access to food, food growing land, equipment and other supports 4. Those in Mango reported the King had forbidden their return to Mango island though they were encouraged to return to fish in the surrounding waters 5. Nomuka island was provided as an example 6. For some from 'Atataa who were at the time still awaiting decisions on housing allocation and access to plantation land in their new village 7. Issues around self-identity appeared to be creating push-back on the expectations of the receiving community to take up local economic activities over their typical work (e.g., resisting working in the plantation).

## INSIGHT

**INSIGHT 12** - Overseas family do, and will, play a critical role in climate mobility, funding adaptation, influencing decisions, enabling mobility itself as well as successful integration. Churches also play a crucial role

**INSIGHT 13** - A lack of income continuity following environmental mobility creates many damaging knock-on effects

**INSIGHT 14** - Negative emotional/psychological impacts were a priority issue for those relocating internally (inter-island) and overseas and some report ongoing tensions between incumbents and 'settlers'

**INSIGHT 15** - Cultural 'dilution' and a loss of cultural diversity is a risk in a range of future mobility scenarios

## INSIGHT DETAIL

Families overseas contribute specifically to climate adaptation in Tonga, both at a family level<sup>1</sup> (29%) and at a village or island level (24%). Over 40% of diaspora surveyed reported participating in mobility decisions for family in Tonga and also report hosting family from Tonga at high rates (75% have hosted family moving from Tonga). Participants reported that those in Tonga without close family overseas will have limited to no overseas mobility options in a future of greater climate stress.<sup>2</sup> Overseas family (diaspora) consistently reported an acceptance of future role/s in supporting family undergoing climate mobility.<sup>3</sup> 2/3 reported they want more proactive contact from the Tongan government and believe there is a need to better coordinate efforts for better future mobility outcomes. Many reported that churches play critical practical, emotional/spiritual, social roles during and after mobility.<sup>4</sup>

Access to income/income continuity was reported as the greatest challenge following recent environmental mobility. Relocating to areas with a different subsistence culture (e.g., farming not fishing) or where they no longer had access to materials to weave (e.g., pandanus plants) had created many issues in terms of self-reliance, self-worth, self-identity, and had impacted successful integration. Many focused on their incapacity to provide for their children's schooling. Tongan diaspora also reported income access was their top concern following overseas relocation.

Community leaders in relocated communities shared that many struggle with integrating into their new locations due to issues around self-identity (e.g., sub-cultural, skill-based factors). Other leaders in Tonga and many diaspora highlighted concerns around the emotional/social/psychological impacts of mobility, including social disorientation (manifesting in e.g., people wandering aimlessly in the streets) and drug and alcohol abuse. Interestingly, some people reported a cluster of family deaths following relocation due to 'missing' their old island.<sup>5</sup>

Future assumptions of impacts included cultural 'dilution' and cultural diversity loss from greater scales of inter-island mobility/relocations and disconnection from land. People assumed this dilution would be furthered by the dispersion of family members across different family households on relocation/displacement. Concerns were related to the loss of values, knowledge and language systems specific to populations and geographic areas. People also reflected on the social tensions arising from the coming together of different Tongan sub-cultures (e.g., those from the Ha'apai island group and 'Eua) and how expectations around integration need to be (better) managed.

## POLICY IMPLICATIONS

1. In line with efforts by the Samoan government, explore opportunities to engage and celebrate the large Tongan diaspora, and to build a strong and coordinated support network. This network could ensure valuable two-way communication between the diaspora and the government. It could also be leveraged to support resilience and climate adaptation efforts, as well as to sound out options to improve climate (im) mobility outcomes, internally and overseas.
2. Explore partnership and support options for churches who are highly influential and have response, recovery and integration support roles for those impacted by mobility.

1. In policy planning for climate mobility, consider prioritising short and longer term income continuity support for those relocated.
2. Target skill expansion and experience building for those facing high climate stress to improve future mobility options and outcomes.
3. For relocation planning, consider the environmental and income-generating 'match' where possible, particularly where populations are living subsistence lifestyles.

1. Consider capturing longitudinal data on emotional, spiritual, cultural, economic and social impacts of mobility and what support, when, and for whom has greatest impact.
2. Pilot contextually appropriate interventions (at an individual, family, community level) and build successful interventions into future climate mobility planning.

1. Consider education programmes for current and likely future receiving communities (e.g., those on 'Eua, Vava'u, or in elevated areas of Tongatapu) on the challenges faced by those relocating following environmental or climate impacts, approaches to supporting those relocating, and manage expectations around the level and speed of 'integration' possible.
2. Scale up existing initiatives with promise, such as project or goal-focused groups.<sup>6</sup>
3. Consider ways to reduce barriers for cultural continuity for those who have relocated (e.g., access to raw materials for weaving).

1. Most commonly support went to raising homes - see research product The Mobility Willing and the Steadfast Stayers (Survey One). 2. Identified by those in the future scenarios exercise, given the direct reliance on family to cover travel costs and/or support e.g., living costs, integration on relocation. 3. Assumed roles incl. financially supporting mobility, hosting family, connecting family with services, education and work, lobbying governments, mentally and emotionally preparing family for mobility etc. 4. Churches and church leaders supported decision making and provided spiritual support during sudden mobility events (see 'Atataa case study), as well as short and long term accommodation, food supplies. Diaspora overseas reported a critical role of churches in integration support as well as maintaining social cohesion (e.g., reducing conflict, alcohol and drug abuse) and providing direction for those living and working overseas 5. See 'Atataa case study. 6. Per efforts in 'Eua to have relocated communities and host communities working together on projects, run by Member of Parliament, Taniela Fusimalohi.