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Introduction

Migration motivated by anthropogenic climate change is expected to affect a significant population of individuals in the near-to-immediate future. As a direct consequence of climate change and the subsequent migration that it triggers, migrant languages face an existential threat. This chapter examines the flow-on effect of climate change to Pacific languages, and how this leads to an increased demand for language resources for migrant languages. This will be highlighted by observing the case study of Tokelau, an island state which is expected to be among the first to suffer the consequences of climate change, and where migration has already resulted in more Tokelauan speakers being located in diasporic regions than in the islands themselves. The first section of the chapter investigates climate-change-induced migration in the Pacific. The second section introduces Tokelau as our case example and discusses, firstly, the Tokelau language, and, secondly, the effects of climate change. This is followed by a discussion of the Hawaiian and New Zealand Tokelauan diasporic communities. The final section of the case study considers the need for Tokelauan translation.

Climate change and migration

The net environmental effects of anthropogenic climate change include: rising sea levels; increased severity of meteorological events, like storms; increased ocean acidity and salinity, which result in a reduced ability to grow crops and in diminished resources of potable water (leading to food insecurity); encroachment on coastlines (making managed retreat impossible for smaller atolls); destruction of homes and reduced economic mobility. This provides a set of potentially inhospitable conditions such that individuals, and possibly entire communities, may wish to migrate. This is essentially what has come to be known as “climate migration.” In many cases, the destination location is one where the migrant language is not natively (or commonly) spoken. Immediate or long-term pressures on this migrant population can then result in language endangerment.

Climate migration is a multiplex concept. The extent to which climate change will have an effect on migration patterns in the near future is debated (Mortreux and Barnett 2009),

and how climate change factors into the complex set of choices that individuals/groups make when deciding to migrate is still an under-researched area. For instance, what exactly counts as climate migration, as opposed to migration relating to other reasons, is not always clear. In some cases, it has been claimed that people's decision-making is not driven by considerations of climate at all, despite the widely held conception that it is. However, there exists plenty of evidence to suggest that the effects of climate change factor into this decision-making. In interviews with 36 people who migrated to New Zealand from Tuvalu and Kiribati, Yates et al. (2022) established that all migrants were influenced by climate change, in a small way or a large way, in their emigration decision-making. In addition, climate change is predicted to disproportionately affect many Pacific Island nations due to their geographical isolation and their fragile landmass structures (Cheung, Watson and Pauly 2013; Valmonte-Santos et al. 2016).

Thus, climate-induced migration is a reality, it is currently affecting some Pacific Island nations and there are migrant populations from those nations already living in other regions. We explore these issues by turning now to the concrete example of Tokelau, and how Tokelauans (and the Tokelauan language) are being affected by migration.

Tokelau

In the Pacific, we find that atolls are under threat of anthropogenic climate change, as rising sea levels result in increased flooding of these regions (Storlazzi et al. 2018), rendering small land masses uninhabitable; fishing, water salinity and local economies are affected. In this context we examine the case of Tokelau.

Tokelau is made up of three atolls: Nukunonu, Fakaofu and Atafu. There is a total population of around 1500 people on these atolls (Willans and Jukes 2017). The total land mass is 12 km², although not all the land mass is inhabited. Tokelau has the smallest land area and smallest population of any territory or country in the South Pacific (Barnett 2010; Chand, Grafton and Peterson 2003; Charlton et al. 2016; Statistics New Zealand 2016). It is one of only four Pacific territories which are made up entirely of atolls (Adger et al. 2011). The atolls include 127 small islets, with sizes varying from 90 m to 6 km long, and from a few metres up to 200 m wide (McLean and d'Aubert 1993). The islets are all on the reef rim and are made up of sand and gravel which form the reef. This means Tokelau has a low elevation and poor soil quality. No portion of the atolls is more than 5 m above sea level (Lefale, Faiva and Anderson 2017). Tokelau is incredibly isolated geographically. It lies 480 km north of Western Samoa, 880 km east of Tuvalu and 500 km south of the Phoenix Islands (Kiribati) (McLean and d'Aubert 1993). The three atolls themselves are relatively spread out: Fakaofu is 64 km from Nukunonu, which is 92 km away from Atafu.

Politically, Tokelau is a non-self-governing territory of New Zealand, and New Zealand supports the Tokelau economy financially (Carpenter 2015). Tokelau became part of New Zealand in 1949, giving all islanders the right to New Zealand citizenship (Ellsmoor 2016). In 1983, Tokelau became a realm state, and by 1996, Tokelau was given full national law-making power (although the New Zealand government could still overrule its decisions), which gave Tokelauans licence to self-govern, while still being associated with New Zealand. However, there is still a desire in the atolls for increased self-governance (Carpenter 2015).

With this geopolitical context in mind, we turn next to facts about, and the social dynamics around, the Tokelau language.

The Tokelauan language

Tokelauan is an Austronesian language natively spoken in Tokelau. The language is part of the Samoic subgroup of the Polynesian branch of Austronesian. It is closely related to both Samoan and Tuvaluan. The total number of Tokelauan speakers is estimated to be 4000, with 1400 living in the atolls (Gordon 2005). The Tokelau language is the predominant means of communication in the atolls, with 94 per cent of the population using it as their first language (Statistics New Zealand 2012). Tokelauan is also employed as the language of education (alongside English).

The Tokelau language has shown signs of endangerment ever since the first colonial habitation of the atolls (Hoëm 2010). From the 1860s, missionaries introduced Samoan as the language of literacy, meaning Tokelauan was considered only a spoken language. In mission compounds when Samoan was being taught, students were punished for speaking Tokelauan (Huntsman 1980). From 1863, Samoan was used in the domains of literacy, Protestant churches and official communications. The church languages were Latin (for the Catholics) and Samoan (for Protestants), which reduced the number of domains in which Tokelauan was spoken. Official rejection of the Tokelauan language had another significant impact in terms of attitudes towards the Tokelau language, which was stigmatised to some extent, with many believing the language to be impoverished (Hoëm 1995), an idea which is patently false. Finally, English has superseded Samoan as a language of official communications in more recent years. An administrative report from the New Zealand Department of Island Territories from 1948 states: “the old Tokelauan language is gradually dying out, and most people under fifty are unreliable informants in relation to research on the Tokelauan language itself” (New Zealand Department of Island Territories 1948: 10). Hoëm (2010) suggests this is not entirely realistic – most Tokelauans under 50 would have considered themselves too young to be experts in Tokelauan culture or language in any era. The reason for this type of self-report is cultural. Therefore, it is likely that this was an exaggeration of the state of the language at the time, due to a lack of understanding of the social distribution of knowledge in Tokelau culture.

The use of Tokelauan in various domains has changed since the first European contact took place. In schools, the policy of discouragement of Tokelauan (and of promoting English instead) ceased in the 1980s. Latin was discontinued as the church language in Nukunonu and Fakaofu in the early 1960s, with Tokelauan finally making its way into the religious domain (Hoëm 2010). Samoan was phased out of Protestant churches in the 1980s when the first Tokelauan mass book was produced (Hoëm 2010). Currently, Tokelauan is used in many different media and domains: on the internet, in schools, in churches and in daily life.

Climate change in Tokelau

Lal and Fortune (2000: 43) succinctly characterise the situation: “The survival of some island states – including Kiribati, Tuvalu and Tokelau – and the economic, social and cultural viability of many others, is seen to be threatened by global ‘greenhouse gas’ emissions and other human influences on the global climate.” Pacific Island countries and territories are the regions that are most vulnerable to climate-change effects (Cheung et al. 2013; Valmonte-Santos et al. 2016). In the case of Tokelau, the threat that climate change poses has been known for decades. In 1990, Pernetta (1990) developed an index for climate vulnerability of Pacific nations based on island type, insularity, relative relief, maximum

altitude and number of islands. Tokelau was placed in the most vulnerable group (alongside the Marshall Islands, Tuvalu and Kiribati) and was considered the most vulnerable even within this group. Awareness of the danger of climate change to Tokelau was even publicised in the media; the extract below is from the *Sydney Morning Herald* over 30 years ago:

The tiny island-nation of Tokelau is facing extinction. Its unique people, who for generations have lived on a mere 12 square kilometres of land in the middle of the South Pacific, have been told that within decades their homeland could be rendered uninhabitable by the greenhouse effect. (*Sydney Morning Herald*, 7 December 1991, as quoted in McLean and d'Aubert 1993)

Thus, climate change threats to Tokelau are not exclusively a thing of the future, with Tokelau already experiencing climate-change-related problems (Oxfam 2009). The direct, concrete consequences have been rises in temperature and sea level. There has been a trend towards warming in the South Pacific, just as in the rest of the world. Since 1910, the South Pacific has heated up – by between 0.6°C and 1.0°C in the region south-west of the South Pacific Convergence Zone. In the north-east of the South Pacific Convergence Zone, areas have heated up rapidly, between 0.3°C and 0.5°C per decade since 1970 (Salinger, Renwick and Mullan 2001). The South Pacific is expected to heat up by 1–3°C by 2100. Sea levels in the South Pacific are predicted to rise by 1–7 mm a year, with an increase of 14–32 cm expected by 2050 (Adger et al. 2011). It is estimated that a 1 m increase in sea level would make Tokelau uninhabitable, with most of the land area becoming submerged (Ellsmoor 2016).

A popular myth about the impacts of climate change is that atolls and islands are only truly uninhabitable when sea-level rise and major storms render them completely inundated by the ocean or washed away. However, impacts such as coastal erosion, degradation of land, increased flooding events and freshwater contamination all have the ability to make a place like Tokelau difficult to live in by destroying infrastructure and usable agricultural land (Barnett 2017; Connell 2016; Storlazzi et al. 2018).

Climate change is expected to increase the number of intense rainfall events in future, while also resulting in fewer wet days, meaning drought periods will increase (Lal, Harasawa and Takahashi 2002). A critical impact of this is on fresh water: Tokelau has shallow freshwater lenses which rely on rainfall (Ellsmoor 2016). Drought periods, as well as pollution of these lenses and the risk of saltwater contamination, endanger the atoll's freshwater supply. This makes the environment increasingly unsuitable for habitation.

Like all atolls at risk of climate change, another significant factor is tropical cyclones or storms, which cause land erosion and damage to infrastructure. Cyclones have devastated Tokelau in the past, notably in 1914, 1925, 1936, 1941, 1957, 1966, 1972 and 1978. Emanuel (1987) claimed that there had been large increases in the intensity of these storms, with relatively small increases in sea surface temperature, a fact anecdotally supported by older Pacific Islanders, who have reported an increase in the intensity of cyclones over their lifetimes (Adger et al. 2011). Sea-level rises and storm surges cause the reduction of physical land mass, meaning that the total area for growing food also reduces (Storlazzi et al. 2018; Storlazzi, Elias and Berkowitz 2015).

Climate change also has a significant impact on the marine environment of Tokelau. Pacific Island countries are some of the most marine-resource-dependent countries

in the world (Bell et al. 2013), with fisheries being a main factor for food security (Bell et al. 2009; Valmonte-Santos et al. 2016; Zeller et al. 2015). Tokelau is no exception, as it has a significantly high dependence on fisheries (Tolosa et al. 1991). In the 1980s, it was estimated that reef and lagoon fish made up 55 per cent of Tokelau's protein sources, and offshore fish made up 20 per cent (Gillett and Tolosa 1988). In fact, almost all of Tokelau's population partakes in fishing (Gillett 2016; Weissbach 2017), making this industry the most important in the country. Sea-level rise and warming, in addition to extreme weather events, will change natural marine ecosystems (Diamond et al. 2012, Storlazzi et al. 2018). A decrease in fish numbers is expected, and damage to fishery infrastructure has been predicted (boats, docks, piers etc.) (Barnett 2010; Storlazzi et al. 2015, 2018). Most significantly, Tokelau relies heavily on reef-based and reef-associated fishing (White et al. 2018), and it is expected that climate effects will bring about a decrease in the total numbers of reef fish (Barnett 2017, Cheng et al. 2017; Cheung et al. 2013).

Tokelauans have been proactive in their fight against climate change. While building extreme infrastructure like sea walls is prohibitively expensive, safe houses have been constructed for storms and tidal surges (Ellsmoor 2016). Tokelau is at the forefront of climate change resistance: the nation has been involved in international climate-change negotiations, at which it argued for goals to be set for the reduction of greenhouse gases. Furthermore, in 2012, Tokelau became the first nation in the world to be 100 per cent reliant on renewable energy through solar energy systems (Ellsmoor 2016, Steiner 2015). Living with climate change, rather than migrating away from the atolls, is a priority for the Tokelauans who live there, and this was laid out in the *Living with Change Implementation Plan* (Lefale, Faiva and Anderson 2017).

Despite these achievements, as a result of the severe impacts of climate change we have outlined, migration due to climate change is a very real possibility in the near-to-extended future. Tuvalu and Kiribati share many of the characteristics of Tokelau, being made up of atolls with very low-lying inhabited areas. These states have already begun to see climate migration; a recent study interviewed 36 people who had migrated to New Zealand from Tuvalu and Kiribati and found that all participants cited climate-change effects as a reason to leave, or a reason not to return (Yates et al. 2022). With Tokelau in a similarly precarious position, the same result can be expected there.

The Tokelauan diaspora

Tokelau presents a unique situation in that more Tokelauans live overseas than in the atolls, with the overseas population estimated to be up to five times greater (Campbell 2014, Ellsmoor 2016). Across the Pacific and the globe, there are many diasporic communities of Tokelauans, which became established from the mid-1960s (Hoëm 2010). The largest include those in Samoa, Hawaii, mainland USA, New Zealand and Australia.

New Zealand began assisted migration from Tokelau under the Tokelau Islands Resettlement Scheme, after the major tropical cyclone that tore through the atolls in 1966 (Hooper and Huntsman 1973; Wessen et al. 1992). Between 1966 and 1973, the atoll populations dropped by 16.5 per cent. In the early 1970s, the emigration rate from the atolls slowed considerably, with their population stabilising at around 1500 (Bertram and Watters 1984). Around this time, the atoll-born New Zealand population stood at around

80 per cent of the atoll population. Tokelau's population has remained relatively stable to this day, with out-migration being offset by normal population increases.

The migration of Tokelauans to other regions has led to the transformation, and often weakening, of cultural forms from the atoll communities (Adger et al. 2011). In these diasporic communities, language proficiency and usage are significantly lower than on the atolls. The following sections examine the language situation in Hawaii and New Zealand.

Tokelauan in Hawaii

Hawaii hosts a significant (≈ 1000 people) diasporic community of Tokelauans (Waldrup and Walworth 2010). Of this community, however, only 8 per cent have retained conversational proficiency in their native language (Glenn 2012). Although the community sizes between Hawaii and Tokelau do not differ substantially (≈ 1000 vs. ≈ 1500 , respectively), the Tokelauan language proficiency ratio differs vastly. This indicates the significant role that a country's dominant language plays. In Tokelau the main language remains Tokelauan, meaning the vitality of the language is more easily maintained (Willans and Jukes 2017).

Tokelauan diasporic communities have largely assimilated into the multicultural, English-dominated host countries. In Hawaii, interracial marriage between Tokelauans and Hawaiians is very common (Otsuka and Wong 2007). Many Tokelau practices have been lost over time, including *Toeaina* (elder council), *fatupaepae* (decision-making person who makes distribution decisions for a wider family group) and *inati* (institutional sharing). Although the clan grouping is currently maintained, Otsuka and Wong (2007) suggest that the Western nuclear-family-based society is eroding these Tokelauan traditional social hierarchies. The erosion of cultural aspects of Tokelauan society occurs concurrently with the reduction of language use.

Active language maintenance in Hawaii started in 2004 (Otsuka and Wong 2007). In July of that year, a visiting youth group from Tokelau performed for the Tokelauan community in Wahiawā, Hawaii. This display of cultural heritage inspired the Tokelauan youth living there to have a greater active interest in preserving their culture and language. Two young parents started Te Lumanaki o Tokelau i Amelika, a Saturday school for teaching Tokelauan to children. Elders who were already concerned about language loss used this platform to share their knowledge with children. Te Lumanaki o Tokelau i Amelika is self-funded through the generosity of private donors and participants, families and teachers (Otsuka and Wong 2007). A parent organisation, Te Taki Tokelau Community Inc., was founded in 2005 to oversee funding opportunities. For example, Te Taki Tokelau Community Inc. gained a grant from the Administration for Native Americans to survey the Tokelau situation in Hawaii in their first year.

Despite these efforts by the community, several obstacles to their language revitalisation efforts remain. Tokelauan is not taught as a school subject in Hawaii, meaning language learning predominantly relies on intergenerational transmission in the family domain (Otsuka and Wong 2007). Furthermore, Tokelauan is not considered the main language in the community; of the roughly 400 responses to Otsuka and Wong's (2007) survey on the language, only 8 per cent felt their language ability was "native-like," with Tokelauan the first language for only 7.2 per cent.

Tokelauan in New Zealand

In 1951, only 10 Tokelauans lived in New Zealand. The first New Zealand-born Tokelauans were recorded in 1956, and the population increased rapidly, reaching nearly 1000 in 1971. By 1975, more Tokelauans lived in New Zealand than in the atolls (Ellsmoor 2016). Today, New Zealand remains home to more Tokelauans than the atolls themselves, with a population of ≈6000. This is facilitated by the formal relationship between the two countries: officially, Tokelau is a non-self-governing territory of New Zealand. This means that one of the privileges enjoyed by Tokelauans is relatively easy access to New Zealand in terms of migration. However, the language is not recognised in any official capacity. There is little policy in terms of Tokelauan language maintenance or protection in New Zealand. Of the ≈6000 Tokelauans in New Zealand, only 2500 speak the language, with many second- and third-generation individuals having lost it or never learnt it. Only 53 per cent of New Zealand-based Tokelauans were able to hold an everyday conversation in Tokelauan in 1996, a figure that had reduced to 44 per cent by 2001 (Statistics New Zealand 2005).

In New Zealand, Tokelauan is spoken primarily in families, especially those with elders living with them. It is the language used for worship in churches, at community cultural events and even in the existing Akoga Kamata Tokelau (early childhood centres). There has been a trend of fewer and fewer Tokelauans speaking their native language in New Zealand, for a variety of reasons. According to the 2018 New Zealand census, most of those who identified as Tokelauans had been born in New Zealand. In addition, most of the young population are of the second generation, and their parents were also born in New Zealand. Related to this fact is the role that education plays in language maintenance. The influence of mainstream education, in which English is the language of instruction, is another factor that contributes to the Tokelauan language being spoken less within the New Zealand community. Furthermore, some community members no longer associate with their families, and have abandoned or forgotten their cultural traditions.

It is important to note that the Tokelau community in New Zealand shares a strong bond with the community in the atolls, not only through the official relationship brought about by the New Zealand administrative powers, but also through family and cultural connections (Bertram and Watters 1984). The majority of language-maintenance work is being conducted by members of the community themselves. Some of these efforts are briefly discussed in the next section.

Translation and language maintenance

The impact of migration on the Tokelauan language is evident in the large proportion of Tokelauans living in other parts of the world. This gives us an insight into the future of the language, which will be threatened if climate migration from the atolls occurs en masse, as it is expected to do. A major factor in language maintenance is the availability of translation services, which we discuss here.

The language is presently classified as a “severely endangered” language by UNESCO (2011). The Tokelau language is an important aspect of identity for the Tokelau people, and it is closely linked to their culture and the values embedded in it. Given that Tokelauan is endangered, there is an increased motivation for the maintenance and preservation of the language. As discussed in Reyhner et al. (1999) – and, in the context of climate migration, in Brown and Middleton (2022) – one strategy for maintaining languages in a

migrant context involves informal support of the language. The introduction of Tokelau Language Week, as well as weeks dedicated to other Pacific languages, were significant initiatives by the New Zealand government to promote the different languages and are a form of informal national support. In addition, there have been some recent language-maintenance initiatives carried out by the Tokelauan communities in New Zealand. There are two Akoga Kamata (early childhood centres), and it is hoped that there will be more such centres in the future to teach the Tokelauan language. There is also a Tokelauan language class offered by the Centre for Pacific Languages in Auckland, with the capability of enrolling students from other parts of New Zealand through online classes. At the beginning of 2023, a milestone was reached when a Tokelau bilingual unit was officially opened at Glenview School in Porirua. This initiative was spearheaded by the community. In addition, the New Zealand Qualifications Authority (NZQA) is currently scoping and trialling the Tokelau language as a subject in which secondary students can earn credits towards their National Certificates of Educational Achievement (NCEA), which are the national standards for secondary students.

However, many of these efforts in New Zealand are hampered by the ongoing need for translation services for the Tokelauan community there. Developing bilingual materials and educational resources requires employing vast numbers of translators to translate Tokelauan into English and vice versa. For the most part, while some efforts have been initiated by the government, particularly in the health sector, these have relied largely on community translation. Community translation allows the non-English-speaking community access to both health and legal services (Taibi and Ozolins 2016), and it has brought the community together in church-related projects. These are briefly outlined here.

Works that have been translated from Tokelauan to English to date include folk tales and oral histories (Hooper 2010; Thomas, Tuia and Huntsman 1990), and translations from English to Tokelauan have included an ambitious project for translating the Bible, but also several government documents (as part of a larger-scale translation effort in New Zealand). Within this context, we explore some issues here – those relating to community translation for purposes of health and legal services, and those relating to the translation of literary texts.

In some of the discussions between health and social services providers, the importance of translation in these dialogues arises. If materials are not being translated into Tokelauan, the community, including elders, will inadvertently be excluded. Tokelauan elders are considered the knowledge-holders of the culture; they are the individuals most well versed in Tokelauan, and they prefer to be communicated with in their own language, so that they can fully understand the message. For the Tokelau communities in New Zealand, translation is the only way in which information can be fully understood by native speakers, particularly if they have low fluency in English. It is important for the Tokelau community to be informed of any issues that concern them. This includes the messaging around COVID-19. During the pandemic, messages were informally passed on through social media in Tokelauan, through an informal initiative that reached out to families, especially elders. For most of these older people, such messages gave them comfort and assured them of the reality of the pandemic, as well as providing them with daily and weekly updates, which included details around lockdowns, vaccinations and other health measures.

Another aspect to be considered is the translation of government documents into Tokelauan. This covers documents translated from English into Tokelauan for Tokelauan

government purposes in the atolls (Angelo and Vulu 2014), and also the dissemination of official information in New Zealand as part of the New Zealand government's efforts to provide translations in many languages, including Pacific languages. In the former case, Angelo and Vulu (2014: 208) note that "Tokelauan translators have been slow to adopt a consistent terminology for the new legal and political ideas, and [...] they have preferred to source the words of translation in the existing language." The issue here is that there has been social resistance to and misunderstanding of some of these ideas due to the words chosen and their current cultural understandings. The same is true of translation into Tokelauan in New Zealand, and the problem is exacerbated by the issues of limited capacity and resourcing. Another issue that Angelo and Vulu report is that there is no established set of words and phrases in official Tokelauan dictionaries and word lists which are used to present the government's new ideas in that language. In addition, there are resourcing issues. "Over the last twenty or so years there has been a small group of native speakers (perhaps a maximum of 10 persons) involved in translating" (Angelo and Vulu 2014: 215). Although these translators are bilingual, usually in English and Tokelauan, with many also familiar with Samoan, for the most part they are not professional translators, nor do they have specialised legal or political science knowledge. They also face difficulties when it comes to the terminology of particular domains (such as the legal domain), and with consistency in using that terminology. These issues impacted the translation of the *Universal Declaration of Human Rights* (Kirifi et al. 1990), which includes legally binding documents, some of which form the basis for the Constitution of Tokelau.

One of the major translation projects within the New Zealand Tokelau community is the translation of the Bible. A translated Bible is a desired resource in the Tokelauan community. This project, which is still in progress, was officially started at Porirua (a suburb of Wellington) in 1995 and its editing process involves Tokelauans both in the homeland and in New Zealand. The Bible is core to the spirituality of the people, and the project's completion is looked forward to with great anticipation, as this will mean Tokelauans will be able to read and understand the Bible in their language. The project itself is driven by Tokelauans, and is another prime example of community translation.

Language maintenance can include the promotion of literature in the language. A prime example comes from Tonga, whose language and community are closely related to those of Tokelau, and where many of the issues are similar. Taumoefolau (2014) highlights the case of the translation of poetry with the intention of making it accessible to an audience of speakers *and* non-speakers. The main difficulties encountered during this process involve the differences in cultural knowledge between Tongan and English audiences (and the question of whether to add background cultural information or to sacrifice poetic content), as well as the problems posed by grammatical differences between Tongan and English. Thus, there are the usual challenges that arise when literary texts are translated from one language to another. The challenges described by Taumoefolau are evident in a collection of songs and stories from Tokelau (Allen et al. 1990), in which the editors discuss the need to balance non-literal translations with linguistic subtlety. This is especially true for songs, where "an English version is favoured which gives the meaning of the song rather than directly translates it" (Allen et al. 1990: 9). In addition, the grammatical differences between Tokelauan and English pose challenges for translation. These differences include (but are not limited to) the existence of dual pronouns in Tokelauan, a lack of pronominal gender distinctions and a difference in how possession is encoded in the language.

The translation and maintenance initiatives outlined in this chapter demonstrate not only the willingness of the community to participate in these types of projects, but also the problems encountered. Thus, it is obvious that the need for translation services for this community, and other Pacific communities, can only be projected to increase. These needs are varied, and the delivery of these services will be a challenge for governments (such as New Zealand's) in the years to come.

Conclusion

That climate change has the capacity to negatively impact the relative health of languages has been demonstrated both here and in recent work by Brown and Middleton (2022). The intermediate factor in this relationship is the migration that will be triggered by climate change, particularly in small states, and particularly those with small communities. Tokelau is a clear example of this, with diasporic communities in Hawaii and New Zealand, among several other locations. This chapter has assessed the language endangerment and revitalisation efforts in these satellite communities. The issue that is of particular salience here is the Tokelauan community's increased need for translation services in the diasporic areas. As the number of speakers of Pacific languages rises in areas such as New Zealand, there will be increased pressure in terms of public services for heritage and migrant languages, with translation being a priority.

Further reading

Canagarajah, S. (2017). *The Routledge Handbook of Migration and Language*. Routledge.

This volume lays out the complexities involved in the intersection between migration and language.

Hale, K., Krauss, M., Watahomigie, L. J., Yamamoto, A. Y., Craig, C., Jeane, L. M. and England, N. C. (1992). "Endangered Languages." *Language*, 68, 1–42.

This is a collection of opinion pieces published on the topic of endangered languages and the linguist's response to the problem that endangerment poses.

Neef, A., and Bengé, L. (2022). "Human Mobility and Climate Change." In K. Sims, N. Banks, S. Engel, P. Hodge, J. Makuwira, N. Nakamura, J. Rigg, A. Salamanca and P. Yeophantong (eds.), *The Routledge Handbook of Global Development*. Routledge.

This chapter outlines the current state of the art in terms of understanding human migration in the face of anthropogenic climate change.

Ministry of Education. (2009). *Gagana Tokelau: The Tokelau Language Guidelines*. Wellington: Learning Media Limited.

This expansive volume outlines the basic structures and use of the Tokelauan language, including guidelines for teaching Tokelauan in schools.

Bibliography

Adger, N., Barnett, J., Chapin III, F.S. and Ellemor, H. (2011). "This Must Be the Place: Underrepresentation of Identity and Meaning in Climate Change Decision-Making." *Global Environmental Politics*, 11, 1–25.

Angelo, T. and Vulu, T. (2014). "Decolonization by Missionaries of Government: The Tokelau Case." In S. Fenton (ed.), *For Better or For Worse: Translation as a Tool for Change in the South Pacific* (pp. 208–240). London: Routledge.

Barnett, J. (2010). "Dangerous Climate Change in the Pacific Islands: Food Production and Food Security." *Regional Environmental Change*, 11, 229–237.

- Barnett, J. (2017). "The Dilemmas of Normalizing Losses from Climate Change: Towards Hope for Pacific Atoll Countries." *Asia Pacific Viewpoint*, 58, 3–13.
- Bell, J.D., Ganachaud, A., Gehrke, P.C., Griffiths, S.P., Hobday, A.J., Hoegh-Guldberg, O., Johnson, J.E., Le Borgne, R., Lehodey, P., Lough, J.M. and Matear, R.J. (2013). "Mixed Responses of Tropical Pacific Fisheries and Aquaculture to Climate Change." *Nature Climate Change*, 3, 591–599.
- Bell, J.D., Kronen, M., Vunisea, A., Nash, W.J., Keeble, G., Demmke, A., Pontifex, S. and Andréfouët, S. (2009). "Planning the Use of Fish for Food Security in the Pacific." *Marine Policy*, 33, 64–76.
- Bertram, I.G., and Watters, R.F. (1984). "New Zealand and Its Small Island Neighbours: A Review of New Zealand Policy toward the Cook Islands, Niue, Tokelau, Kiribati and Tuvalu." Unpublished report. Wellington: Institute of Policy Studies.
- Brown, J., and Middleton, J. (2022). "Climate Change, Migration, and Language Endangerment in the Pacific." In G.W. Muschert, K.M. Budd, H. Dillaway, D.C. Lane, M. Nair and J.A. Smith (eds.), *Global Agenda for Social Change 2* (pp. 88–95). Bristol: Bristol University Press.
- Campbell, J.R. (2014). "Climate-Change Migration in the Pacific." *The Contemporary Pacific*, 26, 1–28.
- Carpenter, D. (2015). *New Zealand Ministry of Foreign Affairs and Trade/Manatū Aorere A Synthesis Report*. Sydney: Adam Smith International.
- Chand, S., Grafton, R.Q. and Peterson, E. (2003). "Multilateral Governance of Fisheries: Management and Cooperation in the Western and Central Pacific Tuna Fisheries." *Marine Resource Economics*, 18, 329–344.
- Charlton, K.E., Russell, J., Gorman, E., Hanich, Q., Delisle, A., Campbell, B. and Bell, J. (2016). "Fish, Food Security and Health in Pacific Island Countries and Territories: A Systematic Literature Review." *BMC Public Health*, 16, 1–26.
- Cheng, L., Trenberth, K.E., Fasullo, J., Boyer, T., Abraham, J. and Zhu, J. (2017). "Improved Estimates of Ocean Heat Content from 1960 to 2015." *Science Advances*, 3, e1601545.
- Cheung, W.W.L., Watson, R. and Pauly, D. (2013). "Signature of Ocean Warming in Global Fisheries Catch." *Nature*, 497, 365–368.
- Connell, J. (2016). "Last Days in the Carteret Islands? Climate Change, Livelihoods and Migration on Coral Atolls." *Asia Pacific Viewpoint*, 57, 3–15.
- Diamond, H. J., Lorrey, A.M., Knapp, K.R. and Levinson, D.H. (2012). "Development of an Enhanced Tropical Cyclone Tracks Database for the Southwest Pacific from 1840 to 2010." *International Journal of Climatology*, 32, 2240–2250.
- Ellsmoor, J. (2016). "Island Innovation in an Era of Climate Change: Tokelau's Moral Leadership through Renewable Energy." (Honours thesis, University of North Carolina.)
- Emanuel, K.A. (1987). "The Dependence of Hurricane Intensity on Climate." *Nature*, 326, 483–485.
- Gillet, R. (2016). *Fisheries in the Economies of Pacific Island Countries and Territories*. Noumea: SPC.
- Gillett, R. and Toloa, F. (1987). "The Importance of Small-Scale Tuna Fishing: A Tokelau Case Study." In D. J. Doullman (ed.), *Tuna Issues and Perspectives in the Pacific Islands Region* (pp. 177–190). Honolulu: Pacific Islands Development Program.
- Glenn, A. (2012). "Wayfinding in Pacific Linguascapes: Negotiating Tokelau Linguistic Identities in Hawai'i." (Doctoral dissertation, University of Hawai'i.)
- Gordon Jr., R.G. (2005). *Ethnologue: Languages of the World* (15th ed.). Dallas, TX: SIL International.
- Hoëm, I. (1995). *A Way with Words*. Bangkok: White Orchid Press/Oslo: Institute of Comparative Research in Human Culture, Oslo.
- Hoëm, I. (2010). "Language Endangerment: Situations of Loss and Gain." In G. Senft (ed.), *Endangered Austronesian, Papuan and Australian Aboriginal Languages: Essays on Language Documentation, Archiving and Revitalization*. Canberra: Pacific Linguistics.
- Hooper, A. (2010). "Two Tokelau Fishing Texts." *The Journal of the Polynesian Society*, 119 (3), 227–268.
- Hooper, A. and Huntsman, J. (1973). "A Demographic History of the Tokelau Islands." *Journal of the Polynesian Society*, 82, 366–411.
- Huntsman, J. (1980). *Tokelau Tales Told by Manuele Palehau*. Working Paper 58, Department of Anthropology, University of Auckland.
- Kirifi, H., Angelo, A.H., Gordon, R., McKenzie, K. and the Tokelau Law Project. (1990) *Tokelau: Na aia tatau fakataga*. Atafu, Fakaofu, Nukunonu: Malo o Tokelau.

- Lal, P. and Fortune, K. (2000). "Climate Change." In B.V. Lal and K. Fortune (eds.), *The Pacific Islands: An Encyclopaedia*. Honolulu: University of Hawai'i Press.
- Lal, M., Harasawa, H. and Takahashi, K. (2002). "Future Climate Change and Its Impacts Over Small Island States." *Climate Research*, 19, 179–192.
- Lefale, P.F., Faiva, P. and Anderson, C.L. (2017). *Living with Change (LivC): An Integrated National Strategy for Enhancing the Resilience of Tokelau to Climate Change and Related Hazards, 2017–2030 – Implementation Plan*. Wellington: Government of Tokelau and LeA International Consultants, Ltd.
- McLean, R. and d'Aubert, A.M. (1993). "Implications of Climate Change and Sea Level Rise for Tokelau." *South Pacific Regional Environment Programme, SPREP Reports and Studies Series 61*. Apia, Western Samoa: Office of Tokelau Affairs.
- Mortreux, C. and Barnett, J. (2009). "Climate Change, Migration and Adaptation in Funafuti, Tuvalu." *Global Environmental Change*, 19(1), 105–112.
- New Zealand Department of Island Territories. (1948). *Reports on Cook, Niue and Tokelau Islands [Later, Reports on Niue and the Tokelau Islands]*. Wellington: New Zealand Department of Island Territories.
- Otsuka, Y. and Wong, A. (2007). "Fostering the Growth of Budding Community Initiatives: The Role of Linguists in Tokelauan Maintenance in Hawai'i." *Language Documentation & Conservation*, 1(2), 240–256.
- Oxfam. (2009). "The Future Is Here: Climate Change in the Pacific." *Oxfam Briefing Paper*. Carlton, Victoria: Oxfam Australia; Auckland: Oxfam New Zealand.
- Pernetta, J.C. (1990). "Projected Climate Change and Sea Level Rise: A Relative Impact Rating for the Countries of the Pacific Basin." In J. C. Pernetta and P. J. Hughes (eds.), *Implications of Expected Climate Changes in the South Pacific Region: An Overview*. Nairobi: United Nations Environment Programme.
- Reyhner, J., Cantoni, G., St. Clair, R. and Yazzie, E.P. (eds.). (1999). *Revitalizing Indigenous Languages*. Flagstaff, AZ: Northern Arizona University.
- Salinger, J., Renwick, J. and Mullan, A. (2001). "Interdecadal Pacific Oscillation and South Pacific Climate." *International Journal of Climatology*, 21, 1705–1721.
- Statistics New Zealand. (2005). *Tokelauan People in New Zealand*. Wellington: Statistics New Zealand.
- Statistics New Zealand. (2012). *Profile of Tokelau Ata o Tokelau: 2011 Tokelau Census of Population and Dwellings/Tuhiga Igoa a Tokelau 2011 mo te Faitau Aofaki o Tagata ma na Fale*. Wellington: Statistics New Zealand.
- Statistics New Zealand. (2016). *2016 Tokelau Census*. Apia, Western Samoa: Tokelau National Statistics Office.
- Steiner, C.E. (2015). "A Sea of Warriors: Performing an Identity of Resilience and Empowerment in the Face of Climate Change in the Pacific." *The Contemporary Pacific*, 27, 147–180.
- Storlazzi, C.D., Elias, E.P.L. and Berkowitz, P. (2015). "Many Atolls May Be Uninhabitable Within Decades Due to Climate Change." *Scientific Reports*, 5, 1–9.
- Storlazzi, C.D., Gingerich, S.B., Van Dongeren, A.P., Cheriton, O.M., Swarzenski, P.W., Quataert, E., Voss, C.I., Field, D.W., Annamalai, H., Piniak, G.A. and McCall, R. (2018). "Most Atolls Will Be Uninhabitable By the Mid-21st Century Because of Sea-Level Rise Exacerbating Wave-Driven Flooding." *Science Advances*, 4, eaa9741.
- Taibi, M. and Ozolins, U. (2016). *Community Translation*. London: Bloomsbury.
- Taumoeofalau, M. (2014). "The Translation of Queen Salote's Poetry." In S. Fenton (ed.), *For Better or For Worse: Translation as a Tool for Change in the South Pacific*. Manchester: St Jerome Publishing.
- Thomas, A., Tuia, I. and Huntsman, J. (1990). *Songs and Stories of Tokelau: An Introduction to the Cultural Heritage*. Wellington: Victoria University Press.
- Tolosa, F., Gillett, R. and Pelasio, M. (1991). "Traditional Marine Conservation in Tokelau: Can It Be Adapted to Meet Today's Situation?" *Proceedings of the South Pacific Commission 23rd Regional Technical Meeting on Fisheries* (pp. 2–9). Noumea, New Caledonia. 5–9 August 1991.
- UNESCO. (2011). *Atlas of the World's Languages in Danger* (3rd ed.). Paris: UNESCO.

- Valmonte-Santos, R., Rosegrant, M.W. and Dey, M.M. (2016). "Fisheries Sector Under Climate Change in the Coral Triangle Countries of Pacific Islands: Current Status and Policy Issues." *Marine Policy*, 67, 148–155.
- Waldrip, A., and Walworth, M. (2010). "The Fua Le 'o Project: Promoting Self-Publication in Polynesian Languages." *Reversing Language Shift: How to Re-awaken a Language Tradition; Proceedings of the Fourteenth FEL Conference* (pp. 116–124). University of Wales, 13–15 September 2010. Hungerford: Foundation for Endangered Languages.
- Weissbach, U. (2017). "The Solar Nation of Tokelau: An Adventure in Documentary Making." *Pacific Journalism Review*, 23, 55–64.
- Wessen, A., Hooper, A., Huntsman, J., Prior, A. and Salmond, C. (1992). *Migration and Health in a Small Society: The Case of Tokelau*. Oxford: Clarendon.
- White, R., Coghlan, A.R., Coulter, A., Palomares, M.L.D., Pauly, D. and Zeller, D. (2018). "Future of Fishing for a Vulnerable Atoll: Trends in Catch and Catch-per-Unit-Effort in Tokelau's Domestic Marine Fisheries 1950–2016." *Frontiers Marine Science*, 5, article 476.
- Willans, F., and Jukes, A. (2017). "How Far Can the Language Ecology Metaphor Take Us? A Pacific Perspective on Language Vitality (Response to Mufwene)." *Language*, 93, e263–e274.
- Yates, O., Groot, S., Manuela, S. and Neef, A. (2022). "‘There's So Much More to that Sinking Island!’ – Restorying Migration from Kiribati and Tuvalu to Aotearoa New Zealand." *Journal of Community Psychology*, 51, 924–944.
- Zeller, D., Harper, S., Zylich, K. and Pauly, D. (2015). "Synthesis of Under-Reported Small-Scale Fisheries Catch in Pacific-Island Waters." *Waters Coral Reefs*, 34, 25–39.

