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TOKU TIA

Tuvalu and the impacts of climate change

A thesis

submitted in fulfilment

of the requirements for the degree

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by

TAPUGAO FALEFOU



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ABSTRACT

Climate change is the greatest and most profound threat the world is facing today. Its impacts on the environment, species of all kinds, and humanity is intensifying at an unprecedented rate. Low-lying atoll states, such as Tuvalu, because of their geomorphologies, are exposed directly to climate change impacts. Scientific predictions of the rising sea levels and media representations of low-lying atolls becoming uninhabitable and sinking are increasingly causing grave concerns to people living in atoll states.

This thesis endeavours to examine the perceptions of the people of Tuvalu about climate change and sea level rise. Situated within the human geography theoretical framework, this study specifically explores the cultural and emotional geographies of Tuvaluans in relation to these phenomena. Cultural and national identities are the two pillars that embrace the study.

In examining Tuvaluans' perceptions, the study noticed that most people display a profound uncertainty about the future of their cultural heritage and the country's national sovereignty. The emotions and affects of the people about their future are overwhelmingly touching and heartbreaking. As people who highly value coconut in their traditional ways of life, Tuvaluans' perceptions are analogous to what I metaphorically call "coconut roots and coconut fruits". Tuvaluans' conception of sense of place is one that has very strong connections and attachment to their *fenua* or island or land like the coconut roots to the soil. However, Tuvaluans, like other Pacific islanders, are also voyagers and great explorers who have traversed the Pacific oceans for centuries like the "coconut fruits" that can drift in the ocean for long periods and become established once washed ashore. Yet, the encroaching effect of climate change and sea level rise is greatly reshaping the rootedness and/or fluidity of Tuvaluans.

Tuvaluans' perceptions are greatly influenced by their religious beliefs. As citizens of a Christian atoll state, the majority of Tuvaluans firmly believe that the rainbow in Noah's narrative is unequivocal. However, there is a new interpretation growing within the Tuvalu Christian Church leadership that casts doubt on this view and finds the rainbow starting to fade in their perception of climate change and sea level rise. Tuvaluans understand that they need to construct an ark – solution – to save the islands. Unless the world renders genuine support to the implementation of Tuvalu's Climate Change Policy known as *Te Kaniva*, Tuvaluans will not be able to construct the ark and may well be displaced causing their identities to vanish in the passage of time.

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DEDICATIONS

This thesis is dedicated in loving memory of my late parents

Falefou Maloto

&

Kuata Aasa Falefou

Fakafetai lasi mo lua pati polopoloki, akoako kae fakatonutonu ne fakauta ki toku olaga tenei ne mafai i ei o fakafoe toku vaka ke katoa i loto i faiva o akoakoga!

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ACRONYMS

ABM	-	Australian Bureau of Meteorology
AF	-	Adaptation Fund
AODRO	-	Australian Overseas Disaster Response Organisation
AR5	-	Assessment Report 5
ATR	-	Avions de Transport Regional
BBC	-	British Broadcasting Corporation
CIF	-	Consolidated Investment Fund
CMIP	-	Coupled Model Intercomparison Project
CNN	-	Cable News Network
COP	-	Conference of Parties
CSIRO	-	Commonwealth Scientific and Industrial Research Organisation
EEZ	-	Exclusive Economic Zone
EKT	-	Ekalesia Kelisiano Tuvalu
ENSO	-	El Niño Southern Oscillation
FAO	-	Food and Agriculture Organisation
FASS	-	Faculty of Arts and Social Science
FFA	-	Forum Fisheries Agency
FTF	-	Falekaupule Trust Fund
GDP	-	Gross Domestic Product
GEF	-	Global Environmental Fund
GEIC	-	Gilbert and Ellice Islands Colony
GHG	-	Greenhouse Gas
GtC	-	Giga tonnes of carbon
HSQ	-	Household Survey Questionnaire
IANA	-	Internet Assigned Number Authority
IMF	-	International Monetary Fund
IMO	-	International Maritime Organisation
IOM	-	International Organisation for Migration
IPCC	-	Intergovernmental Panel on Climate Change
JICA	-	Japanese International Cooperation Agency
LDC	-	Least Developed Country
LMS	-	London Missionary Society
NAPA	-	National Adaptation Programmes of Action
NCCS	-	National Climate Change Summit
NGO	-	Non-Government Organisation
NSAP	-	National Strategic Action Plan
PAC	-	Pacific Access Category
PaCE-SD	-	Pacific Centre for Environment and Sustainable Development
PEC	-	Pacific Environment Community
PICs	-	Pacific Island Countries
PIF	-	Pacific Islands Forum
PIFS	-	Pacific Islands Forum Secretariat
PNA	-	Parties to the Nauru Agreement
ppm	-	Parts per million
RCP	-	Representative Concentrate Pathways

RSE	-	Regional Seasonal Employment
SOPAC	-	South Pacific Islands Applied Geoscience Commission
SPC	-	Secretariat of the Pacific Community
SPREP	-	Secretariat of the Pacific Regional Environment Programme
SQRV	-	Samoan Quota Resident Visa
SWP	-	Seasonal Work Program
TC	-	Tropical Cyclone
TCCP	-	Tuvalu Climate Change Policy
TLD	-	Top Level Domain
TMTI	-	Tuvalu Maritime Training Institute
TNLMP	-	Tuvalu National Labour Migration Policy
TTF	-	Tuvalu Trust Fund
TWPS	-	Tuvalu Work Permit Scheme
UAE	-	United Arab Emirates
UN	-	United Nations
UNDESA	-	United Nations Department for Economic and Social Affairs
UNFCCC	-	United Nations Framework Convention on Climate Change
UNFPA	-	United Nations Fund for Population and Agriculture
UNGA	-	United Nations General Assembly
US	-	United States
USB	-	Universal Serial Bus
USP	-	University of the South Pacific
WG	-	Working Group
WPHC	-	Western Pacific High Commission

CHAPTER I

WEATHERING CLIMATE CHANGE IN TUVALU

The impacts of global warming on our islands are real, and are already threatening our very survival and existence. The security of our future and that of our children and grandchildren is indeed at stake.

(Rt. Hon. Sir Toaripi Lauti, Tuvalu's first Prime Minister, UNFCCC COP 3, Kyoto, Japan, 1997)

1.1 Introduction

*Toku tia*¹ Tuvalu is facing the greatest threat the world has encountered in the modern age from the impacts of climate change. The Intergovernmental Panel on Climate Change (IPCC) report of 2014 says that ‘the threats of climate change and sea level rise for small islands are very real. Indeed, it has been suggested that the very existence of some atoll nations is threatened by rising sea levels associated with global warming’ (Nurse and others 2014, p.1618). Since it surfaced in the Tuvalu public domain, climate change has become the topic of daily discourse among the people. When natural disasters such as cyclones, droughts, and storm surges strike causing environmental damage such as coconut trees falling and dying, coastal flooding and erosion, Tuvaluans quickly attribute them to climate change and sea level rise. Media and scholarly representations of low-lying atolls such as Tuvalu disappearing within the course of this century due to the rising sea levels, while debatable, touch the soul of Tuvalu as a sovereign state and the heart of the cultural values of the people. Indeed, climate change and sea level rise discourses have shaken the very core of *toku tia* Tuvalu.

Climate change is the result of planet earth's temperature becoming excessively warm due to anthropogenic gases emitted into the atmosphere. In simple terms, the earth's temperature is the effect of the sun's radiation being absorbed and re-emitted by earth, some trapped and re-emitted back to earth by gases in the earth's atmosphere known as greenhouse gases (GHGs). The “greenhouse effect” is a

¹ The phrase *toku tia* is used in the title of the thesis because it carries a culturally powerful meaning. I discuss it in full in Chapter V but by way of introduction it simply means “my place”.

natural phenomenon without which the earth would be much colder and largely uninhabitable (Downie and others 2009). However, the additional GHGs that have been emitted over the past century and half, especially in the past few decades, and which are continuously being emitted, are now enhancing this natural process. Climate change proponents claim that human activities are the primary cause of the change to the natural play of the climate process and system.

All five Assessment Reports of the IPCC on the physical science of climate change have consistently reported that climate change is real. Its latest Assessment Report (AR5) 2013 of Working Group I, IPCC (2013, p.4) clearly says that:

Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

IPCC further reports that as a consequence of the increased warming of the climate system, natural disasters such as cyclones, droughts and wave surge have increased in intensity and frequency in varying degrees across the world. In the Pacific region, the Australian Bureau of Meteorology (ABM) and Commonwealth Scientific and Industrial Research Organisation (CSIRO) reported in 2014 that temperature has increased in the last two decades, rainfall has varied considerably and noted that the southwest and northwest Pacific has become wetter and central Pacific drier, and ocean surface temperature has increased. ABM and CSIRO (2014) also reported that in Tuvalu warm temperature extremes have increased, rainfall generally remains unchanged, and sea level rise has increased. Fieldwork findings of people's perceptions of Tuvalu's climate show similar outcomes.

The literature on climate change reveals the complexity of this global phenomenon and the extreme difficulties of addressing it. Since the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and its enforcement in 1994, the progress to combat climate change has been rather glacial, simply due to so many competing and conflicting views. Responses thus far have targeted two major areas: mitigation and adaptation. Mitigation relates to efforts to reduce GHGs to a level that will not adversely affect the natural climate process.

Adaptation, on the other hand, refers to undertakings to adjust to the impacts of climate change. One of the key outcomes of climate change negotiations under the UNFCCC was the Kyoto Protocol 1997, which set out emission reduction targets for its parties to commit to. Although the Kyoto Protocol and its subsequent instruments did not succeed within the commitment periods allowed for parties to take action, the passing and signing of the Paris Agreement in 2015 and 2016 respectively has revived hope in this global political process.

One of the projected consequences of climate change and sea level rise reported by IPCC is the mass movement of people. Discourse about migration and relocation of people as options for adaptation to climate change has made useful contributions in the international efforts to address this global problem. However, migration and relocation are not simple options. In fact, they are extremely complex and difficult to address because there are fundamental political, economic, financial and social challenges involved. More importantly, each and every concerned country and affected community has specific predicaments that may render migration and relocation extremely difficult, if not impossible. It would be unspeakable if people were eventually forced to move. It is the ultimate act of humiliation and denial of self-determination. Such an eventuality means that sovereign status of potential victims may cease to exist. Their national identities may forever be unrecognised and their cultural identities may also be greatly altered, if not completely lost.

In view of this global phenomenon and its potential consequences for the lives of people in low-lying states, this thesis endeavours to examine, through the lenses of the people of Tuvalu, how vulnerable communities view climate change and sea level rise. I focus more specifically on the issues relating to national and cultural identities, as they are the two main topics that repeatedly surfaced in the discourse within Tuvalu. In doing so, I explore the literature on climate change and sea level rise, statehood, culture, migration/relocation, and even religious establishment to gauge a comprehensive understanding of how these peoples' mind-sets and feelings are being influenced and affected by this phenomenon. I acknowledge with gratitude scholars who contributed to research works on climate change in Tuvalu in areas such as cultural geography (Corlew 2012; Farbotko 2008), politics and development (Dix 2011; Lazrus 2009), impacts on agricultural and vegetation

(O'Brien 2013; Tekinene 2013), religious aspects (Fusi 2005; Lusama 2004; Talia 2009), and displacement and migration (Farbotko and Lazrus 2012; Paton 2009) and others that I acknowledge in the course of my discussion to follow. Most of these scholars' works, especially those on the human dynamics of climate change, were focussed on specific locations or communities in Tuvalu. As the first Tuvaluan to undertake a significant research work (at least at a PhD level) on this cardinal issue to the people of Tuvalu, I decided to take a wider approach and cover all the island communities in Tuvalu and a significant part of Tuvaluans living overseas.

By way of introduction, I wish to briefly say that I am a Tuvaluan male citizen from the island of Vaitupu. I am married and have four children. I worked in the Government of Tuvalu for approximately thirty years in different senior government positions. More details about myself will be revealed in the subsequent chapters.

1.2 Research questions

This thesis has been developed and carried out on the basis of this key question:

How do the people of low-lying states such as Tuvalu view the uncertainty surrounding the future of their identity as people of an independent state with a unique cultural heritage in light of the impacts of climate change and sea level rise?

In attempting to address this key question, I decided to dissect it into several parts, as given in the following sub-questions, in order to portray a holistic approach to Tuvalu and the impacts of climate change:

1. What is the state of climate change and sea level rise in general, and in the Tuvalu context in particular?
2. How do the people of Tuvalu perceive the impacts of climate change and sea level rise on their country's national identity?
3. How do the people of Tuvalu view the impacts of climate change and sea level rise on their core cultures and cultural identity?
4. How do the people of Tuvalu view migration and relocation against staying or remaining in Tuvalu?
5. How do religious beliefs influence the manner in which Tuvaluans think about climate change and sea level rise?
6. What are the possible solutions available and those envisioned by the people of Tuvalu to address this phenomenon?

1.3 Theoretical framework

I situate this research within the framework of human geography, which is a branch of social science. Human geography involves people and their communities, cultures, economies and their interactions with the environment, placing emphasis on their relationship with and across space and place (Nel 2010). As apparent from the previous sections, I locate this research specifically in the relationship between people of low-lying atoll states in the context of Tuvalu and their environments. I explore how the people of Tuvalu interact with their land and how this relationship has been branded as part of their culture and their identity. Aitken and Campelo (2011, p.913) noted that branding plays ‘an integrative role when related to places because at the core of the brand is culture and the people who live and create it’.

At the heart of this research lies the issue of how the impacts of climate change may affect the people of Tuvalu’s lives and livelihoods. The research is framed on the basis of cultural and emotional geographies of the people of Tuvalu and on how they live and absorb the realities or otherwise of climate change. As part of human geography, cultural geography specifically places emphasis on the relationships between people’s cultures – material and non-material – and the natural environment within which they live (Kirsch 2015; Longhurst 2007). Similarly, emotional geographies underscore the dynamics of people’s emotions within their places or spaces (Anderson 2009). I explore Tuvaluans’ responses to the impacts of these phenomena and try to situate within this framework the people’s perceptions of the possible threats of climate change towards their national and cultural identity.

1.4 Outlines of chapters

Chapter I is the introduction – weathering climate change in Tuvalu. As already revealed, I introduce the core themes of the thesis and chant the *ulufonu! ui ee! ee!*² to indicate the significance of the issues and findings that I unfold in the subsequent chapters.

² A traditional way of telling people that one is coming to tell and present something important.

Chapter II is about Tuvalu – a sovereign atoll state. In this chapter, I outline Tuvalu’s geographical location. This is crucial not only because it is a place that most people do not know of, but also because it is so tiny that I want to ensure it is well understood before I begin to unfold what is within it. I also discuss demographic information to portray the population size and demographic distributions. Moreover, I explore Tuvalu’s governance and political landscapes and discuss the country’s rather limited economic endowments and developments that have taken place in its emergence as a young nation. I end the chapter by covering key sectors such as education, health, Tuvalu’s international relations, and the lives and livelihoods of Tuvaluans, as they provide important contextual background for the discussion in the following chapters.

Chapter III is the state of climate change and sea level rise. I outline the various aspects of climate change and sea level rise that are essential and relevant to the purpose of the thesis. I begin by looking at the science of climate change and sea level rise and reveal the scientific findings that can be reconciled with people’s own experiences, especially the people of Tuvalu, which are discussed in the following chapters. I explore the climate change policy and political processes to highlight the essential issues and challenges, and then examine “mitigation” and “adaptation” to enlighten the discussion on the measures taken to address climate change and sea level rise. I then focus my investigation on climate change and sea level rise in Tuvalu. Sea level rise, as the more fundamental problem of the two, is specifically discussed in the context of Tuvalu to demonstrate its potential impact on national and cultural identity. I conclude the chapter with a discussion of the Tuvalu Climate Change Policy entitled *Te Kaniva* and the various past, present and future climate change and sea level rise programmes and projects in Tuvalu.

Chapter IV outlines the methods and methodology processes I employ in the research. I first describe the research procedures taken from the initial to the concluding stages of the research work. An overview of the methodology that was utilised is provided as well as the ethical considerations that were taken, especially during the fieldwork phase of the research. I then offer an insight into the specific methods used in the fieldwork to reveal the different dimensions and the extent of the fieldwork. In Tuvalu, all the island communities were covered but substantial

work was undertaken in Nanumea, Niutao, Nui, Vaitupu, Funafuti and Niulakita. Beside the interviews and focus group discussions, the fieldwork also included a household survey questionnaire, as well as an “essay writing” exercise on the topic with most schools in Tuvalu. In doing so, I share my own experiences throughout the fieldwork and of course the entire research programme.

Chapter V is about the connectedness of people to their land in the context of Tuvalu. I open the chapter with an overview of the relevant theories such as roots and routes, the tree and the canoe, land and placenta, and others. I then discuss the phases of the evolution of the land tenure system in Tuvalu to contextualise the theoretical concept of connectedness of people to their land. In exemplifying this, I introduce my symbolic concept of “coconut people” where I hypothesise “coconut roots” as Tuvaluans’ deep connection to their land, and “coconut fruits” as representing the mobile nature of Tuvaluan people, but the latter is discussed in detail in Chapter VIII.

Chapter VI is about national identity. My aim in this chapter is to examine the concepts of state and statehood that are vital to national identity. I first discuss the criteria that make up a state, followed by an examination of the issues of sovereignty and recognition. Also covered are the issues of state extinction and stateless persons. Most of the discussion is based on a literature review but the final two sections are framed in a way to reflect the national pride of the people of Tuvalu as a tiny state but with full sovereignty status. I end the chapter with discussions on how this national identity is being expressed by the people of Tuvalu, which I titled *‘toku fenua ko toku fenua’*³.

Chapter VII is about Tuvalu’s cultural identity. In this chapter, I begin with a literature review of culture and cultural identity and take stock of the evolution of Tuvalu’s culture. I then explore in detail this culture from its traditional structure and governance to social lifestyles and language. I end the chapter with a section called *‘toku iloga ka galo atu’*. It is a Tuvaluan expression of grave concern about

³ A phrase coined by Tito Isala in 2011 as a theme for the commemoration by the Vaitupu community on Funafuti of Vaitupu’s most important annual day called *‘Te Aso Fiafia’*, which is celebrated on the 25th day of November every year.

irreplaceable customary identity disappearing. This final section highlights people's own words of anxiety about the effect of climate change on their culture.

Chapter VIII is about migration and relocation. I first offer insights to discourses about the history and general theories of migration, and the trends of migration in order to shed light on the more specific discussions on migration and relocation that follow. I then turn to a more substantive discussion of internal migration or resettlement in Tuvalu especially the case of migration to Niulakita in the past and present. Likewise, I discuss external migration from Tuvalu including the settlement of Vaitupu people on an island in Fiji called Kioa, and other Tuvaluan people who have migrated to Fiji and New Zealand. Considering the importance of other migrations, I include a section on circular migration with emphasis on Tuvalu phosphate workers in the past, Tuvalu seafarers, and seasonal workers in Australia and New Zealand. I conclude the chapter by putting into perspective how the people of Tuvalu view climate-induced migration and forced relocation.

Chapter IX is titled "The Fading Rainbow and the Ark". In this chapter, I investigate the influence of religious beliefs on people's understanding, and making informed decisions, about climate change. I begin by looking at the background of religions in Tuvalu and then discuss the relevant theological theories of climate change and sea level rise. I then reveal changing religious perspectives that I symbolically call "the fading rainbow". In the second last section, I explore the Ark of Noah concept in an effort to highlight what the people of Tuvalu consider as possible options to save and protect themselves and the islands. I end the chapter with a discussion of options if it is time to leave Tuvalu when worse comes to the worst.

Chapter X concludes the thesis – the end of the beginning. In this chapter, I sum up what I set out to achieve in this thesis. I begin by addressing the key questions in a concise manner and then highlight the key themes that emerged from the research findings. Following that, I briefly underscore my theoretical contribution to the field and the research limitations. I finally conclude with my personal reflections of the three odd years of my research journey and a final remark on the impacts of climate change and sea level rise on the coconut people.

CHAPTER II

TUVALU – A SOVEREIGN INDEPENDENT STATE

Tuvalu mo te Atua, ko te fakavae sili, ko te ala tonu tena, ko te manuia katoa, ...Tuvalu tuu saloto ki te se gata mai. [Tuvalu for God, the utmost foundation, the absolute path, the holistic prosperity... Tuvalu remains sovereign for ever].

(Tuvalu National Anthem)

2.1 Introduction

“Discovered” between the mid-fourteenth and early eighteenth century by European explorers, the nine low-lying islands of the archipelago known now as Tuvalu were first given the name Ellice Islands¹. After almost nine decades of being known as Ellice Islands, and in the wake of it becoming a sovereign state independent from the United Kingdom in 1978, the archipelago became known as Tuvalu. Why and how it was named Tuvalu is not clear but the word Tuvalu was explicitly used in the past well before independence to refer to the Ellice Islands (see Roberts 1958). Tuvalu literally means eight standing together. Its name represents the eight main islands of the archipelago namely, from north to south, Nanumea, Nanumaga, Niutao, Nui, Vaitupu, Nukufetau, Funafuti, and Nukulaelae. There is a ninth island called Niulakita, but it is considered as part of Niutao. Funafuti is the capital of Tuvalu.

The aim of this chapter is to pave the way for the subsequent chapters, where various aspects of Tuvalu will be discussed in greater detail, by outlining the basic characteristics of Tuvalu. I begin the chapter with Tuvalu’s geographical location and its population features, which reveal the sheer small size of the country. I then lead to the section on how Tuvalu and Tuvaluans came into being. Conscious of the

¹ Munro (1982), however, noted that the earlier name of the archipelago was the Lagoon Islands, which was widely used by the London Missionary Society (LMS) before it was superseded by Ellice Islands. Nonetheless, Ellice Islands was derived from the name given by Capt. de Peyster to Funafuti Island, which, after discovering it, he named in honour of his friend and benefactor, E. Ellice, Esq. M.P. for Coventry, ‘as a small evidence of my grateful recollection of his kindness’ (de Peyster and de Peyster 1819).

importance of traditional legends, the section begins with the story of how Tuvalu was created and how its inhabitants settled in the islands. This is followed by discussions on how Tuvalu was discovered by Europeans and the arrival of Christianity in the country. I also discuss the country's governance and political make up as well as its economic and development progress from its birth as an independent sovereign state. I then uncover the essential issues relating to the education and health sectors as well as Tuvalu's regional and international relations. I conclude the chapter with a section on the lives and livelihoods of Tuvaluans in the old and modern Tuvalu to give a general view before the discussions in the following chapters unfold.

2.2 Geography and demography

Barely visible from outer space, Tuvalu is a tiny archipelagic state located in the Pacific Ocean, about 5,175 km northeast of Australia, south of the equator and west of the International Dateline. Tuvalu is encircled by Fiji to the south, Wallis and Futuna to the southeast, Tokelau to the east, Kiribati to the north and northeast, and Solomon Islands to the west, though a pocket of international water separates the two. More precisely, Tuvalu lies between the latitudes of 5°S and 11°S and longitudes of 176°E and 180°E (Figure 2.1).

Tuvalu is a chain of small islands, which stretches some 670 km across the ocean from the northernmost to the southernmost islands in the group. Tuvalu has a land area of 26 km² and an Exclusive Economic Zone (EEZ) of 719,174 km² (SPC 2015). Tuvalu is generally categorised as an atoll island state (Barnett and Campbell 2010, p.23), although technically not all the islands are atolls because some are reef islands.

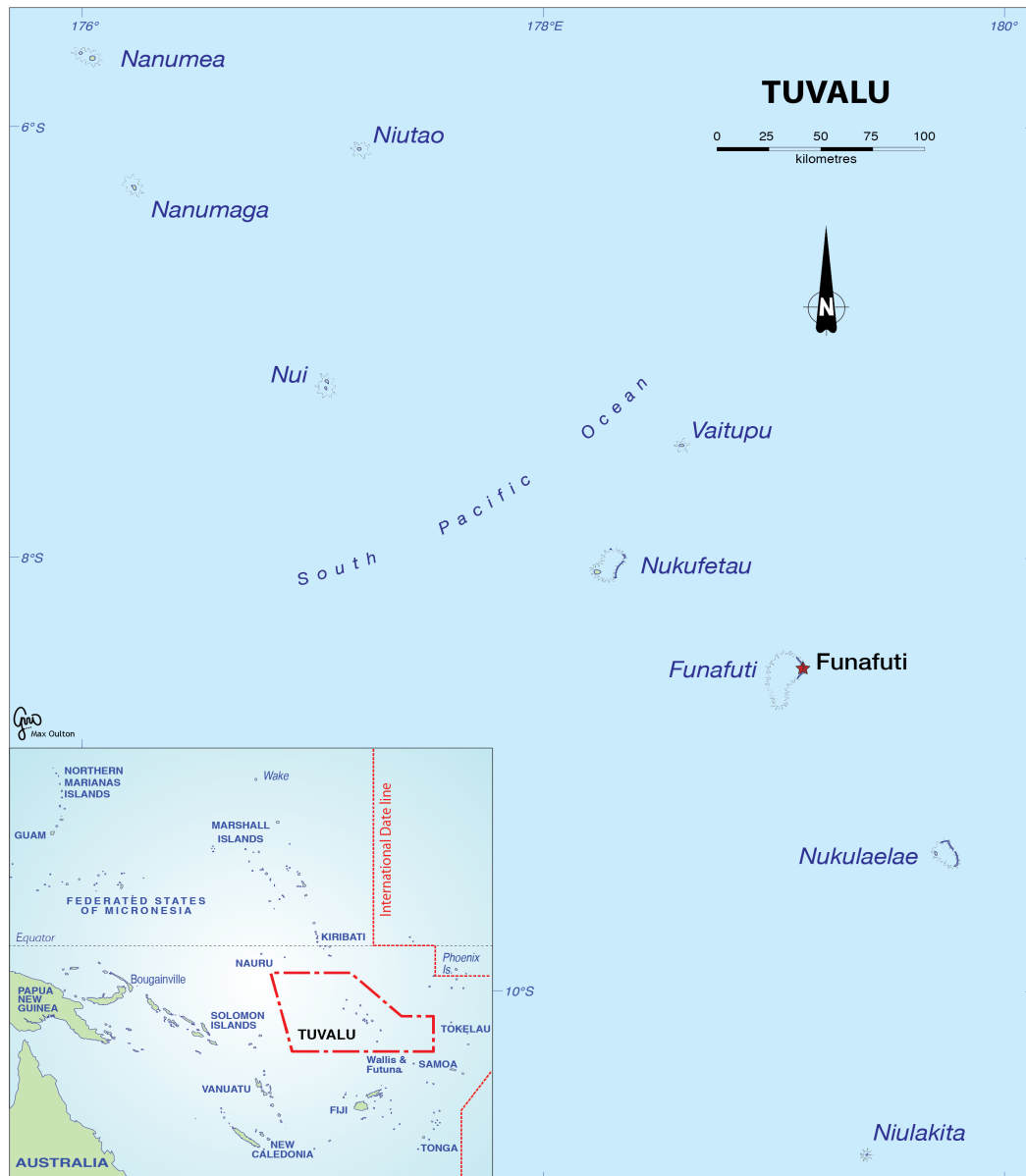


Figure 2.1: Map of Tuvalu.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato.

Geologically, an atoll is formed by coral materials that are deposited by wave action on the reefs above sea level over many years. Campbell (2014, p.4) describes atoll islands as coral reefs that have grown on submerged volcanic high islands. The famous naturalist and geologist Charles Darwin (1842) explained the structure and distribution of atolls as islands built on volcanic islands that subside completely below sea level (Figure 2.2).

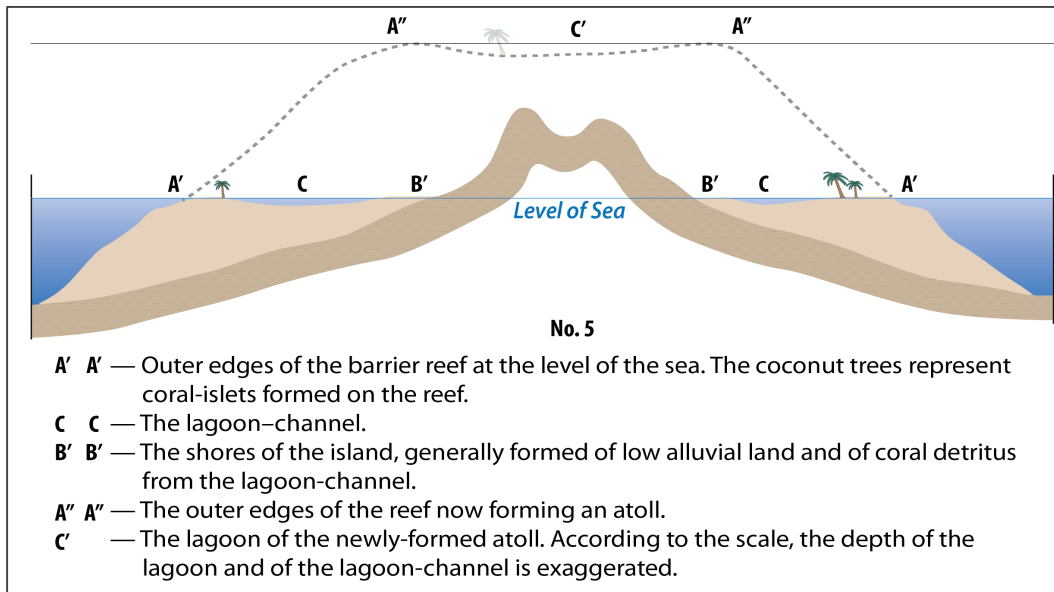


Figure 2.2: Cross-section formation of Atolls.

Source: Adapted from Darwin, 1842, p.100 and cartographically enhanced by Max Oulton, Cartographer, Department of Geography, University of Waikato.

Atolls are generally ring-shaped with a sizeable lagoon open to the ocean encircled by small islets known as *motu* (Barnett and Campbell 2010, p.25). Reef islands do not have open lagoons although they have enclosed lagoons and ponds. That said, Tuvalu comprises five atolls including Nanumea, Nui, Nukufetau, Funafuti and Nukulaelae, and four reef islands namely Nanumaga, Niutao, Vaitupu, and Niulakita. Vaitupu is the largest island in the group with a total land area of 5.6 km², and Niulakita is the smallest with just 0.42 km². For the purpose of this thesis, I use the term atoll to refer to Tuvalu as a state.

As an atoll state, Tuvalu's topography is low and flat. The average height of the islands is about two metres and the highest point is approximately five metres above sea level. The soil is generally poor and infertile due to the shallowness of the coralline soil and the inability to retain sufficient water and nutrients. Flora and fauna are very limited (Aalsberberg and Hay 1992), allowing only few edible crops that sustain life on the islands.

Tuvalu's population is very small. History, however, indicates that the Tuvalu population was much higher in the mid-nineteenth century than nowadays².

² See Newton (1967) and Hedley (1896, p.41) for their accounts of the population of Tuvalu pre-colonial era, which are now generally discredited.

Nonetheless, the 2012 Census indicates that the total population of Tuvalu stands at 10,782 (Central Statistics Division of the Government of Tuvalu 2013b). This population count reflects an increase of 1,221 people since the 2002 Census, which accounted for 9,561. In the last 90 years there has been a gradual increase in Tuvalu’s population from 3,457 in 1921 to 10,782 people in 2012 as shown in Figure 2.3. Of the 10,782 people, 5,515 were males and 5,267 were females. With respect to age distribution, about 32.9 per cent of the population is 14 years old and younger, 58.6 per cent between the age of 15 years and 59 years and the remaining 8.5 per cent is aged 60 years and older. This represents a median age of 23.0 for males and 25.1 for females. The average annual growth of resident population for the whole country is about 1.2 per cent but for Funafuti alone it is 3.2 per cent.

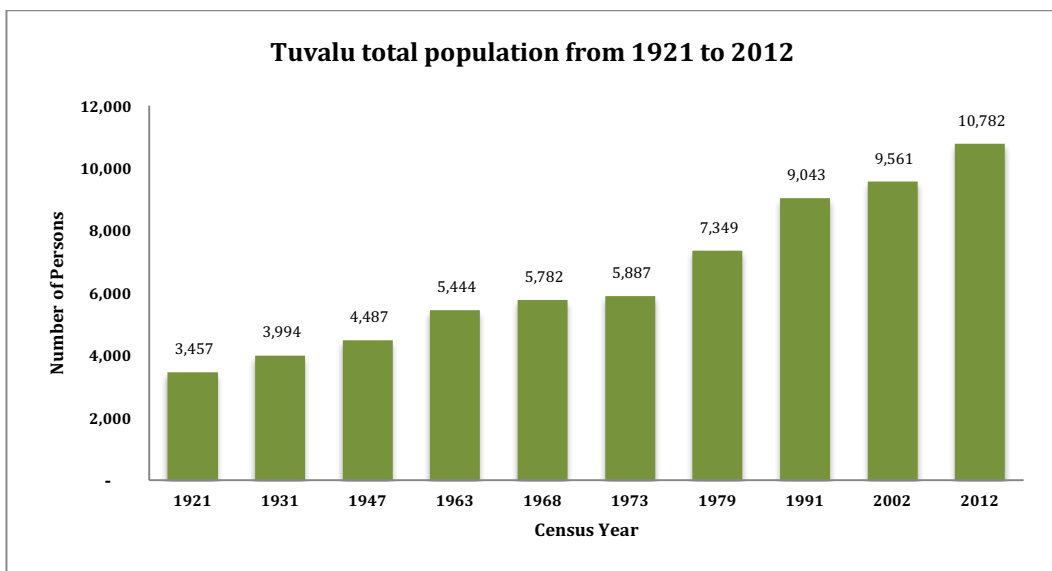


Figure 2.3: Tuvalu population from 1921 to 2012.
 Source: Reproduced from the Population and Housing Census 2012, Central Statistics Division of Tuvalu.

In terms of population by region of residence, there were 5,436 people in Funafuti the capital and 5,204 in the other eight outer islands, which correspond to 51.1 per cent and 48.9 per cent respectively. Thus, population density in terms of the resident population is 1,948 per square kilometre in Funafuti and 228 in the outer islands. Table 2.1 shows the population size, change, distribution and density by islands for the national censuses that were held in 2002 and 2012. Most notable was a big leap in the number of people on the capital from 3,962 in 2002 to 5,436 in 2012 causing an asymmetric distribution of the country’s population.

Table 2.1: Tuvalu population distribution on the islands for year 2002 & 2012.

ISLAND	AREA (km ²)	POPULATION		POPULATION CHANGE 2000-2012			POPULATION DISTRIBUTION	DENSITY (person per km ²)
		2002	2012	TOTAL	%	Growth Rate		
Funafuti	2.8	3,962	5,436	1,474	37.2	3.2	51.1	1,948
O/Island	22.8	5,397	5,204	-193	-3.6	-0.4	48.9	228
<i>Nanumea</i>	3.9	855	612	-243	-28.4	-3.3	5.8	158
<i>Nanumaga</i>	2.8	710	551	-159	-22.4	-2.5	5.2	198
<i>Niutao</i>	2.5	817	694	-123	-15.1	-1.6	6.5	274
<i>Nui</i>	2.8	610	729	119	19.5	1.8	6.9	258
<i>Vaitupu</i>	5.6	1310	1542	232	17.7	1.6	14.5	275
<i>Nukufetau</i>	3.0	701	666	-35	-5.0	-0.5	6.3	223
<i>Funafuti</i>	1.8	392	364	-28	-7.1	-0.7	3.4	200
<i>Nukulaelae</i>	0.4	2	46	44	2,200	31.4	0.4	110
Tuvalu	25.6	9,359	10,640	1,281	13.7	1.3	100	415

Source: Population and Housing Census 2012: Volume 1 Analytical Report, p.21.

2.3 History from pre-contact to post-independence

The history of the creation and settlement of Tuvalu is compounded by many different stories; some are mythical and legendary while others seem to be historical events but are yet to be anthropologically verified. Nonetheless, it is not my purpose to verify them and I have chosen to highlight those that portray the important aspects of Tuvalu's history, and which are relevant to this thesis. Traditional stories of how Tuvalu was formed and settled, which have been relayed to us by our ancestors through word of mouth, songs and language-like practices include many fascinating accounts that would be difficult if not impossible for outsiders to comprehend, let alone to agree with and accept. These stories were traditionally conveyed during evening story sessions between older people and young children before they slept, during pastime activities, and others through speeches during annual commemorations of important historical events at community gatherings.

According to one of the most told legends about the creation of Tuvalu islands, the islands of Tuvalu were a result of the battle between the *pusi* (eel) and the *ali* (flounder) (O'Brien 1983). One day these two sea creatures tested who was stronger by carrying one large stone each and on the way home they started to argue and finally fought. The *ali* was badly injured and crushed underneath the stone but escaped death. After escaping, the *ali* chased the *pusi* who was suffering from a big blow to his stomach from the *ali's* stone. As the *pusi* ran its body started to get thinner and thinner. Both of them cursed each other using their magic words. The

legend concludes that the *ali* turned flat hence the reason Tuvalu is flat and the *pusi* turned thin and tall like a coconut tree thus the reason why coconut trees grow on the islands of Tuvalu (O'Brien 1983, p. 14). Then when the islands were formed, people who travelled from afar subsequently settled and populated them.

There is no single story of how each of the islands was first settled. Each island has one or more versions of who discovered and settled first on the island. The only folk tale that seemingly tells of the discovery by an adventurer and his crew of all the islands except Nanumea to the north and Niulakita to the south was the story of Lapi (Roberts 1958). It was said that Lapi was the son of Tepuhi, who was a spirit. They lived in a remote land called Tulenga in Tepole which was a land of mountains covered with large trees. One day, Lapi decided to search for new land and thus built a canoe and set sail with nine others namely Lae, Nuku, Funa, Vai, Nui, Fetau, Niu, Nanu and the carpenter Tefau. After many weeks at sea they came to the land of Maoli and decided to continue on. They went past Tonga, and stopped for a short while in Samoa before they continued northwest. As they sailed they saw a low island and Lae was put ashore and the island bore the name Nukulaelae. They proceeded further and came to another low island and Lapi put Funa there and the island became known as Funafuti. At the third island, he put Fetau there and thus the island was named Nukufetau. The fourth island was a much bigger one and more fertile and so he left Vai there and they continued on. The island then became known as Vaitupu. At the next island, Nui was left there and hence the island was named Nui. On the sixth island, Lapi landed Niu there and the island became known as Niutao. As they came to the seventh island, Lapi and the remaining crew decided to stay there because the canoe could not travel further. He then named the island Nanumaga after one of his remaining crew, namely Nanu.

However, archaeological evidence suggests that the settlement of the islands of Tuvalu took place about 400 years prior to European contact (Munro 1982). According to Macdonald (1982, p.3), the settlement pattern of Tuvalu was 'part of a westwards backwash movement from established Polynesia communities. [...] suggest[ing] that Ellice Islands were links in a migration chain stretching from

Southeast Asia, through Micronesia to Polynesia...'³. This empirical evidence appears to be consistent with the legends of some of the islands such as Vaitupu and Funafuti, which were said to have been conquered and settled by a Samoan giant named Telematua, and Nanumea by a Tongan half-man, half-spirit giant called Tefolaha (O'Brien 1983). This evidence, which suggests that the people of Tuvalu are of Tongan or Samoan descent, may not be completely true and therefore it should not be taken as conclusive.

My dissenting view is based on evidence that the people of the Pacific originated from Southeast Asia (Irwin 2006), which suggests that, if the normal current of the sea in the Southern Hemisphere of the Pacific Ocean is always moving southeast from the Equator, then it is highly likely that the Polynesian population came through Tuvalu, or could have originated from Tuvalu though in small numbers over centuries. Indeed, Buck (1954) asserted that Polynesians came from Southeast Asia passing through Micronesia to the Polynesia region and small atolls were their resting place, which suggests, as I humbly argue, that Tuvalu being the westernmost Polynesia atoll was the maritime corridor for the rest of the Polynesian early settlers. This assertion is further supported by a finding, though it has not been archaeologically verified, of an underwater fire cave about 40 metres below sea level at the edge of the reef of Nanumaga that was discovered in the 1980s by scuba divers from a reef channel blasting team from New Zealand who tried to prove a Nanumaga legend of a large house under the sea (Gibbons and Clunie 1986, p.82).

Nevertheless, the discovery of the islands of Tuvalu by Europeans began when the island of Nui was sighted by Captain Alvaro de Mendaña on 15 January 1568 while sailing on his vessel *Los Reyes*, and concluded with the “discovery” of Vaitupu in 1825 by Captain Starbuck on his vessel, the *Loper*. However, significant contact with Europeans did not happen until 1781 when Captain Francisco Antonio Mourelle on his vessel, *Le Princesa*, arrived and made contact with the people of Niutao (Munro 1982). Between 1781 and 1892, whalers, explorers, traders and missionaries visited the islands of Tuvalu for different purposes (Seluka 2002). Of all these different visitors, the most predominant and influential ones were the

³ See Anderson (2014), Howe (2006) and Irwin (2006) for further information about voyaging and settlement in the Pacific.

missionaries. Christianity arrived in Tuvalu in 1861 through a deacon from Cook Islands named Elekana. I discuss this in detail in Chapter IX.

Tuvalu became a British protectorate, in conjunction with the Gilbert Islands in 1892⁴, with the Western Pacific High Commissioner (WPHC) based in Fiji as its official headquarters (McIntyre 2012, p.136)⁵. In 1915 Tuvalu became part of the Gilbert and Ellice Islands Colony (Brady 1970). The Gilbert Islands, now known as Kiribati, is an atoll island country north of Tuvalu and is much larger in terms of land area and population. In 1975 Tuvalu sought to split the colony and to become independent. While there were a number of factors for the split, the move was basically triggered by the ethnic tension derived from the long perceived mistreatment of the people of Tuvalu by Kiribati in terms of education and employment opportunities (Goldsmith 2012; McIntyre 2012). The same year, on 1 October, Tuvalu gained formal approval under the Tuvalu Order 1975 to become a separate British dependency (Isala 1983, p.169) and finally gained independence on 1 October 1978. Kiribati followed suit and became an independent nation on 12 July 1979.

2.4 Governance and politics

Following a lengthy period of tutelage by Great Britain whose democratic norms and institutions were the basis of the governing system (Srebrnik 2004), founding leaders of Tuvalu decided to adopt the Westminster system of government. Clague and others (2001) have observed that being a former colony of Britain or of one of its cultural descendants (the United States, Australia or New Zealand) has had a powerful positive effect on institutional democracy in small island states. Accordingly, the Tuvalu Independence Constitution established Tuvalu as a sovereign democratic state (Tuvalu Constitution Article 1). Furthermore, the Constitution recognised the Queen of Great Britain as Tuvalu's Head of State, represented in the country by the Governor General. Keeping in line with the

⁴ By virtue of the Pacific Islanders Protection Act 1857.

⁵ The Protectorate HQ was established in Tarawa. In 1896 and later moved to Banaba (Ocean Island) under the oversight of a Resident Commissioner. The relocation of the protectorate's headquarters was a result of the substantive exploitation of phosphate in Banaba where transportation and shipping was more convenient (Teo 1983). After World War II it was relocated back to Tarawa (Macdonald 1982; Maude and Doran 1966; Williams and Macdonald 1985).

doctrine of separation of powers, the Constitution established three main organs of the state namely; legislature or parliament, executive or government, and judiciary or court to govern and administer the affairs of the country.

The parliamentary system of Tuvalu is a single legislative or technically unicameral chamber, and does not use a political party system. At first, there were twelve members of parliament, two members each from Funafuti, Nanumea, Niutao and Vaitupu, and one each from Nui, Nanumaga, Nukufetau, and Nukulaelae. This composition was changed in 2000 with an increase to two members each from the latter three islands except Nukulaelae, making the total membership 15. Members are elected under the usual universal adult suffrage system every four years. However, Taafaki (2004, p.5) asserts that ‘individual qualities, personal and community relationships are the main determinants in election, reflecting Tuvalu’s small size and close-knit society’. The Speaker of the House of Parliament is appointed from elected members through a resolution of parliament, usually straight after the formation of the government following the general election.

The executive (or Cabinet of the government) consists of eight members including the Prime Minister. The election of the Prime Minister is done through lobbying among elected members, and the Governor General appoints whoever commands the trust of the majority of elected members. During the early years of Tuvalu’s democracy, the appointment of the Prime Minister was simply a matter of elected members teaming up with two figureheads who became leaders in the first general election, one being the Prime Minister and the other being the Opposition Leader. The loyalty of members to these two leaders survived three consecutive parliamentary terms without being challenged and this saw political stability in the first decade of independence. However, since the fifth parliamentary term when new political lobbying tactics were introduced, leadership has often changed causing political instability. Since 1993 no Prime Minister has survived after a general election a full term of four years until now, except during Hon. Apisai Ielemia’s administration from 2006 to 2010. Table 2.2 outlines those who served as Prime Minister from independence until 2017. The appointment of Cabinet Ministers is the ultimate prerogative of the Prime Minister, but in practice the winning political group, before the election of the Prime Minister, would

consensually agree upon the allocation of ministerial portfolios. As the executive arm of the country, Cabinet is responsible for the enforcement of the laws and the administration of the affairs of the state and its financial resources.

Table 2.2: List of Tuvalu Prime Ministers.

Name of Prime Ministers	Period	MP from
1. Rt. Hon. Sir Toaripi Lauti*	1978 – 1982	Funafuti
2. Rt. Hon. Sir Dr. Tomasi Puapua	1982 – 1989	Vaitupu
3. Rt. Hon. Bikenibeu Paeniu	1989 – 1993	Nukulaelae
4. Rt. Hon. Sir Kamuta Latasi	1993 – 1995	Funafuti
5. Rt. Hon. Bikenibeu Paeniu**	1995 – 1998	Nukulaelae
6. Hon. Ionatana Ionatana***	1998 – 2000	Funafuti
7. Hon. Faimalaga Luka	2000 – 2001	Nukufetau
8. Hon. Koloa Talake	2001 – 2002	Vaitupu
9. Hon. Saufatu Sopoanga	2002 – 2004	Nukufetau
10. Hon. Maatia Toafa	2004 – 2006	Nanumea
11. Hon. Apisai Ielemia	2006 – 2010	Vaitupu
12. Hon. Maatia Toafa****	2010	Nanumea
13. Hon. Willy Telavi	2010 – 2013	Nanumea
14. Hon. Enele Sosene Sopoaga	2013 –	Nukufetau

Source: Author's own.

* *Toaripi was Chief Minister from 1975 until 1978; ** Bikenibeu replaced Kamuta from 1995-1997, and continued after the General Election of 1997. *** Ionatana died in late 2000 and was replaced by Faimalaga. **** Maatia served less than three months.*

Similarly, Tuvalu's judicial system is based on the English Common Law. The highest court in Tuvalu is the Sovereign in Council⁶, which has very specific jurisdictions, particularly to hear appeals from decisions of the Court of Appeal or a case submitted by virtue of an Act of Parliament. The Court of Appeal⁷ is the second highest court with jurisdiction to determine appeals from decisions of the High Court, either exercising its original or appellate jurisdictions. At the time of writing this thesis, the Sovereign in Council has not been convened to hear any case, or appeal for that matter, and the Court of Appeal has convened only twice since independence. The Court of Appeal is composed of not less than three judges,

⁶ Established by the Constitution section 136.

⁷ Established by the Constitution section 134 and the Court of Appeal Rules Act 2009 section 3.

which have so far been appointed from prominent judges around the Pacific region. The High Court⁸ of Tuvalu is presided over by one judge who is also the Chief Justice and head of the judiciary. Since independence, foreign judges have held this position to the present time. The High Court is the only competent authority to interpret the Constitution with unlimited jurisdiction. Below the High Court is the Magistrates Court that is presided over by a local magistrate and its jurisdiction is limited to those provided for under the Magistrates' Courts Act (1963). On each island there is an Island Court and Island Lands Court⁹. The former deals with civil and criminal cases at the island level, and the latter is responsible for land related cases only. There is also a Lands Panel that deals with any appeal from Island Lands Courts, and its decision is final, except if there is an error in law. In such cases, the High Court will hear the appeal.

Each island has its own local council except Niulakita because it is considered part of Niutao. Initially, local governments were made up of council members or councillors who were elected from members of the island community and a staff member or two from the national government who basically handled local administrative matters. The Falekaupule Act 1997 which came into force on 1 January 1999 replacing the Local Government Act 1990, saw the devolution of certain authorities of the national government to local governments, providing them with much wider autonomy in running their own affairs. The Act also saw a change from the Council to *Kaupule* not so much in terms of a name change but more so in terms of power and structural set up¹⁰. Local government budgets are largely financed by the national government but the establishment of the Falekaupule Trust Fund (FTF) in 1999 has greatly supported island *Kaupule* development programmes.

2.5 Economy and development

As an atoll state, Tuvalu's economic development is constrained by its lack of natural resources. There is no known mineral resource that can be found on the

⁸ Established by the Constitution section 120.

⁹ Established by Island Courts Act (1965)

¹⁰ See Seluka (2002) for further information on the evolution of governance in Tuvalu from pre-independence.

islands, although a number of reports have identified some limited minerals such as manganese, sulfide and sand deposits in the ocean floor within Tuvalu's EEZ¹¹. Copra, which used to be the main cash crop in the country for many years, especially before independence has lost its importance as a key source of cash income since the early 2000 due to unfavourable international market prices. As a result, subsistence farming and fishing are the primary economic activities in the country, particularly on the outer islands.

Tuvalu's geographical remoteness from major economies further compounds its lack of economic development. For instance, the tourism industry, which is widely advocated as a potential economic driver for small economies in the Pacific region, is not very promising for Tuvalu because of transportation challenges. With only three scheduled flights a week from Fiji to Tuvalu on a 72 seat ATR plane, which is usually overbooked, coming to Tuvalu for holidays is therefore very unattractive. This is further aggravated by the high cost of the airfare. Likewise, in other sectors, especially trade related economic activities, there is great disadvantage in Tuvalu's isolation from major shipping routes. All trade between Tuvalu and the outside world comes through Fiji only. But that is not all; the irregular shipping services between Fiji and Tuvalu coupled with the high cost of freight create an unattractive market environment for foreign investors. Such transportation predicaments therefore, make Tuvalu in the meantime, a purely import-oriented economy.

Despite its poor natural economic endowments and its isolation, Tuvalu's economy survives because of its three main sources of income. First and foremost is its overseas investment fund called the Tuvalu Trust Fund (TTF). The TTF was jointly established on 16 June 1987 by Tuvalu, New Zealand, Australia and the United Kingdom as original parties and was later joined by Japan and South Korea (Goldsmith 2012; Tuvalu Trust Fund Board 2007). With an initial contribution of A\$27.1 million, the TTF was set up with the purpose of supporting the annual national budget, especially if there were chronic financial deficits, as well as to provide for economic developments for the country in order to achieve greater financial autonomy. The TTF is held in trust under the direct oversight of the board,

¹¹ Tuvalu parliament passed in 2014 the Seabed Minerals Act 2014 to regulate seabed mining activities within Tuvalu's EEZ.

which comprises representatives from the four original contributors. The TTF is managed by a number of well-recognised fund managers and is closely monitored by fund monitors who provide independent advice to the board. ‘Over the twenty years history of the Fund, it has achieved an average rate of return of 9.3 per cent per annum’ (Tuvalu Trust Fund Board 2007). Part of the annual returns was reinvested into the TTF (also called Account A) and the rest was usually placed in Account B, which is commonly known as the Consolidated Investment Fund (CIF); a separate account established so that the government can unilaterally drawdown some funds to buffer the national budget deficit.

The other major source of revenue comes from Tuvalu’s country code Internet Top Level Domain (shortened as ccTLD). The ccTLD is a two-letter suffix character-encoding scheme used in Internet protocols, assigned by the Internet Assigned Numbers Authority (IANA) to sovereign states, countries and dependent territories based on their names’ English alphabetical letters¹². Tuvalu’s ccTLD is “.tv”. Propitiously, Tuvalu’s ccTLD is unique because it also stands for the two-letter word globally known as television. Internet investors desperately sought the code “.tv” and its value skyrocketed such that the initial buyer agreed to pay an upfront amount of US\$50 million in 1998. In 2002, a US company called VeriSign took over the administration of “.tv”, paying to the Government of Tuvalu an annual fee based on an agreed formula.

Fisheries license fees are the third major source. From the late 1990s to early 2000s fisheries license fees were not a significant source of income for the country but towards the mid-2000s they started to show a substantial contribution to the national budget. In the 2014 National Budget, fisheries licenses became the number one income earner, contributing about 33 per cent to the total core revenue (Economic Planning and Budget 2013, p.4). This major increase was a result of years of negotiation, jointly as part of a regional and sub-regional grouping, with distant-water fishing nations such as the United States and the European Union, as well as individually between the government and fishing companies from nations such as Korea, Japan, and Taiwan. In fact, the favourable movement of migratory fish

¹² The allocation of TLDcc is based on the International Standardization Organisation (ISO 3166-1) system that alone gives countries the privilege to own such code.

stocks such as tuna to the Tuvalu EEZ, which in turn attracted fishing boats, also played a major role in the increase in revenue¹³.

Whilst the above are significantly improving Tuvalu's fiscal situation, the fact that the funds are subject to fluctuations in the international financial market plus the migratory nature of fish stocks, means that Tuvalu's economy is not financially secured in the long term, and highly vulnerable to market shocks. Assistance from traditional development partners namely Japan, Australia, New Zealand, Republic of China (Taiwan) and a few others has been instrumental in the development of Tuvalu's economy over many years since independence.

Tuvalu's Gross Domestic Product (GDP) as of 2014 was about US\$38 million, which has steadily increased from US\$32 million in 2010 and from US\$22 million in 2005. Its GDP per capita stood at US\$3,796 in 2014, an increase of US\$558 from 2010's figure of US\$3,238, and US\$1,538 from 2005's figure of US\$2,258 (United Nations (UN) 2017). According to IMF (2014), Tuvalu's real GDP growth as of 2013 was 1.3 per cent, which is a substantive decrease from the 2011 figure of 8.5 per cent.

Paid employment in Tuvalu is insignificant because of the size of its economy. Overall, during the 2012 Census, the labour force participation rate was 59 per cent, the unemployment rate was 40 per cent, and the employment-population ratio was 36 per cent. This is calculated on the basis of dividing the number of persons 15 years and older that are economically active in the labour force including those who are unpaid and unemployed but are searching for work by the total population of those 15 years and older (Central Statistics Division of the Government of Tuvalu 2013b). In terms of employment by industries, one quarter of the workforce is employed under public administration and social security; 16 per cent work in household activities as employers producing activities of households for their own use; 14 per cent work in wholesale and retail trade related services and 12 per cent work in the education sector. The major employers are the government and public

¹³ See Nicol and others (2014) for detail information about the causes of tuna stock migration in the Pacific Ocean.

enterprises, which take up a significant part of the labour force in the country (Central Statistics Division of the Government of Tuvalu 2013).

The seafaring industry is another major employment area, and it has employed an average of 450 seafarers each year for the past three decades until the last two or three years when the number drastically decreased to just around 100 seafarers and fell further to less than 90 as of December 2016¹⁴. Seasonal workers under New Zealand and Australian schemes employ just below 100 workers annually, and it is projected that the number will increase in coming years. Remittances sent home by Tuvaluan seafarers and seasonal workers contribute significantly to the economy, especially at the grassroots level (Boland and Dollery 2007; Taomia 2006b). The introduction of the New Zealand migration scheme known, as the Pacific Access Category (PAC) is another source of income through remittances but in a rather occasional fashion.

2.6 Education and health

Education and health have always been important parts of Tuvalu's development. During the pre-contact period, traditional skills and knowledge known as *iloa* or *poto faka-Tuvalu* and traditional arts locally called *logo* were passed down through oral presentations and practices. Generally, *iloa* or *poto faka-Tuvalu* was publicly taught whereas *logo* was sacredly passed through family lineages.

Western-style education in Tuvalu was perhaps introduced when European explorers set foot on the islands in the mid 1800's. However, formal education did not start until 1900 when the London Missionary Society (LMS) began a boys' school in Funafuti, on Amatuku islet. The school was later relocated to Vaitupu in 1905 and remains there to the present time. The name of the school is Motufoua School, and it was initially established to prepare young men for entry into the London Missionary Society seminary in Samoa. Later a girl's school was formed by Mrs Sara Joliffe at Papealise, an islet in Funafuti but that did not survive long. Another boy's school was set up in Vaitupu, this time by the colonial government.

¹⁴ Personal communication with the TOSU General Secretary in his office on 12 December 2016 during my follow up fieldwork.

The school known as Elisefou School was established in 1923 and was run by a *palagi* named Donald Gilbert Kennedy. In 1953 the colonial government decided to send all students to King George V School in Tarawa, Kiribati therefore resulting in the closure of Elisefou School. After WWII primary schooling was introduced on each island in Tuvalu.

Throughout its 110 odd years of existence, education has always been viewed as the most important sector in the development of Tuvalu. Recent programmes such as education for all or education for life have revitalised the importance of education in the country and attendances have improved significantly. According to the 2012 Census, the attendance rate for children aged three to five was 84 per cent and aged six to thirteen was 98 per cent (Central Statistics Division of the Government of Tuvalu 2013b). This is more or less the same for boys and girls. From the ages of thirteen to nineteen, the girls' attendance is much higher than boys but there are more men than women undertaking tertiary education. Ironically, there are more women than men that have completed secondary education or higher among adults aged fifteen to twenty-four. The literacy rate has also improved representing 99.8 per cent and 86.9 per cent in Tuvaluan and English languages respectively (Central Statistics Division of the Government of Tuvalu 2013b).

Moreover, the importance of education is well reflected in the government's commitments especially in the last two decades. In the early 1990s there was a great leap in the number of scholarships for Tuvaluans to study overseas. In 2014, the government introduced a student loan scheme to assist those who do not get scholarships. Primary education is free and secondary school boarding fees are A\$50 per term which is considerably low. Financial support on a refund-based arrangement was introduced for government employees to undertake extension courses at the USP campus in Tuvalu, which was later followed by almost all public enterprises and some NGOs and private businesses. New classrooms were built and old ones renovated, and school facilities, training of teachers and all other school related programs were improved, making the education budget the highest in the national budget. In 2014, the budget for education alone was about 22 per cent of the total government expenditure (Economic Planning and Budget 2013).

Health services in Tuvalu, on the other hand, evolved from informal treatment using traditional medicines and healing methods to a formal system with a modern hospital and medical clinic services. Whilst traditional health services may have started in time immemorial, formal health services in Tuvalu only began in 1913 when the first hospital founded by Smith-Rewse was built in Funafuti (Teo 1983). After years of operation under the supervision of a foreign qualified doctor, the hospital became the colony's main health centre where critical cases were treated.

At present, there is one health clinic on each of the outer islands and a central hospital in Funafuti. Health clinics on the outer islands, except Niulakita, are staffed by two qualified nurses, who are assisted by locally trained nurse-aids. These health clinics handle minor cases and if, in the opinion of the nurse, a patient needs to be referred to the central hospital, he or she will consult a doctor from the central hospital first before the patient is sent to Funafuti on the first available boat. If it is a very serious case requiring a medical evacuation, a chartered ship will be organised. Moreover, if a patient cannot be treated in the central hospital in Funafuti he or she will be referred to Fiji for treatment under the government's Tuvalu medical referral scheme. Further still, if the patient cannot be treated in Fiji he or she will be referred to India, Malaysia, or Taiwan, or occasionally to New Zealand as a final resort for treatment.

Like education, the health budget accounts for a significant portion of the national finances, second only to the education budget every year. In 2014, it accounted for about 14 per cent of the total government budget and about 25 per cent of that was for the medical referral scheme alone (Economic Planning and Budget 2013).

2.7 Regional and international relations

As a sovereign independent democratic state, Tuvalu is a member of a number of international and regional organisations, and has diplomatic relations with more than 100 countries. Tuvalu became a member of the Commonwealth of Nations on 14 August 2000 and later on 5 September 2000 became a member of the family of the United Nations. It also became a member of the World Health Organization (WHO), Food and Agriculture Organisation (FAO), International Maritime Organisation (IMO) in the early stages of its independence and joined the World

Bank and International Monetary Fund (IMF) in 2012. Regionally, Tuvalu is a member of the Pacific Islands Forum (PIF), Secretariat of the Pacific Community (SPC), Secretariat of the Pacific Regional Environment Program (SPREP), Forum Fisheries Agency (FFA), and other sub-regional organisations such as the Polynesian Leaders Group (PLG) and Parties to the Nauru Agreement (PNA).

Of its 100 plus diplomatic friends, Tuvalu's traditional development partners include Japan, Australia, New Zealand, Republic of China (Taiwan), and the European Union. With the exception of Japan, the other three traditional development partners provide support to the government's annual budget every year particularly in areas such as scholarships, transportation and public services. Japan however, is the only development partner to date that offers major infrastructure development such as hospital, power station, wharf and boat harbour, inter-island ships, etc. Recently however, countries such as Russia, Georgia, India, Turkey, United Arab Emirates (UAE) to name a few, and even Papua New Guinea, have offered financial, and in-kind support such as capacity building, renewable energy projects, and disaster relief equipment. As revealed earlier, Tuvalu's economic trajectory has shown a gradual improvement over the years but this has only been possible because of the support of the country's development partners. Therefore, foreign relation is an important political ingredient to Tuvalu's success as a nation and needs to be strengthened but without compromising Tuvalu's sovereignty.

2.8 Lives and livelihoods

Tuvaluans' lives and livelihoods are fundamentally constrained by the minuscule physical environment in which they live and the limited natural endowments available to them. Settlement in all the islands in Tuvalu is concentrated in one main village divided into two sides generally separated by a church building and the island's main hall building known as *falekaupule* in the middle (see maps in Figures 4.4; 4.5; 4.7; and 4.10). There are, however, some houses scattered around the island and these are mainly farmhouses. People traditionally lived in local houses made of materials mainly from coconut and pandanus trees since the islands were settled but today most houses are built of imported materials.

In the old days, daily life in the islands was dictated by traditional household routines and community programmes but in a “take-your-own-time” fashion. This is a contrasting lifestyle to that of the western world where people scheduled their work and time is of the essence. In the morning, people began their day with daily chores; men cut toddy¹⁵ from the coconut, went out fishing, fetched the coconut fruits, and fed the pigs, while women swept their house and the surrounding area, boiled tea and fresh toddy, and cooked breakfast; children assisted in sweeping and collecting rubbish, fetching water, and even feeding the pigs. Older members of the family either assisted in any of the chores or went about whatever they desired to do, particularly visiting other old friends for a brief *talanoa* session. Most of these chores were also performed in the latter part of the day, particularly at about an hour or two before sunset. Morning chores were normally carried out very early even before dawn. This was because of a strong cultural sense of shameness if these morning chores were performed after daybreak as it portrayed laziness and indolence.

During the day, people did whatever the day brought, which generally depended on the mood of the day, the weather, inadvertent communal activities, social group gatherings for *talanoa* or a small project, and family work. As alluded to, time was not so important in the way people carried out their daily activities but getting things done at the earliest was culturally of the essence. With the exception of Sunday, every other day of the week was the same in the sense that people performed their daily activities without concern about whether it was Monday, Wednesday or Saturday. By and large, men traditionally engaged mostly with fishing, cultivation of *pulaka* and *taro* plantations, and cleaning landplots and collecting coconut. Women on the other hand, were occupied mainly with cooking, mat weaving, and sometimes crab hunting in the bush, and collecting shellfish. Furthermore, people also engaged in other substantial work like house construction and canoe making. In such work projects, for instance building a house, men engaged in cutting timber from the bush and the construction work, while women fetched the pandanus leaves for the roof thatch. A major job for women was basically collecting of materials

¹⁵ Toddy is the sap (sweet fluid in the vascular system of the plant) extracted from the coconut’s inflorescence, and can be used as a drink (raw or cooked) or as an ingredient in food and can be fermented as an alcohol drink.

for, and weaving of, mats. If there were community programmes people suspended these routines to participate except cutting toddies, feeding pigs and sweeping the house. In between their daily worklife, people play local games, visit friends and relax as they wish and participate in storytelling in groups of two or more.

Tuvaluans lived for centuries on very limited homegrown foodcrops, mainly *pulaka* (swamp taro—*Cyrtosperma chamissonis*), *taro* (*Colocasia esculenta*) coconut (*Cocos nucifera*), banana (*Musa spp*), breadfruit (*Artocarpus altilis*) and pandanus (monocots genus). As shown in Figure 2.4, the *pulaka* and *taro* were grown in large dug pit plantations made of anthropogenic soils built up using compost over many decades in the water table in the centre of the islands (Iese 2005; Tekinene 2013). Working in *pulaka* and *taro* plantations was a laborious job that required many hours of work. This was mainly men’s work but women sometimes provided support by collecting local fertilizers or compost locally called *kaiao*. Coconut, banana, breadfruit and pandanus were grown on flat ground with little cultivation effort required. Fresh coconut fruit and toddy were the main drinks that supplemented rainwater. Fish was the main source of protein but land crab, pig and poultry were supplements that were mainly seen on Sunday meals or during a special feast.



Figure 2.4: *Pulaka* plantation in Nui.
Source: Author’s own photo.

In modern day Tuvalu however, lives and livelihoods have substantially changed due to external influences. For instance, cutting toddy is no longer a core household chore because many young men do not cut toddy. While feeding pigs remains a chore for some households, others no longer have pigs. The tradition of attending to household chores very early in the morning is rarely seen because people tend to sleep in as a result of staying up too long at night either to watch television, play video games, drink *kava* (a mildly narcotic drink derived from the root of the *kava* plant – piper methysticum), or play bingo games. During weekdays, many adults go to work in paid employment and time is becoming important in their lives. The rest of the people, beside school children, have nothing much to do apart from preparing and cooking food for the day. In fact, today men are hardly seen going to their *pulaka* plantations, collecting coconuts or going fishing because people have greatly changed their food intake preferences to imported food, particularly rice, as well as the fact that these root crops have become difficult to cultivate due to increasing salinity of the soil. Also, afternoon sport is becoming a part of the everyday life of many men and women either to participate in or to watch. Interestingly, these changes are most apparent in Funafuti but the rest of the islands are becoming attuned to these practices as well.

2.9 Conclusion

In this chapter, I described the basic features of Tuvalu that are of importance and relevant to the discussions in the subsequent chapters. Tuvalu's history reveals many interesting myths about its creation and how it was populated. Its geographical configuration and isolation, and its poor natural endowments have placed Tuvalu as one of the smallest nations and one of the least developed countries in the world.

With a growing population mostly concentrated in the capital, there is great concern about social and health issues. Fortunately, with its core sources of income coupled with support from its diplomatic friends, Tuvalu has survived the economic challenges over the 38 years of its independence. The influence of foreign lifestyles is causing a noticeable change to the lives and livelihoods of the people. Despite the many challenges the people already faced from the islands' poor natural

resources and land scarcity, the impacts from climate change and sea level rise are exacerbating the level of concern to an unprecedented height. In fact, the uncertainty that is felt by the people about their future because of these phenomena is in itself disconcerting. In the next chapter, I discuss the core elements of climate change and sea level rise to reveal what it is that causes grave concern and uncertainty to the people of Tuvalu and their future.

CHAPTER III

CLIMATE CHANGE AND SEA LEVEL RISE

Climate change does not respect borders, it does not respect who you are - rich and poor, small and big. Therefore, this is what we call global challenges, which require global solidarity.

(Ban Ki-Moon, Momentum for Change Initiative Conference, Durban, 6 December 2011)

3.1 Introduction

The history of climate change can be traced back through time for hundreds of thousands of years, although our knowledge and ability to understand is only a recent scientific development of the nineteenth through to the twenty-first centuries (Hughes 2010). Scientific findings indicate that the rate of climate change has been amplified by global warming resulting from a human-induced increase in greenhouse gas (GHG) concentrations in the earth's atmosphere. Indeed, the Intergovernmental Panel on Climate Change (IPCC) reports state with confidence that evidence of the warming of the climate system is real. Climate change is a major factor that contributes to sea-level rise, coastal erosion, coral bleaching, ocean acidification, increased frequency of severe storms, devastating flooding, wildfires, pest outbreaks and massive tree deaths (Climate-Institute 2015)¹.

In this chapter, I unpack critical climate change issues relevant to the thesis. I begin with the basic science of climate change covering the physics and chemistry of global warming. The chapter then discusses the evolution of climate change as a topical issue and the convolution of political and policy discourses about this phenomenon. This includes discussions about the development of international efforts to address climate change covering mitigation and adaptation responses. As an integral part of this thesis' focus, sea level rise is discussed in great depth. Moreover, the chapter outlines the impacts of climate change and sea level rise, particularly in the Pacific region. Being the cornerstone of this research, the chapter

¹ The Global Risk Report 2016 reported that climate change has risen to the top of the list of all types of risk and is perceived in 2016 as the most impactful risk for the years to come, and it is ahead of weapons of mass destruction, and water crisis risks (World Economic Forum 2016).

explores the issues of climate change and sea level rise and their impacts in Tuvalu. In doing so, the chapter discusses the Tuvalu Climate Change Policy entitled *Te Kaniva* and the various past, present and future climate change and sea level rise programmes and projects in Tuvalu.

3.2 The science of climate change

The earth's climate system is influenced by many different (natural and anthropogenic) forces. IPCC (2007, p.79) explains that:

[t]he climate system is the highly complex system consisting of five major components: the atmosphere, the hydrosphere, the cryosphere, the land surface and the biosphere, and the interactions between them...evolves in time under the influence of its own internal dynamic and because of external forces such as volcanic eruptions, solar variations and anthropogenic forcings such as the changing composition of the atmosphere and land-use change.

Dow and Downing (2011, p.36) frankly state that earth's climate system functions as a 'giant distribution engine'.

Understanding the science of climate change is therefore extremely difficult. This is because it is a process that requires scientists to journey back thousands and millions of years and then fast forward to the present in order to determine the effect of climate into the future. Before we start the journey of deciphering climate change, it is imperative to understand the difference between climate and weather. The *Oxford Dictionary of English* defines climate as 'the weather conditions prevailing in an area in general or over a long period of time', and the weather as 'the state of the atmosphere at a particular place and time as regards heat, cloudiness, dryness, sunshine, wind, and rain'(Stevenson 2015). The IPCC (2012, p.557) defines climate in a narrow sense as:

[t]he average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period of averaging these variables is 30 years, as defined by the World Meteorological Organization. The relevant quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system.

In short, climate refers to the average weather pattern of a place or planet over a period of time, and its key components are temperature and precipitation (Downie and others 2009). Thus, the difference between climate and weather can usefully be summarised as “climate is what you expect, weather is what you get” (cited in Allen 2003b, p.891).

Evidence is building that human influence is changing our planet’s climate system. Many of the world’s leading scientists argue that the warming experienced since before the beginning of the twentieth century is at least partially anthropogenic in origin (Arrhenius 1896; Clark and Jager 1997; Dow and Downing 2011; Hansen and others 1981). In its Fifth Assessment Report, the IPCC (2013, p.4) concluded that:

Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

The phrase ‘climate change’ is often used interchangeably with the phrase ‘global warming’, though there is an ongoing debate on which phrase is more appropriate (Schuldt and Roh 2014; Villar and Krosnick 2009). Climate change is defined by UNFCCC (Article 1) as ‘a change of climate, which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods’.

Although such definition of climate change is useful, it is imperative to understand its distinctive difference from climate variability as well as extreme weather and extreme climate because there exists widespread confusion among the public and even the scientific community (Hassol and others 2016, p.3). IPCC (2012, p.557) provides a more comprehensive definition of climate change as:

A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal

processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Climate change is the average of the range of fluctuation of the weather in a long period of time. “Average”, “range”, and “timeframe” are important elements in understanding climate change because the mere changes in weather are not what the climate change phenomenon is about. Essentially, climate change is measured on the basis of the range of movement upward/downward of the temperature in a given place that is averaged out on a given timeframe of not less than 30 years.

Climate variability, on the other hand, is defined by IPCC (2012, p.557-558) as:

The variations in the mean state and other statistics (such as standard deviations, the occurrence of extremes, etc.) of the climate at all spatial and temporal scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

In simple terms, climate variability is the upward and downward movement of the climate over seasons and years instead of day-to-day like the weather. Figure 3.1 provides a graphical illustration of the distinction between climate change and climate variability. The variety of data points of temperature above and below the long-term mean is climate variability. The upward sloping black line indicates a warming trend from 1896 to 2008, which is climate change. While the distinction may be useful, it is arbitrary, as it is ultimately depends on context (Oglesby 2009). Nonetheless, the bottom line is that climate change is not the same as climate variability although the former ‘is inevitably resulting in changes in climate variability’ (Thornton and others 2014, p.3314).

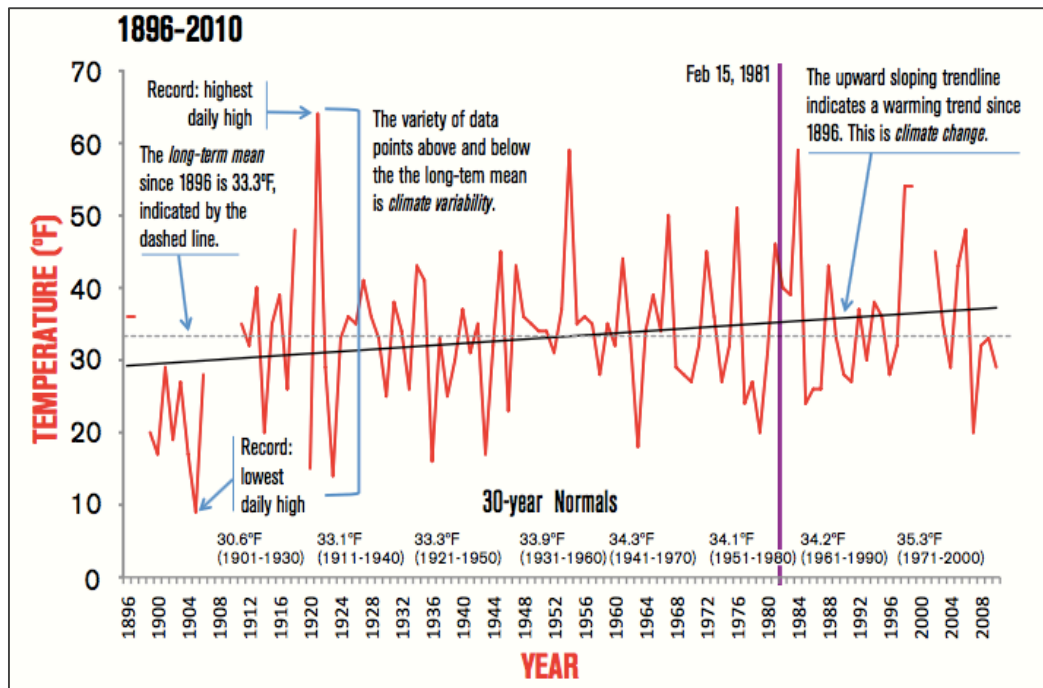


Figure 3.1: Graphical description of climate variability and climate change. Source: Dinse (2013). Used with permission.

In addition, climate extremes are the weather extremes such as floods, droughts and heat waves that ‘persist for some time, such as a season, especially if it yields an average or total that is itself extreme’ (IPCC 2013, p.134). In a more simplistic way, if a single day is recorded as the hottest in a year or in a longer timeframe it is called weather extreme. If the level (or thereabout) of temperature of that hottest day continues for weeks and months, generally causing no rain or drought, it becomes a climate extreme. These extreme events are not necessarily in themselves climate change although they may attribute to climate change if they recur more often in decadal or longer periods.

3.2.1 The physics behind climate change

Earth’s temperature is key to understanding climate change. As in Figure 3.2, the earth’s temperature that we know today comes from solar ultraviolet radiation that is absorbed by the earth surface. The short wavelength from the sun radiates about 340 watts of solar power per square metre of the surface of the earth. About 30 per cent of this solar energy is reflected back to space by the atmosphere and clouds before it reaches the earth surface leaving an average of 240 watts to be absorbed by each square metre (Houghton 2004, p.21). The solar radiation that reaches the

earth surface is converted to heat energy, therefore warming the earth surface. The earth then emits thermal radiation, also known as long wavelength or infrared radiation, back to the atmosphere and outer space. In the process, some of the thermal radiation is lost into space and some is trapped by certain gases that exist in the atmosphere. The trapped thermal radiation is then re-emitted back to earth making ‘the average air temperature at the ground level about 15°C---roughly 33°C higher than the surface temperature of the Earth would be otherwise’ (Ross 1991, p.176). The gases in the earth’s atmosphere are known as ‘greenhouse gases’² (GHGs). Details of these gases are discussed in the next sub-section.

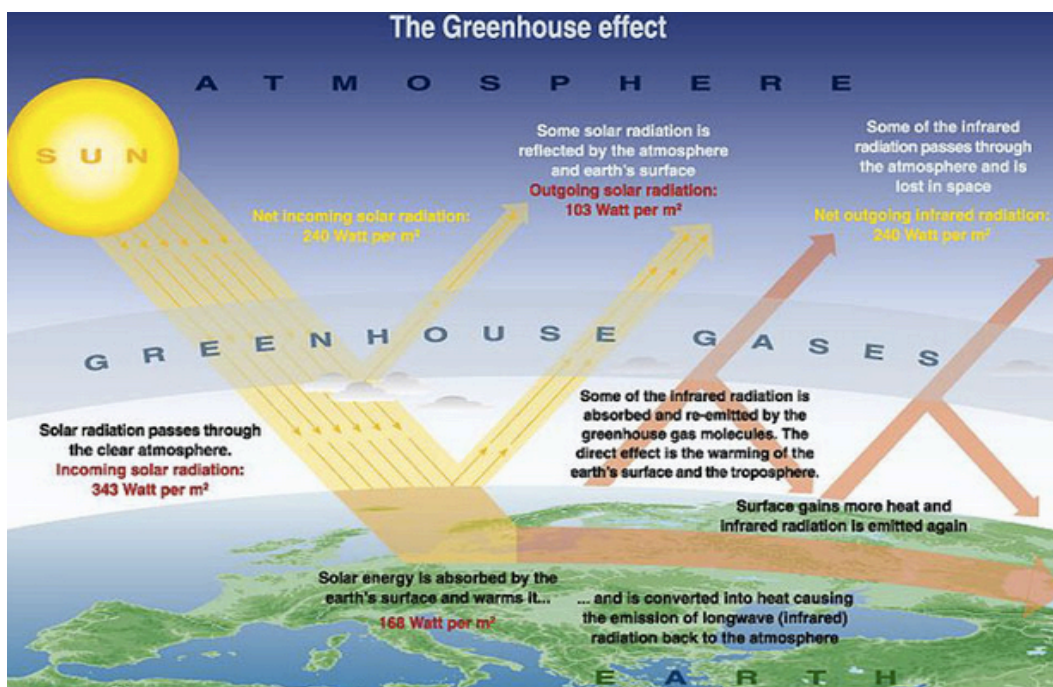


Figure 3.2: Model of greenhouse effect.
Source: IPCC Working Group 1 Report, 1996.

3.2.2 *The chemistry behind climate change*

As briefly revealed in the preceding section, greenhouse gases and their effects on the Earth’s climate system are of utmost importance. They are an integral component of the Earth’s climate system (Hansen and others 1981). If it was not for greenhouse gases, the Earth’s temperature would be too cold for most living

² The greenhouse gas is a concept that attributed to findings of scientists like Fourier (1768-1830), Pouillet (1791-1868), Tyndall (1820-1893), and Arrhenius (1859-1927). Basic information of these scientists’ findings are eloquently provided by Gray (2013).

organisms, including humans. Early climate scientists like Arrhenius (1896) found that greenhouse gases are predominantly carbon dioxide, methane, and water vapour. Subsequent scientific findings reveal that other gases that made up greenhouse gases³ are nitrous oxide, ozone, chlorofluorocarbons, and sulphur hexafluoride.

These greenhouse gases' lifespan in the atmosphere varies from a few years to a hundred years or longer because of the differences in their compound configurations. While some greenhouse gases have a half-life of several decades, the half-life of carbon dioxide is in the order of a century (Climate-Institute 2015). Therefore, most of the carbon dioxide we release today will linger in the atmosphere until 2100 and beyond. In terms of warming potential, many of these greenhouse gases, such as methane, contribute many times more to the greenhouse effect than carbon dioxide. However, the sheer volume of carbon dioxide in the atmosphere that has accumulated over time makes it by far the largest contributor to anthropogenic greenhouse warming, a trend that the majority of climate scientists uphold (Hansen and others 1981; Houghton 2004).

Over the past two and one-half centuries the concentration of carbon dioxide in our atmosphere has increased about 40 per cent, from a pre-industrial level of about 280 ppmv (parts per million by volume) to a current level of about 388 parts per million by volume (Dow and Downing 2011; IPCC 2013). More intriguingly, the IPCC AR5 revealed, as shown in Figure 3.3, that each of the last three decades has been successively warmer than any preceding decade since 1850 (IPCC 2013, p.12). Increased carbon dioxide concentrations were primary caused by burning of fossil fuels such as oil, natural gas, and coal, primarily for electricity generation, transportation, heating and cooling (Dow and Downing 2011)⁴.

³ These gases' molecules have three or more atoms that have the capacity to capture outgoing infrared energy from earth or not allow infrared rays to escape the earth's atmosphere into space. In contrast, molecules of gases like oxygen and nitrogen that only have two atoms are not considered greenhouse gases because they do not have the ability to trap thermal radiation from earth (Climate-Institute 2015; Wuebbles and others 1989).

⁴ IPCC WG1 AR5 (2013) reported that from 1750 to 2011 fossil fuel combustion and cement production have released 375 giga tonnes of carbon (GtC) and deforestation and other land use have been estimated to have released 180 GtC. Other gas emissions accounted for about 240 GtC.

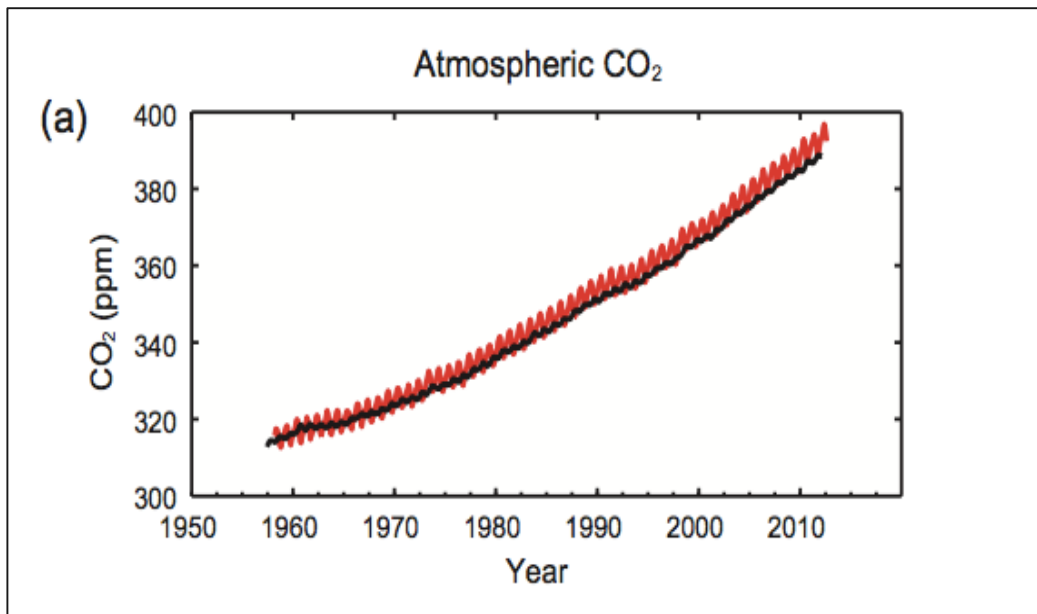


Figure 3.3: Atmospheric concentration of carbon dioxide 1960 – 2010.

Source: IPCC AR5 (2013, p.12).

Deforestation plays a significant role in carbon dioxide that is released into the atmosphere. By definition, deforestation is the ‘conversion of forest to non-forest’ (IPCC 2007, p.79) or permanent destruction of the forest. There are two main forms of deforestation; logging of timber and forest fire (Lewis 1998). However, ‘large-scale agriculture (e.g. cattle ranching, soybean production, oil palm plantations), small-scale permanent or shifting (slash-and-burn) agriculture, fuel wood removal are other forms of deforestation’ (Gorte and Sheikh 2010, p.(i)), though traditional shifting cultivation in many parts of the world and the Pacific was sustainable. The permanent destruction of the forest, particularly tropical deforestation as opposed to boreal and temperate deforestation⁵ can significantly increase the amount of carbon dioxide released to the atmosphere from land use changes (IPCC 2007). Deforestation accounts for about 17 per cent of all anthropogenic GHGs (Gorte and Sheikh 2010).

Moreover, methane is another major GHG that contributes about 16 per cent of the total global GHGs (Karakurt and others 2012). Although methane does not stay

⁵ Deforestation of boreal forests which are generally occurred north of about 50° north latitude, accounting for a third of world forest; and temperate forests which mainly lie north of the Tropic of Cancer to about 50° north latitude and south of the Tropic of Capricorn and account for a quarter of global forest (Gorte and Sheikh 2010).

longer in the atmosphere compared to carbon dioxide, its absorption capacity of infrared radiation is relatively stronger than carbon dioxide. Its main sources come from (i) natural emission of fossil methane from geological sources such as marine and terrestrial seepages, and mud volcanoes, and (ii) emissions caused by leakages from fossil fuel extraction and use like natural gas, coal and oil industry (IPCC 2013, p. 473). Other methane emission comes from rice paddy agriculture, ruminant livestock, landfills, human-made lakes, and wetlands and wastewater treatment (IPCC 2013, p.473).

Recent scientific findings show that greenhouse gases are not the only chemical agents contributing to the warming of earth’s surface. In recent years increasing attention has focused on the role of black carbon aerosol particles in contributing to Earth’s warming. Black carbon aerosols are “soot”, a by-product of incomplete combustion of fuels. Black carbon influences climate through multiple mechanisms. As indicated in Figure 3.4, it absorbs incoming and outgoing radiation of all wavelengths, which contributes to warming of the atmosphere. Deposits of black carbon on snow and ice darkens the surface and decreases reflectivity (albedo) thereby increasing absorption and accelerating melting of ice caps (US Environment Protection Agency 2012). Unlike many greenhouse gases however, black carbon aerosol particles have a very short lifetime in the earth’s atmosphere, typically only residing in the atmosphere for a few days to a few weeks (Climate-Institute 2015).

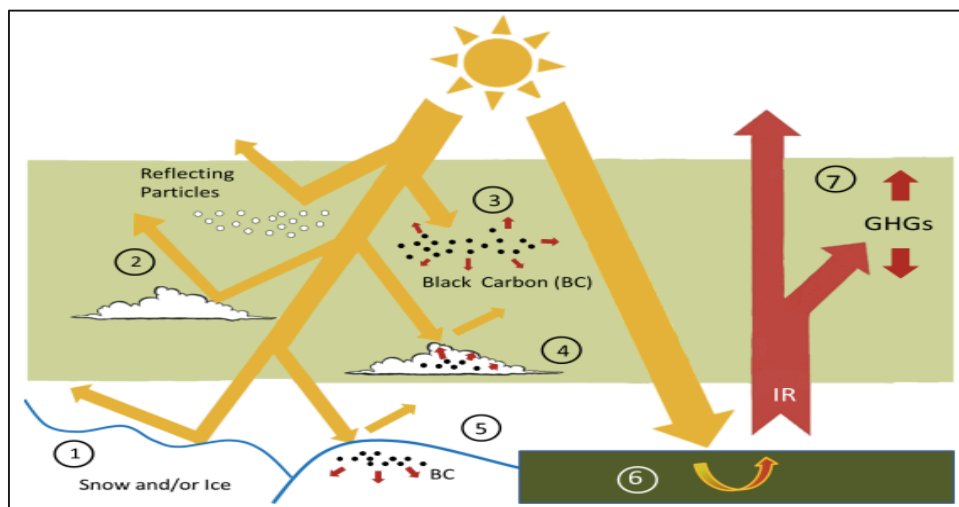


Figure 3.4: Effects of black carbon aerosol on global warming.
Source: US Environment Protection Agency.

3.3 The science of sea level rise

Directly associated with climate change, sea level rise has been observed to be increasing rapidly in the last few decades. The IPCC AR5 states with high confidence that ‘[t]he rate of sea level rise since the mid-nineteenth century has been larger than the mean rate during the previous two millennia. Over the period 1901 to 2010, global mean sea level rose by 0.19 [0.17 to 0.21] m’ (IPCC 2013, p.11). There are a number of factors contributing to sea level rise, as shown in Figure 3.5, but the most significant ones are thermal expansion and melting ice. IPCC (2013, p. 11) estimated with high confidence that the combined effect of thermal expansion and melting ice account for about 75 per cent of the observed global mean sea level rise. Adding all sea level rise factors together for a specific period of time, IPCC reported that from 1993 to 2010, the global mean sea level rise was about 2.8 [2.3 to 3.4] mm yr⁻¹.

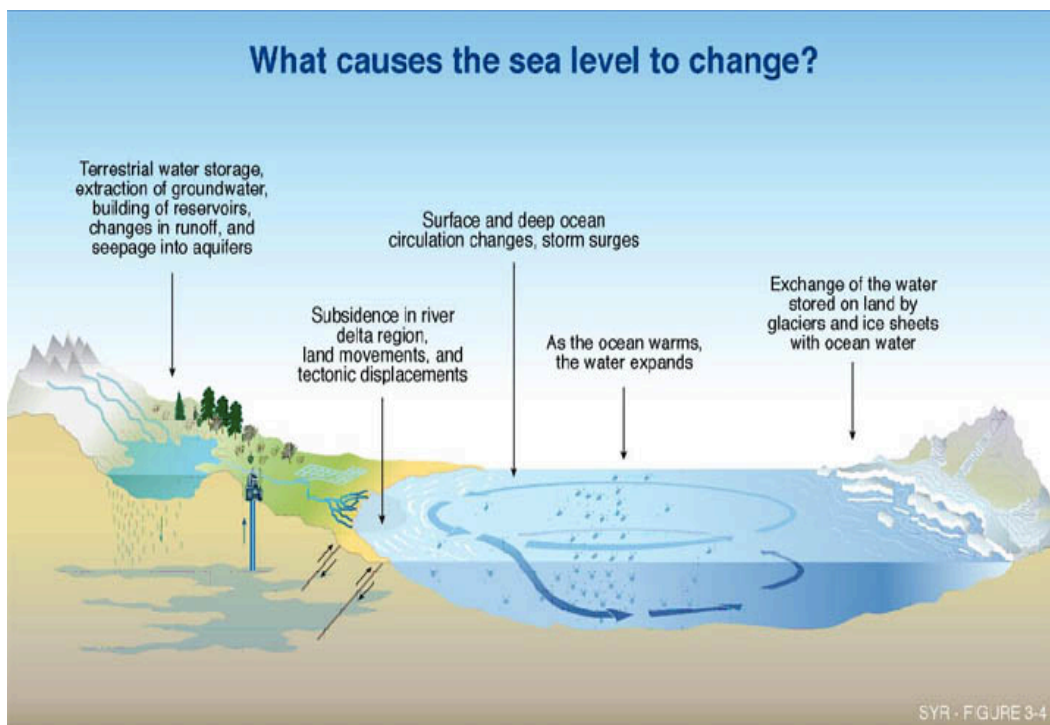


Figure 3.5: Causes of sea level rise from climate change.
Source: Rekacewiz and UNEP/GRID-Arendal (2005).

3.3.1 Thermal expansion

Thermal expansion is the increase in size of the seawater when the ocean gets warmer. It is analogous to water in a kettle, which increases in volume when it is boiled. Since the oceans absorb more solar radiation than land, as they warm the

density decreases and the volume of the oceans expand. The expansion of water in a given heat is more acute in oceans at higher temperature level or under greater pressure. The alteration of the ocean density structure, with consequent effects on ocean circulation, caused by the modified surface momentum, heat and water fluxes is the principal determining factor of the geographical distribution of sea level change. Further, the salinity changes though have little effect; at the global sea level change they do have a major impact on the local density of the ocean and therefore at the local sea level (IPCC 2013). Calculation of the precise amount of expansion is complex because it depends largely on the water temperature. Some scientists assert that thermal expansion accounts for one-third (Houghton 2004, p.146) while others such as Nicholls and Cazenave (2010, p.1517) suggest that thermal expansion accounts for about 25 per cent of the observed sea level rise since 1960 and about 50 per cent from 1993 to 2003.

3.3.2 Melting ice caps

Ice caps or ice sheets form in areas where snowfall in winter does not melt entirely over summer. The growth or decay of ice sheets are the net effect of snowfall and melting snow (Houghton 2004). Over thousands of years the layers of snow pile up into thick masses of ice. Most of the ice sheets or glacial land ice are found in Greenland and Antarctica as well as at high land elevations such as the Himalayas in South Asia. Ice caps are an important source of freshwater. The Antarctica and Greenland ice sheets contain more than 99 per cent of the freshwater ice on earth⁶.

The increase in global warming has caused these ice caps to melt thus pouring additional volumes of water into the ocean. Melting ice caps have contributed about 30 per cent of sea level rise from 1993 to 2009 (Nicholls and Cazenave 2010). IPCC (2013) shows that the Greenland ice sheet contributed about 0.76 [0.39 to 1.13] mm yr⁻¹, Antarctica ice sheet about 0.76 [0.16 to 0.38] mm yr⁻¹, and other land water storage such as the Himalayas about 0.38 [0.26 to 0.49] mm yr⁻¹.

⁶ See the US National Snow & Ice Data Centre for details of freshwater ice: <https://nsidc.org/cryosphere/quickfacts/icesheets.html>

3.4 Impacts of climate change and sea level rise in the Pacific

Consequential effects of the increased global temperature causing climate change and sea level rise have been experienced in all parts of the globe. IPCC Reports consistently highlight that natural and human systems on all continents and across the oceans have been affected in varying degrees. Changing precipitation together with melting snow and ice are altering hydrological systems affecting water resources. Many terrestrial, freshwater and marine species have shifted their geographic ranges, seasonal activities, migration patterns, and other responses to ongoing climate change. Negative impacts on crop yields and human health from climate change have been noticed though there are other stressors involved. The multifaceted impacts of climate change and sea level rise have significantly disturbed human lives and livelihoods and the ecosystems with which they live (IPCC 2014). This section discusses the impacts of climate change and sea level rise in the Pacific regional context.

The Pacific region is not immune to the adverse impacts of climate change and sea level rise. It is well established that climate change poses serious risks to the wellbeing of Pacific Island peoples (Mimura and others 2007). Composed of 22 island states and territories, the total land area of the Pacific is 551,312 km² spread across 165 million km² of ocean. This vast region is home to about 10 million people (UNFPA Pacific Sub-regional Office 2014). Pacific island states and territories have different topographical structures. Most of the islands are located within the tropical cyclone belt and are affected by El Niño South Oscillation (ENSO) that exposes them to droughts, with some also vulnerable to earthquakes, tsunamis and volcanic activity (Nunn and others 2014).

Irrespective of their topographical structures and geographical situations, increases in mean and extreme air and ocean temperatures, rising sea levels, changes in precipitation and the intensity of extreme climate events (Mortreux and Barnett 2009) mean that the Pacific region is very much exposed to the impacts of climate change. These climate change impacts⁷ are in turn likely to drive changes in the

⁷ These include coastal erosion and inundation, coral bleaching, changes in fisheries distribution and abundance, saline contamination of freshwater and soils, increasing risk of disease, and declining agricultural productivity.

ecosystems upon which Pacific Island peoples depend for their livelihoods and cultures (Mortreux and Barnett 2009). While they are particularly exposed to climate change, the degree of vulnerability varies and is contested (Barnett 2001).

Given the high ratio of coastline to land area in the Pacific island states and territories coupled with the fact that most coastlines consist of soft materials such as sand and sediments (Barnett 2005), sea level rise impacts on the physical environment may be huge. Coastal erosion and inundation is happening in all the 22 states and territories (Nunn and others 2014) and is more acute in low-lying atolls (Webb and Kench 2010; Woodroffe 2008). In Kiribati, Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI) high sea level and swells have caused displacement of people internally (Burson 2010). Even in high tropical islands such as Kauai, Oahu, and Maui, in Hawaii, chronic coastal erosion predominates with over 75 per cent of beaches being eroded (Romine and Fletcher 2013). Coastal flooding and seawater intrusion causing contamination of arable land and groundwater have affected crops and vegetation which was experienced in FSM and RMI in 2007 and 2008 respectively (Gordon-Clark 2012, p.54). Similarly, in Solomon Islands salt water intrusion in 2008 caused major contamination of freshwater aquifers (Webb 2008 cited in Burson 2010).

The rapid increase in coral bleaching and reduced reef calcification rates due to thermal stress, increasing carbon dioxide concentration and ocean acidification have devastating effects for coastal fisheries on small islands in the Pacific where reef-based subsistence activities are critical to the wellbeing of people (IPCC 2014). In the Phoenix Islands of Kiribati, unprecedented bleaching events have resulted in 100 per cent coral mortality in the lagoon and 62 per cent mortality on the outer leeward slopes of the otherwise pristine reefs of Kanton Atoll (Alling and others 2007). Kimbe Bay in Papua New Guinea has experienced a decline in reef fish (Jones and others 2004), and larval supply of coral reef fisheries in Rangiroa Atoll, French Polynesia, has been lagging due to sea surface temperature anomaly events (Lo-Yat and others 2011).

3.5 Global and regional climate change processes

Global and regional climate change political and policy processes are as complex as the climate system itself. The spread of climate change from the scientific sphere to political and policy circles has been rapid, making the whole process a multifaceted one. This section examines the core institutional processes through which climate change negotiations have been carried out, and discusses the ups and downs of the negotiation progress to date.

3.5.1 UNFCCC

The United Nations Framework Convention on Climate Change (UNFCCC) was endorsed during the United Nations (UN) Conference on Environment and Development that was held in Rio de Janeiro, Brazil in May 1992. The UNFCCC core objective was the:

stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner (UNFCCC Article 1).

The Convention segregated countries into Annex 1 Parties, non-Annex 1 Parties, and Annex II Parties with differing responsibilities and commitments⁸. The Convention also gave special recognition to the 49 UN Least Developed Countries (LDCs) due to their limited capacity to address and respond to climate change issues. The division of members into these three or four categories was based on a number of factors, but mainly on their level of emission and status of economic development. This categorisation also gives them different levels of commitment in terms of emission reduction pledges and responsibility in terms of financial considerations, among other things. While this divisive mechanism has its own merits, it is one of the attributing factors that triggered political disagreement

⁸ The Annex 1 Parties includes industrialized countries, non-Annex 1 Parties are developing and under developed countries, and Annex II Parties consisted of some Annex 1 Parties that are required to provide financial resources to enable developing countries to undertake emission reduction activities.

among countries, resulting in the prolonged negotiations over various instruments and programmes of UNFCCC to this day.

The implementation of the UNFCCC is carried out through a multifaceted process. At the highest level is the Conference of Parties (COP), the decision-making body, which meets annually to review the implementation of the Convention and any other related legal instruments. There are 195 member states and one regional economic integration organisation (EU) that are parties to the UNFCCC. In addition, there are 1,598 non-government organisations (NGOs) and 99 inter-government organisations (IGOs) that also participate in COP as observers. The next level down is the Conference of Parties serving as the Meeting of Parties to the Kyoto Protocol (usually referred to as CMP), which excludes those who are not parties to the Kyoto Protocol. I discuss this in the next paragraph. There are 192 parties to the CMP. Its main function is to review the implementation of the Kyoto Protocol. CMP meets annually alongside the COP meetings. Below these two main levels are the Subsidiary Bodies, Ad Hoc Working Groups, Bureaus of the COP and CMP, and a range of committees. In between annual COP/CMP there are inter-sessional meetings where most of the technical deliberations take place.

Since the first COP that was hosted in Berlin, Germany in 1995, the progress of negotiations has been rather slow and daunting. While all 22 COPs that have been held thus far produced some outcomes, only a few have had significant results with the Copenhagen COP in 2009 being the least successful. One of the first significant achievements in the UNFCCC process was the establishment of the Kyoto Protocol during COP3 that was held in Kyoto, Japan in 1997. The Protocol was the first significant legal instrument that operationalised the Convention and prescribed the commitments of Annex 1 Parties based on the principle of “common but differentiated responsibilities”. The Protocol did not come into force until 2005 due to its complex ratification process. The COP13/CMP3 in Bali in 2007 was another milestone undertaking, which resulted in the adoption of the Bali Road Map. This is an instrument that was forward-looking and also contains the Bali Action Plan that provides for the long-term visions on mitigation, adaptation, technology and financing. The COP16/CMP6 in Cancun, Mexico in 2010 culminated in the adoption of the Cancun Agreement; the most comprehensive package ever agreed

by governments to help developing nations deal with climate change. As alluded to above, COP15/CMP5 that was held in Copenhagen raised climate change policy to the highest political level because, for the first time, some 115 heads of governments, and around 40,000 people attended. Although it produced the Copenhagen Accord, it was the most criticised COP because it failed to reach the desired level of expectation and parties did not agree to meet commitments under Kyoto Protocol. It is a COP that ‘at one level it can be regarded as a step forward and at another it can be dismissed as a political failure’ (Sinha 2010, p.865). COP 21 in Paris in 2015 is thus far the most successful one. I discuss it in detail in a later section.

3.5.2 IPCC

The Intergovernmental Panel on Climate Change (IPCC) was first proposed to be established during the World Climate Change Conference 1 (WCC1) in 1979 under the joint sponsorship of the World Meteorological Organisation (WMO) and United Nations Environment Programme (UNEP). This did not eventuate until 1988, when it was also endorsed by the United Nations General Assembly (UNGA). IPCC’s main function is to review and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It does not conduct any research, nor does it monitor climate related data or parameters. IPCC’s work is fuelled and supported by thousands of scientists from around the world. As an intergovernmental body, IPCC is open to all UN member countries and currently has 195 members.

Three major Working Groups and a Task Force carry out the IPCC’s work. Working Group I (WGI) handles work relating to the “physical science basis” of climate change⁹. Working Group II (WGII) deals with “climate change impacts, adaptation and vulnerability”¹⁰. Working Group III (WGIII) is responsible for work

⁹ WGI basically assesses the changes in greenhouse gases and aerosols in the atmosphere; observed changes in air, land and ocean temperatures, rainfall, glaciers and ice sheets, oceans and sea level and so forth.

¹⁰ WGII mainly looks at vulnerability of socio-economic and natural systems to climate change; options for adaptation, and relationships between vulnerability, adaptation and sustainable development, etc.

on “mitigation of climate change”¹¹. Since its establishment, the IPCC has produced five Assessment Reports (1991, 1996, 2001, 2007 and 2014). The Task Force on National Greenhouse Gas Inventories (TFI) was established to oversee, develop and refine internationally agreed methodology and software for the calculation and reporting of GHG emissions. These groups are supported by technical group units (TGU), which are appointed on an ad hoc basis and operate under the leadership of the IPCC chair.

Despite its comprehensive structural set up and the wide wisdom upon which it operates, IPCC has faced constant challenges to its political and policy processes. The science-policy nexus internal to IPCC has ‘sparked significant controversy and criticism with regards to the credibility of its interpretations and products’ (Shaw and Robinson 2004, p.84). At one end of the spectrum, the involvement of government delegations in the process which are driven by their own domestic agendas portrayed negatively on IPCC’s work. At the other end, scientific deniers of climate change such as Fred Singer and Richard Lindzen claimed that the models used by IPCC have not been validated with real-world observations and are therefore not accurate (Welsch 2011). Through the years, and as there is increasing confidence in data and modelling systems, the critics of the IPCC have subsided, at least within the scientific community. However, there are critiques about the dominance of science in the IPCC process.

3.5.3 AOSIS and other coalitions

The web of groups involved in climate change processes is wider than the UNFCCC COP/CMP and IPCC. Having different and diverse interests in climate change negotiation, many parties to the UNFCCC have formed groups of different sizes through which they solicit views and ideas of common interest to them for consideration by the COP/CMP and even IPCC.

Many of these groups, as outlined in Figure 3.6, have overlapping interests and thus each country has one or more groups to which they belong. Recognising the disproportionate exposure of their territories and populations to the negative

¹¹ WGIII generally deals with the assessment of options for mitigation through limiting and preventing greenhouse gas emissions, taking into account relevant economic sectors.

impacts of climate change, the Alliance of Small Island States (AOSIS) was formed in 1990 with the ultimate aim to defend island interests in UNFCCC negotiations (Betzold and others 2012). AOSIS has a membership of 44 states drawn from regions in Africa, Caribbean, Indian Ocean, Mediterranean, Pacific and South China Sea.

Thirty-nine of its members are also members of the UN. Since its establishment AOSIS has made significant impacts on the UNFCCC process. Despite its small and relatively powerless status, AOSIS has managed to exert a profound and continuing influence on global climate policy (Betzold and others 2012; Davis 1996). Indeed, AOSIS has made certain remarkable achievements such as the successful securing of seats in the prominent UNFCCC negotiation bodies such as the Bureau, Executive Board of the Clean Development Mechanism (CDM),¹² Adaptation Fund (AF),¹³ and Green Climate Fund (GCF)¹⁴. AOSIS also has a strong moral leverage in the negotiation processes because of the extreme exposure of its members to the impacts of climate change (Betzold and others 2012). Such moral leverage has helped AOSIS forge coalitions with more powerful groups of countries such as the EU and G77/China (Larson 2003). While its main focus remains on climate change negotiation, AOSIS has somewhat broadened its scope of work (Fry 2005).

¹² CDM is an environment investment and credit scheme that provides a standardised emissions offset instrument, which stimulates sustainable development and emission reductions, while giving industrialised countries some flexibility in how they meet their emission reduction and limitation targets, established by Article 12 of the Kyoto Protocol (UNFCCC website).

¹³ AF is a fund established in 2001 to finance concrete adaptation projects and programmes in developing country parties to the Kyoto Protocol that are particularly vulnerable to the adverse impact of climate change (UNFCCC website).

¹⁴ GCF is a fund established at the Cancun COP16 to operationalise the financial mechanism of the UNFCCC under Article 11 (UNFCCC website), to limit or reduce greenhouse gas emissions in developing countries, and to help adapt vulnerable societies to the unavoidable impacts of climate change (GCF website).

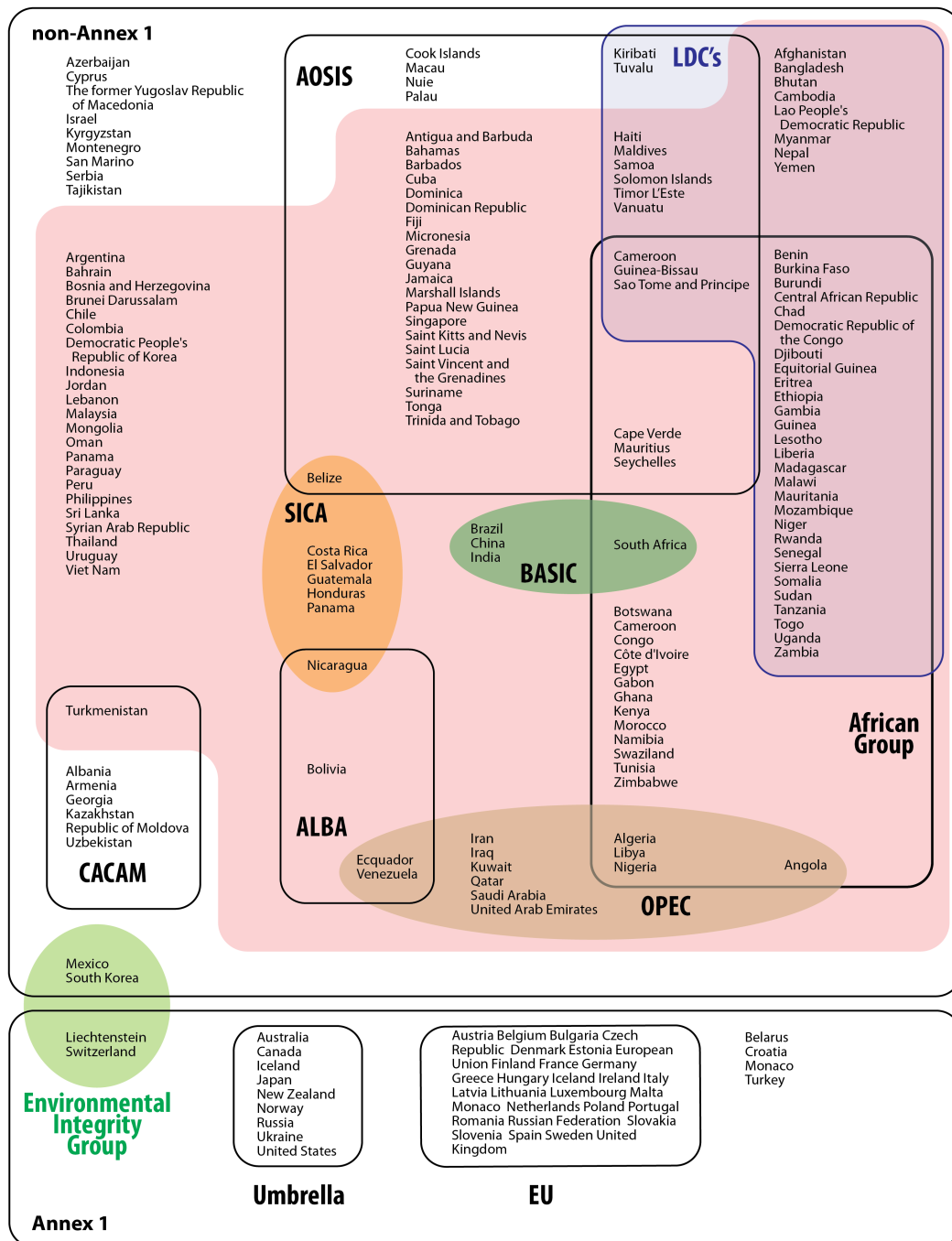


Figure 3.6: Country coalitions within the UNFCCC.

Source: Adapted from Castro and others (2011) and graphically enhanced by Max Oulton, Geography Department Cartographer, University of Waikato.

3.5.4 Pacific regional climate change processes

Alarmed by the threat of climate change and sea level rise, Pacific Island Countries (PICs) have actively worked as a region to express their grave concern through participation in various climate change forums. While PICs are members of other climate change groups such as AOSIS, LDCs and G77 where their interests are also

being voiced, PICs through their regional institutions and processes are also working together to ensure the safety of the region from the impacts of climate change is well addressed. At the political level, regional decisions on climate change are generally coordinated through the Pacific Islands Forum Secretariat (PIFS).

Every year leaders of PIF meet to discuss various regional issues, and climate change has been one of the key agenda items¹⁵. In 2009 for instance, Pacific leaders made a “Call to Action on Climate Change”, as Annex A to their Forum Communiqué, in the lead up to the Copenhagen COP (Pacific Islands Forum Secretariat 2009). Likewise, in 2013, PIF leaders made a declaration as Annex 1 to their Communiqué entitled “Majuro Declaration for Climate Leadership” as partly given below:

We, the Leaders of the Pacific Islands Forum, underline the need for urgent action at all levels to reduce greenhouse gas emissions commensurate with the science and to respond urgently and sufficiently to the social, economic and security impacts of climate change to ensure the survival and viability of all Pacific small island developing States, in particular low-lying atoll States, and other vulnerable countries and regions worldwide (Pacific Islands Forum Secretariat 2013).

PICs have established a number of climate change regional policies and initiatives coordinated by the Pacific Islands Forum Secretariat (PIFS), Secretariat of the Pacific Community (SPC), and the Secretariat of the Pacific Regional Environment Programme (SPREP). For example, in 2011 SPC released its internal climate change engagement strategy for 2011 – 2015 containing three major strategic outcomes (Burson 2010, p.29):

- (i) Strengthened capacity of Pacific Island communities to respond effectively to climate change
- (ii) Climate change integrated into SPC programmes and operations
- (iii) Strengthened partnerships at the regional and international level

¹⁵ See detailed discussion of the region’s climate change processes in Barnett, J. and Campbell, J.R., 2010, *Climate change and small island states: Power, Knowledge, and the South Pacific*, London, England, Earthscan.

As I write this thesis, these regional bodies together with other technical regional institutions such as the University of the South Pacific (USP) have solidified their efforts by undertaking to consolidate a more comprehensive climate change framework for the region. The framework entitled “Framework for Resilient Development in the Pacific: An integrated approach to address climate change and disaster risk management 2017-2030” contains three main goals, namely:

- (i) Strengthened integrated risk reduction and adaptation to enhance climate change and disaster resilience;
- (ii) Low-carbon development; and
- (iii) Strengthened disaster preparedness, response and recovery

Moreover, leaders of PICs also voice the region’s concern about climate change at most conferences they attend. For instance, the Tuvalu Prime Minister Hon. Bikenibeu Paeniu represented PICs at the Second World Climate Conference in 1990 and gained world attention after delivering a very powerful statement (Zillman 2009). Similarly, in 2014, Hon. Tangariki Reete, Minister for Women, Youth and Social Affairs of Kiribati speaking on behalf of the PICs at the 58th United Nations Commission on the Status of Women (UNCSW) in New York, underscored the vulnerability of PICs to the adverse impacts of climate change, especially women, and stressed the need for political will to make optimal decisions.

At national level, all PICs have their own policy documents¹⁶ that reflect their visions and missions on climate change. Generally, PICs’ climate change policies outline their individual states’ concerns about the impact of climate change they are experiencing, and beseeching developed and developing countries to take positive actions. This call for positive actions involves seeking support for their mitigation and adaptation programmes. Each PIC is implementing at least one or two climate change related projects funded either under multilateral funding mechanisms or through bilateral aid funds. For instance, all PIFS members received around US\$4m from the Pacific Environment Community (PEC) Fund from the Government of

¹⁶ For example, the Fiji National Climate Change Policy 2012, Nauru 2015 Framework for Climate Change Adaptation and Disaster Risk Reduction known as “Ankiwid ekekeow,” and Tuvalu National Climate Change Policy 2012 called *Te Kaniva*.

Japan to assist with their renewable energy and water projects for the period 2010-2013. Similarly, they are enjoying support under the Global Climate Change Alliance (GCCA) fund for their adaptation projects, which are separately administered by the SPC and the University of the South Pacific. Indeed there are a number of other projects such as the Pacific Adaptation to Climate Change (PACC), which have benefited PIF members.

3.6 Climate change core themes: Mitigation and adaptation

While the climate change web of processes is multidimensional making it difficult to understand and complex to deliver, it filters down to two main issues: mitigation and adaptation. This section unbundles these two core elements of climate change processes.

3.6.1 Mitigation: Kyoto Protocol and Paris Agreement

Mitigation is central to UNFCCC processes. Addressing the increase in global temperature is but to lessen the effect of what causes it, which is to mitigate. In fact, UNFCCC's (1992) ultimate objective is the 'stabilization of greenhouse gases in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (Article 2). In the context of climate change, mitigation has been defined by IPCC in varying ways but all are related to the notion of trying to limit or control greenhouse gases emissions to an acceptable level. In its AR5 Annex 1, IPCC defined mitigation as '[a] human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs)' (Allwood and others 2014, p.1266).

Mitigation takes a number of approaches, but all are directed to reducing the amount of GHGs emitted into the atmosphere so that concentrations do not exceed an irreversible level, which most IPCC reports suggest is 1.5 degree Celcius above pre-industrial levels. Nonetheless, these approaches can be categorised in two broad categories. On one side of mitigation is the reduction approach involving measures to cut GHG emissions, particularly of carbon dioxide, by investing in renewable energy and other new carbon dioxide reduction technologies. On the other side is the prevention approach that is focussed on preventing the atmospheric build up of

GHGs by enhancing sinks and reservoirs, especially for carbon dioxide, by such measures as afforestation and reforestation¹⁷, and technological methods such as carbon capture and storage¹⁸. Efforts to achieve the mitigation targets have been a major challenge since negotiations began but IPCC (2014) notes that it is still possible if there is an integrated approach to decarbonise energy supply, reduce net emissions and enhance carbon sinks.

The Kyoto Protocol and Paris Agreement are the two main global instruments that have legal effects on mitigation efforts. Formulated out of complex processes of international negotiation and scientific findings, the Kyoto Protocol, which was finally completed in 1997, was the first to operationalise the UNFCCC. There are two main objectives of the Protocol: to reduce greenhouse gas emissions by at least 5 per cent of 1990 levels in Annex I parties, and encourage transfer of green technologies amongst countries. Strategically, the implementation of these two goals was engineered in a way that considered the “common but differentiated responsibilities” of parties. Envisioning the way to achieve its two goals, the Protocol used a combination of greenhouse gas reduction commitments for Annex 1 countries and three flexibility mechanisms, namely emissions trading, joint implementation, and the clean development mechanism (Napoli 2012). The Kyoto Protocol had two commitment periods – 2008 to 2012 and 2012 to 2020.

Despite efforts to implement the Kyoto Protocol, it failed to produce the expected outcome at the end of its lifetime. Many countries did not meet their emissions reduction targets and no agreement was reached for the second commitment period. The failed outcome of the Copenhagen COP in 2009 exacerbated worries about whether this tug-of-war geopolitical game would ever conclude with a meaningful mitigation regime. This, as some analysts argued was due to processes, characterised by universal representation and consensus-based decision-making, that were fundamentally flawed (Dubash and Rajamani 2010).

¹⁷ Afforestation and reforestation involve the planting of trees in places where there were no trees before and the replanting of forests that have been cut respectively. See Trabucco and others (2008) for more information on climate change mitigation through these two methods.

¹⁸ It is a technological mitigating innovation where carbon dioxide is captured from ‘flue gas power plants and is compressed into supercritical fluid and then injecting it into deep saline aquifers for long-term storage’ (Szulczewski and others 2012).

Notwithstanding all the dilemmas in the previous two decades, COP21 in Paris, France in 2015 finally ended the long battle of negotiation for consensus with a legally binding agreement. It was a remarkable achievement as 195 countries agreed on 12 December 2015 to the text of what became known as the “Paris Agreement”. With the momentum kicking strongly, the Paris Agreement was put up for signature on 22 April 2016 at the UN Headquarters in New York and 175 countries signed. On 5 October 2016 the threshold¹⁹ for entry into force of the agreement was reached and it came into force on 4 November 2016. Mitigation is a fundamental element of the Paris Agreement as stipulated under Article 2:

This Agreement...aims to strengthen the global response to the threat of climate change...by (a) holding the increase in the global average temperature to well below 2° Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5° Celsius pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.

Following the success of COP21 in Paris, UNFCCC parties swiftly took further action during COP22 in Marrakech in 2016 to ensure smooth and speedy implementation on mitigation being followed through. As enshrined in the Marrakech Action Proclamation For Our Climate and Sustainable Development, leaders of COP 22 declared that, among other things, ‘our task now is to rapidly build on that momentum, together, moving forward purposefully to reduce greenhouse gas emissions’ (UNFCCC website).

3.6.2 Adaptation

Adaptation to climate change processes is no less important than mitigation. Climate change adaptation (in human systems) is defined by IPCC (2012) as:

the process of adjustment to actual or expected climate change and its effects, in order to moderate harm or exploit beneficial opportunities; and (in natural systems) the process of adjustment to actual climate and its effects with human intervention which may facilitate adjustment to expected climate.

¹⁹ Stated under Article 21 of the Paris Agreement, the threshold was at least 55 Parties to the Convention (referring to the UNFCCC) accounting in total for at least an estimated 55 per cent of total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession.

The UNFCCC webpage describes adaptation as ‘adjustments in ecological, social, or economic systems in response to actual or expected climate stimuli and their effects or impacts. It refers to the changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change’. The very nature of the problem is that people may be required to adapt to the changes or otherwise face severe consequences. For the exposed countries, especially the LDCs, adaptation is crucial but only so much can be done unless developed countries offer support. UN Secretary General, Ban Ki-Moon acknowledged this concern when he said:

Now it is the least developed world who are not responsible for this climate change phenomenon that bore the brunt of climate change consequences so it is morally and politically correct that the developed world who made this climate change be responsible by providing financial support and technological support to these people (cited in Collins 2012).

Addressing adaptation is likely to be extremely difficult and expensive. In climate change undertakings there are five general components of adaptation activities. As shown in Figure 3.7, adaptation requires observation, assessment, planning, implementation, and monitoring and evaluation. All these would need technical and institutional capacities, as well as technological and financial support. Together they would lead to knowledge sharing and learning, which in turn would deliver optimal mix of adaptations.

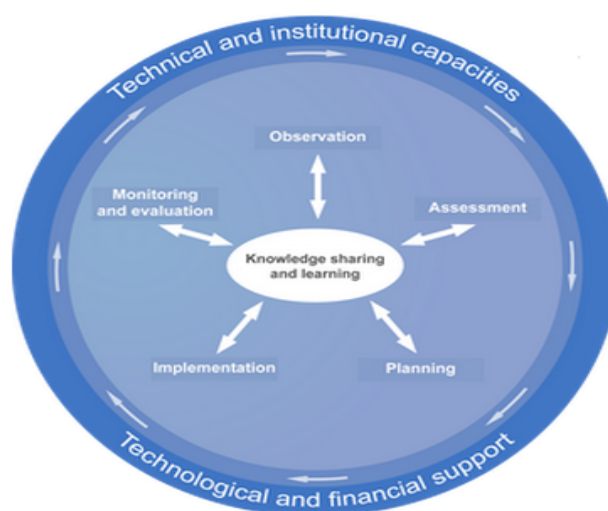


Figure 3.7: Elements of adaptation.
Source: UNFCCC Webpage.

Although there have been a lot of important developments made under adaptation, three key milestones are important to mention as they are relevant to the thesis. First, is the establishment of the Least Developed Countries (LDC) Work Programme during the Marrakesh COP7 in 2001. This is a programme that encourages the building of capacity and national climate change mechanisms within LDCs, and one of the successful programmes under this initiative, at least in the Pacific, is the preparation of the National Adaptation Programmes of Action (NAPA).

Second, is the establishment of a mechanism to facilitate the development and dissemination of information and knowledge to inform and support adaptation policies and practices. This was part of the Nairobi Work Programme that was endorsed during the Nairobi COP11 in 2005. The third is the Cancun Adaptation Framework (CAF) that was endorsed in the COP16 in Cancun, Mexico in 2010, which laid out the processes that enable LDC parties to formulate and implement their national adaptation plans (NAP). The CAF also provides for the approaches to address “loss and damage” which was one of the long debated issues under adaptation. Cancun COP16 also formalised the establishment of the Green Climate Fund (GCF) as an operating entity of the financial mechanism of the UNFCCC by providing programmes, policies and other activities in developing countries. With the Paris Agreement now coming into force, adaptation is another core element enshrined under Article 2 (1)(b) and Article 7.

3.7 Climate change and sea level rise in Tuvalu

As a tiny atoll state isolated from the world, and far from the world media, Tuvalu was so much in the dark that very little was known about it in the global discourse. However, the advent of climate change and sea level rise in particular as a major threat to low lying atolls, suddenly made Tuvalu popular in climate change discourse and media representation (Farbotko 2008). The literature on the potential impact of climate change and sea level rise on Tuvalu and its people is quite appealing. Some scholars have described Tuvalu as a canary in the coal mine, acting as a warning signal for the onset of a global climate change catastrophe (Chambers and Chambers 2001; Farbotko 2008, p.146), a symbol of all threatened islands and

greenhouse disasters (Connell 2003), and for others it is ‘the planet writ small,’ not just in regard to climate change but encompassing environmental challenges more generally (Allen 2004, p.52). Thus, today Tuvalu has become a site for intense debate about the impacts of climate change and how to respond to them (Farbotko 2005). These representations have made Tuvalu a synecdoche of climate change victimisation.

When climate change first emerged in the public domain in Tuvalu in the late 1980s people took little notice of it. Only relevant government officials knew about climate change and had a keen interest in the topic. Towards the end of the 1990s however, climate change as a topic started to surface, and then at the turn of the century it quickly gained widespread awareness. Today it is a daily topic in both government and public discourses. More so, when there is an extreme weather event such as drought, cyclone, king-tide, or flood, climate change is the special menu of the day for most if not all of the household discussions.

3.7.1 *Tau-o-aso masani*: Typical climate

Situated in the southern hemisphere between the Equator and the Tropic of Capricorn, Tuvalu’s climate is tropical. Throughout the year the temperature level varies between 28°C and 31°C and humidity is mostly moderate to high. Rainfall ranges from 2,300mm to 3,700mm annually. The dry season, moderated by south-easterly trade winds is normally from April to October, and the wet season caused by westerly gales and heavy rain is usually from November to March. However, at times weather systems such as the South Pacific Convergence Zone (SPCZ), El Niño Southern Oscillation (ENSO), semi-permanent subtropical high-pressure belts, and zonal westerlies to the south are modes of variability which influence Tuvalu’s climate (Australian Bureau of Meteorology and CSIRO 2014; Farbotko 2005).

Tropical cyclones are not common in Tuvalu. An average of eight cyclones per decade developed within or crossed the Tuvalu Exclusive Economic Zone (EEZ) between the 1969/70 and 2010/11 seasons and were most frequent in El Niño years. Between 1981/82 and 2010/11 seasons 24 cyclones occurred within Tuvalu’s EEZ but only three of them reached Category 3 or stronger (UNDP 2012). The recent

known cyclones that have affected Tuvalu and caused significant damage were Tropical Cyclones (TC) Pam in 2015, Gavin, Hina and Keli all in 1997, and Ofa in 1990. Other major extreme climate events that have happened in Tuvalu were the storm surge that struck Nui in 1882 (Paape 1983, p.75), and the hurricanes/cyclones in 1891, 1914, 1928, 1958 and 1972 (Australian Overseas Disaster Response Organisation (AODRO) 1992). Taafaki (1983, p. 27) made mention of another hurricane in 1894. Of these disasters, the most severe one was Hurricane Bebe that struck Funafuti in 1972 killing six people and causing major destruction to almost all the houses and buildings on the island, and vegetation was badly damaged. Concomitant with that hurricane was the storm surge that washed up a 4.5 metres high stone beach-wall around the eastern ocean side of Funafuti, especially the main islet of Fongafale, which is still largely visible today (Baines and McLean 1976; Kench and others 2014a; McLean 1975). Table 3.1 summarises the climate situation in Tuvalu.

Traditional knowledge of Tuvaluans about climate is little different from the scientific findings, although they express it in a rather simplistic manner. For Tuvaluans, climate or weather is only expressed in terms of good and/or bad. While there is no clear distinction between climate and weather to the ordinary Tuvaluan, the former is more or less equivalent to '*tau-o-aso*', which refers to a longer period, and weather is '*tau-o-te-aso*' which is rather specific to a single day's conditions. However, the sense in which these two phrases are used in daily discourse is becoming indistinguishable. Notwithstanding that, the notion of climate is less known to the people than that of weather. The ordinary Tuvaluan would only talk about '*tau-o-te-aso*' as weather but not climate. In fact, the general public in Tuvalu are now more accustomed to the word '*ueta*', which is a direct transliteration of the term weather, than *tau-o-aso* or *tau-o-te-aso*.

Good weather to the normal Tuvaluan is that which is associated with clear sky or sunshine with the trade wind blowing gently. In most islands it is referred to as '*tau-o-aso lei*' commonly shortened as '*tau lei*'. In contrast, bad weather is one that is associated with cloudy days or heavy rain with strong winds, which is called '*tau-o-aso masei*' or in short form '*tau masei*'. But *tau-o-aso masei* is a more encompassing phrase as it includes extreme bad weather conditions such as a strong

wind warning and the cyclone season. The extreme bad weather season in some islands is more specifically referred to as ‘*tau-o-afaa*’ (lit. strong wind season) and others as ‘*tau-o-lalo*’ (lit. season from down-under, referring to westerly winds).

Table 3.1: Present and future climate in Tuvalu.

Types	Current Climate	Future Climate
Temperature	Annual and May-October mean and maximum air temperatures at Funafuti have increased since 1933. The frequency of night-time cool temperature extremes have decreased and warm temperature extremes have increased. These temperature trends are consistent with global warming.	Further warming is expected over Tuvalu. The warming is up to 1.0 degree Celcius by 2030, relative to 1995, expected to further increase thereafter. Extreme hot days temperature is projected to increase by about the same amount as the average temperature. The frequency of extreme hot days is also expected to increase.
Rainfall	Annual and half-year rainfall trends show little change at Funafuti since 1927. There has also been little change in extreme daily rainfall since 1961.	Average annual rainfall projections show the change from an increase to a decrease but average to near zero. Extreme rainfall events are projected to increase. The effect of climate change on average rainfall may not be obvious in the short or medium term due to natural variability.
Sea level	The sea-level rise since 1993 is about 5mm per year, larger than the global average of 3.2 ± 0.4 mm per year.	Mean sea-level rise is projected to continue to rise over the course of the 21 st century; a rise between 7-18cm by 2030, and 39-87cm by 2090.
Tropical Cyclone	Tropical cyclones affect Tuvalu mainly between November and April. An average of 8 cyclones per decade developed within or crossed the Tuvalu’s EEZ between 1969/70 to 2010/11 seasons. Tropical cyclones were most frequent in El Niño years. Only three of the 24 tropical cyclones (13%) between 1981/82 and 2010/11 seasons were severe events in Tuvalu’s EZZ.	Tropical cyclone is projected that the condition for cyclone formation will become less favourable with about half of projected changes indicating decreases between 10% and 40% in genesis frequency.
Ocean acidification	There is increased acidification. The aragonite saturation state has declined from about 4.5 in the late 18 th century to an observed value of about 4.0 ± 0.1 by 2000.	It is projected that the aragonite saturation state will transition to marginal conditions of about 3.5 around 2030.
Droughts	Occasional, only in 1997 and 2011 but very severe.	The frequency of mild, moderate and severe drought events is expected to decrease while the frequency of extreme drought events is expected to remain stable.

Source: Australian Bureau of Meteorology and CSIRO (2014, pp.302-318).

Traditional knowledge of the annual weather pattern indicates that *tau-o-afaa* normally starts towards the end of the year and continues through the first part of the year, and *tau-o-aso lei* occurs in the middle of the year. Most respondents I interviewed, especially the older ones, concurred with this traditional knowledge. Some said that when they were young, they usually raced small sailboats made of coconut or pandanus leaves in the lagoon during school holidays at the end of the year because the wind was strong. Koch (1984) made mention of boys in Nanumaga playing with toy boats especially during the season of strong westerly winds. Others said that around October or November every year the men would tie the houses to the coconut trees or breadfruit with ropes and set up *amatagi* (shutters) made of coconut leaves to protect the buildings from strong winds. I can verify these accounts because I had had the same experience in my young days.

3.7.2 *Maafuuliiga o tau-o-aso: Climate change*

Climate change in the Tuvaluan vernacular, which is now widely used by the people, is *mafulifuliga o tau-o-aso*. However, I prefer to use ‘*maafuuliiga o tau-o-aso*’²⁰. In any case, there is overwhelming acknowledgement by the people of Tuvalu that the weather they know today is different from what they used to know in the past. To most people in Tuvalu, the weather has changed. But is the change in the weather that the people observe really climate change? This is an interesting but very crucial question because people’s responses could be influenced by their knowledge of the topic rather than their personal experience or observation of the climate or weather in the islands. However, this is an expected scenario because perceptions of the weather had always been influenced by the discourses surrounding the people and now climate change is the frame in which the weather

²⁰ I use it because the word *mafulifuliga* is ‘change’ in its present perfect progressive tense that puts emphasis on the ‘course’, which is the same as ‘changing’. Thus, *mafulifuliga o tau-o-aso* in English is simply ‘climate changing’. This would therefore incorrectly describe climate change as an ongoing process of change for worse or for better. In contrast, *maafuuliiga* is ‘change’ in its past and/or present perfect simple tense that stresses the importance of the ‘result’, which is ‘change’ and therefore it describes climate change more correctly, as a result of increased greenhouse gas concentrations that have caused global warming. The Tuvaluan Dictionary contains the same definitions as I explained here but Geoffrey Jackson who wrote the dictionary used the word *mafuliga* with single vowels because he employed the diacritic system whereby he used a macron to mark the stressed vowels or syllable (Jackson 2001), which is a system that has not been widely used in Tuvalu. The use of double vowels, e.g. *maa* or *fuu*, therefore indicates a long syllable or the vowel is stressed.

discourse has been interpreted. Sack (1997, p.238) also asserts that the meaning of climate change depends ‘on what we imagine it would be like to dwell in these altered places’. Like many other aspects of life, environmental knowledge is a product of history and knowledge that people acquired through their lifetime, which was, in most instances, passed from generation to generation. Traditional knowledge of the change in climate is not always uniform and sometimes differs from scientific findings, thus raising issues of uncertainty as to whether lay people’s knowledge is legitimate or not. Nevertheless, Tuvaluans are not passive in the face of science, but actively construct their own knowledge of climate change based on what they have observed and knowledge passed on by their ancestors (Connell 2003, p.103).

The 150 participants, who participated in my household survey questionnaire, were asked whether they understand what climate change was in order to gauge the extent of people’s understanding. Of this total, 117 said yes and 33 said no. Of this number, 59 had lived about 5 to 10 years, and 70 of them had lived for more than 10 years in the islands in which the survey took place. The remainder had only lived there for less than five years. Similarly, from the 127 respondents I interviewed in Tuvalu, and those who participated in the focus groups and *sausautalaaga* (i.e. 63 in total), the majority acknowledged that they have an understanding of climate change. Likewise, the 105 pupils who participated in the essay writing appeared to have a fair knowledge of the subject. Most of them learned of climate change from radio awareness programmes, workshops and consultations, and from day to day discourse, especially if there was a major climatic event. It must be noted however, that the majority of them do not know the science of climate change. Therefore, their knowledge of climate change is limited to the rhetoric about its impact rather than the scientific findings about its processes. In that regard, the people’s accounts of climate change were mainly based on their non-scientific knowledge, and there might be an element of exaggeration in some aspects. For instance, they talked about temperature having substantially increased in the last ten years without having any knowledge of the scientific measurement of temperature in the past and present.

The most predominant elements of climate change the people highlighted were the change in the annual weather pattern and sea level. In terms of weather patterns, many of the respondents stated that strong winds and the wet season that used to occur at the end and beginning of the year in the past could now happen at any time of the year. A 57 year old woman in Vaitupu stated that ‘the wind [referring to strong winds] now is unseasonal and it is therefore hard to predict as winds would come at any time. Before, there were months, I know around October to December that would be the bad weather season. Now it could come any time’ (Faailo Liufau). The respondents also highlighted that the strong winds caused by the westerly gales would now come from any direction; north, south, or even east of the island. A former high chief of Nanumea of 65 years old said that ‘there is change to wind patterns. In the past, strong wind only comes from the west but now it comes from anywhere’ (Iliala Lima). Furthermore, there was a general perception of the people of Tuvalu that the daily temperature has changed. The household survey confirmed this, as 137 (91 per cent) out of the 150 participants said that it is hotter now than before, and only 13 (9 per cent) said that it is colder now than in the past, as shown in Figure 3.8.

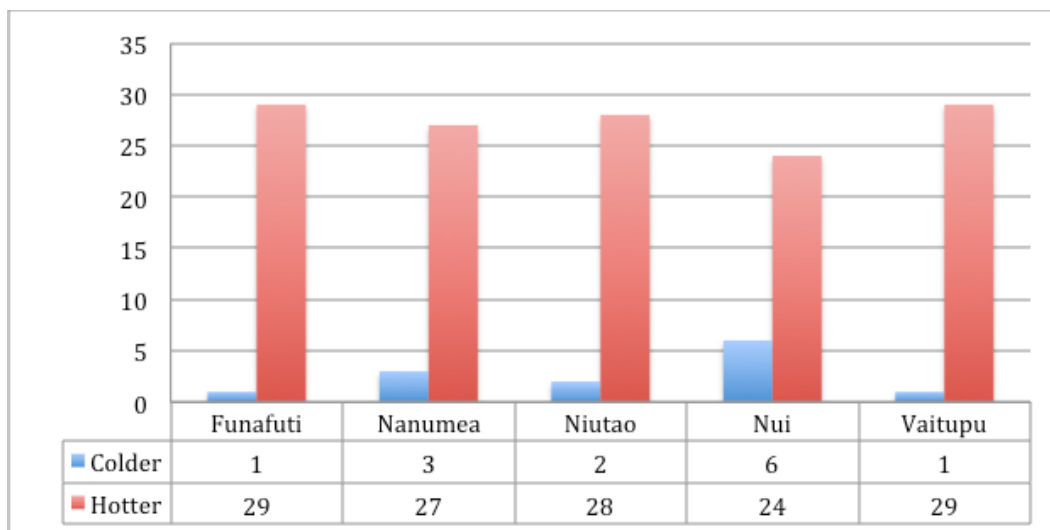


Figure 3.8: HSQ participants' responses about daily temperature in Tuvalu.
Source: Author's HSQ.

Interestingly, when the participants were asked about the frequency of rain, 59 per cent (89 participants) said that there was less rain now than before and 41 per cent (61 participants) said more rain. While there is little correlation between the

frequency of rain and the state of the temperature, one assumption that can be drawn from this is that people still feel the heat during rainy days. Indeed, the majority of the respondents observed that in the past when it was raining they felt cold, especially in the evening but in the last decade they have not felt cold even if it was raining for several days.

3.7.3 *Te tai fanaka*: The rising sea

In its most recent report released on 31 March 2014, IPCC highlighted that sea flooding and inundation are often associated with storm waves and surges, and deep ocean swells, and it made specific reference to Tuvalu's high spring tides (king tides) that have flooded Funafuti in recent years (IPCC WGII AR5 2014). The report further noted that the rates of relative sea-level rise at Funafuti between 1950 and 2009 have been approximately three times higher than the global average, and saline flooding of internal low-lying areas occurs regularly and is expected to become more frequent and extensive over time. Church and others (2006) estimate the rise in sea level at Funafuti to be 2 ± 1 mm yr⁻¹ over the period 1950 to 2001.

The Australian Bureau of Meteorology and CSIRO (2014) projected with very high confidence that in Tuvalu the mean sea level will continue to rise over the course of the twenty-first century. The CMIP5²¹ models simulate a rise of between 7cm to 18cm by 2030, and with an increase of 39cm to 87cm by 2090 under the RCP8.5²², as shown in Figure 3.9. These findings about sea level rise, however, have been a subject of controversy (Eschenbach 2004; Hunter 2004). One of the main controversies concerns the periodic timeframe that has been employed to give a meaningful estimate of the change in the levels of the sea. Eschenbach (2004) points out a report by Douglas (2001) that suggested 50 to 80 years is the appropriate timeframe to give a meaningful estimate, but Tuvalu's tidal record was only 22 years old.

²¹ Coupled Model Intercomparison Project – Phase 5.

²² Representative Concentration Pathways (RCP) are for greenhouse gas and aerosol concentration pathways for modelling experiments and climate projections. The 8.5 means a very high emission, similar to business as usual scenarios in earlier IPCC reports.

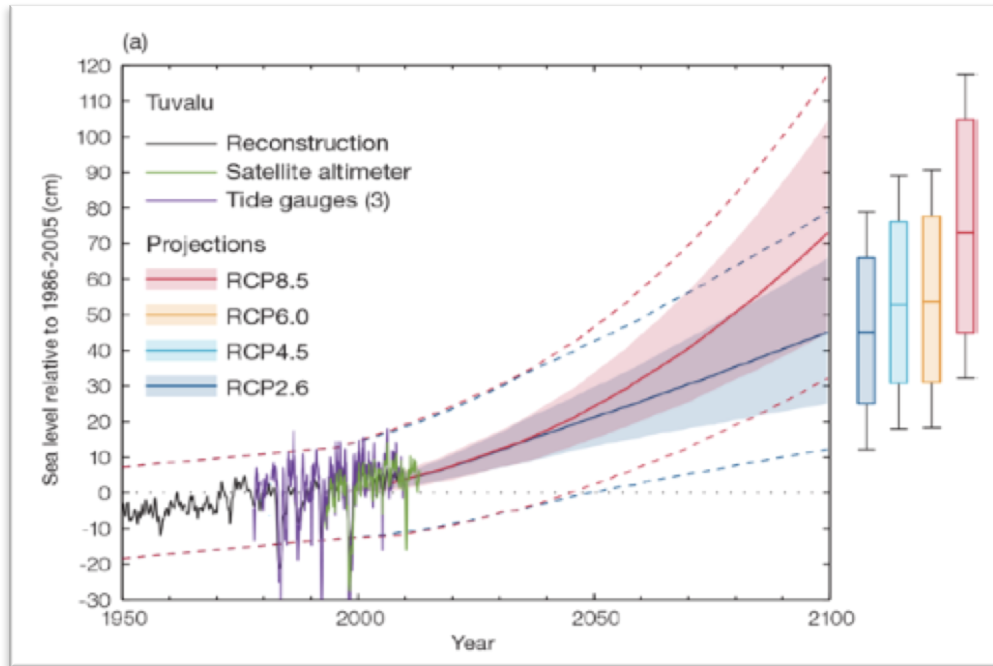


Figure 3.9: Observed and projected relative sea-level change near Tuvalu. Source: Australian Bureau of Meteorology and CSIRO (2014).

Despite the on-going controversy, the people of Tuvalu generally acknowledged that the level of the sea has risen. Sea level rise to them is not a question of whether it is happening or not, but rather it is a question of whether or not it will actually cause Tuvalu to disappear from the surface of the earth. In 2002, Tuvalu Prime Minister Koloa (Talake 2002) gave an account of sea level rise in Tuvalu in which he said:

It is not the predictions, which we see in various newspapers by scientists arguing for and against this philosophy on global warming. In Tuvalu it is an actual real happening... which gives rise to our sea level rising. Islets used to be my playing ground when I was 10 or 11 years old... have disappeared, vanished. Flooding is very common. When it is high tide, the flood has gone right into the middle of the islands, destroying our food crops. A lot of trees which were there when I was first born, I am 60 years old, ... now they have gone.

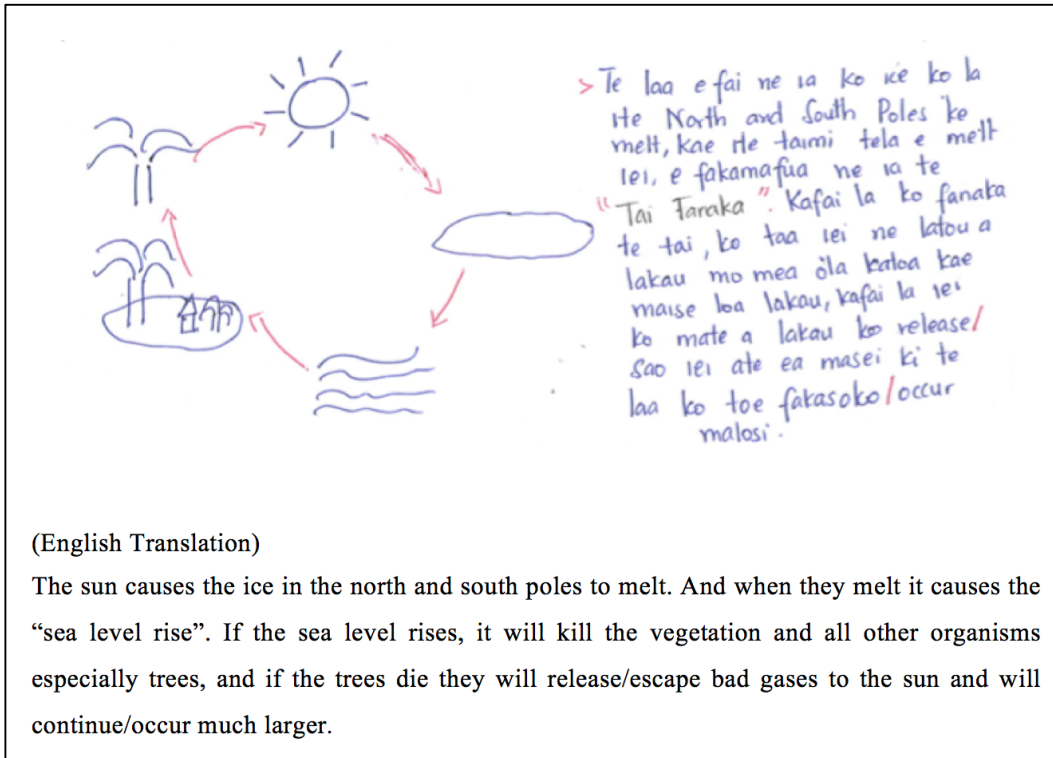
In interviewing the respondents from the island community of Funafuti about their observations of sea level rise, 11 of the 12 respondents talked convincingly about coastal inundation and seawater bubbling from dry ground in the middle of the island. A 54 year old female respondent said: 'the sea is coming everywhere around here [pointing to the surrounds of her neighbourhood], and before the only places

that were inundated with seawater were the edges of *taisala*²³, but now if you run or ride around the island most places are wet but there was no rain' (Malia Amupelosa). In their analysis of land-use/cover change of Funafuti, particularly Fongafale Islet, from 1941 to 2003 using historical aerial photographs and high spatial resolution IKONOS satellite, Webb (2007) revealed the same, that is, flooding had originally predominantly occurred around the swampland. In contextualising this observation, the HSQ shows that 100 per cent (30) of participants from the Funafuti community concurred about erosion and flooding, with the majority of them saying that sea level rise is responsible. Nonetheless, recent findings about the geomorphological formation of Tepuke, an islet of Funafuti atoll, indicate that sea-level is not the sole cause of erosion and flooding because reef formation is also a critical factor in determining the change (Kench and others 2014a).

On the other islands, the majority of the people I interviewed said that they also noticed sea level rise is happening. Most respondents in Nui attested to this observation and said that a particular part of the island along the main road some one and half kilometres from the village has been severely eroded and waves can now come up to the road during high tides. I went there with one old man and he showed me that before, the beach was about ten or fifteen metres from where we stood at the side of the road, but I saw that the beach was now just about two metres from the road. The respondents in Niutao and Nanumea shared similar sentiments. When I interviewed the 60 years old high chief of Nanumea in his house, he said: 'sea level rise is happening. Erosion is happening just there at the beach [he was pointing to the ocean side from where we had the interview]. Before, there were cookhouses about three metres somewhere there at the coast but now those land and cookhouses have been eroded' (Eli Teuea). The HSQ in the four outer islands revealed that 88 per cent (105) of the participants said that sea level rise is indeed happening.

²³ Swampland including borrow pits dug by the US army during World War II for materials to construct the airstrip which became ponds.

Likewise, the majority of students who participated in the essay writing pointed out that sea level rise is actually happening. They described it by making reference to big waves they see nowadays compared to the first experiences they had of the sea and waves. One female student from Nauti Primary School drew a sketch to explain her knowledge of sea level rise as in Box 3.1.



Box 3.1: A sketch of what causes sea level rise by a Nauti student.
Source: Author’s own fieldwork.

3.7.4 Pokotiaga: The impacts

The impacts posed by climate change and sea level rise on the lives and livelihoods of the people in Tuvalu have pushed traditional and contemporary adaptive capacities to their extreme limits. IPCC recognised this problem in AR5 when it said that the current and future drivers of risk for small islands during the twenty-first century, which include sea-level rise, tropical and extra-tropical cyclones, increasing air and sea surface temperatures, and changing rainfall, would result in the loss of adaptive capacity and ecosystem services critical to the lives and livelihoods in small island states (IPCC WGII AR5 2014). To understand how the lives and livelihoods of the people of Tuvalu have been affected, it is imperative to

look into the impacts of climate change and its related drivers as one set of phenomena, and the impacts of sea level rise as another set of phenomena.

In terms of climate change impacts, first I considered the ramifications of the increased heat conditions and the frequency of rain, as climate change drivers, to the land and vegetation, and secondly, I looked at how these drivers impacted on the people. As briefly mentioned in Chapter II, the livelihoods of the ordinary Tuvaluans depend largely on the land and what grows on it, and the ocean. Subsistence farming has been the main source of food for the people in Tuvalu for many centuries. Although the soil is poor in nutrients for vegetation, the people have been able to survive for centuries because of traditional knowledge of how to grow crops. However, the increase in temperature on the islands, coupled with the occasional lack of rainfall has had an adverse effect on the crops, and traditional knowledge has been stretched to the limit and is becoming less useful. A 41 year old male respondent from Niutao said: ‘people are buying rice because there is no *pulaka* due to heat from the sun’ (Toakai Pakatu). Webb (2007, p.5) reported that salinity of groundwater exists in all the islands but Funafuti’s condition was too high for successful *taro* growth. As a result, *pulaka* and *taro* qualities have been highly compromised, making them prone to rot, and have become stiff and dense, making them tough for food consumption. The produce from coconuts has become less bountiful, fruit sizes have shrunk, and the sweetness reduced. Coconut toddy has significantly been affected in terms of quantity and quality. Breadfruit trees are not bearing as plentifully as they used to, and have become unseasonal as well, and some are ripening prematurely as mentioned to me by Eli Teuea, the 60 year old high chief of Nanumea. This can also be seen in other edible trees such as pandanus and pawpaw. In the event of droughts, the impacts on vegetation would be more severe. The 2011 drought that gave the government no choice but to declare a state of emergency throughout the country on 28 September, caused massive damage to *pulaka* and *taro* plantations such as that reported by Nukulaelae Kaupule (Tekinene 2013).

In the same vein, the increase in temperature has also affected peoples’ lives. Almost all interview respondents stated that they could personally feel the difference in heat condition. However, there is uncertainty as to whether the

increase in heat that they felt was a result of climate change or from the increase in infrastructure developments such as houses with iron roofing. Be that as it may, it is inevitable from the change in the way ordinary Tuvaluans live that it is hotter now than before. In the past, men would go to their plantations or go out fishing without wearing any shirt, but now they wear shirts and hats because the sun is too hot to bear. Interestingly, I noticed that apart from the increase in the number of people now wearing caps or hats because of the intolerable heat, there were local people now using umbrellas, or cloth materials to cover their heads, when walking in the sun during hot sunny days. In the past, only *palagi* could be seen using an umbrella during sunny days because it would be a laughable thing for local people to do. Furthermore, if there were no breeze, electric fans and air conditioners would dictate people's movement. Many interview respondents said that the unbearable heat has restricted the way they performed their daily chores. Night times are becoming hotter too, therefore making it harder for people to sleep. A 63 year old married male respondent expressed his experience of the temperature in Nanumaga as: 'the hot now is quite significant, before in Nanumaga, you can sleep without a fan, but now you really cannot sleep [without it] at night because it is too hot' (Mataio Liai). In Funafuti, people would use the airport runway at night as a place to cool their bodies and to sleep, and in Vaitupu men would use the jetty at the boat harbour as a sleep-out place because it is too hot at home. Indeed, in all the islands it is quite common for people to use the top of public water cisterns, concrete volleyball and tennis courts as sleep-out places at night. Health has also been mentioned as being affected by climate change. Although I have not garnered official information to substantiate this proposition, a number of respondents made mention of this aspect of climate change impacts. In short, the respondents asserted that the prolonged drought has caused diseases such as influenza and fever.

Sea level rise impacts present an even more worrying scenario to the people of Tuvalu than the impacts of climate change discussed above. Concerns about the future of Tuvalu are more seen by the people as things that are caused by sea level rise rather than climate change. The lack of understanding in the science of this phenomenon is no doubt playing a major role in people's perspective. The imminence and visibility of the impacts of sea level rise in Tuvalu contribute to

people's claims of the level of exposure of Tuvalu to this phenomenon. Its geographical location and low elevation makes Tuvalu naturally exposed to sea level rise. The literature on the sea level rise impacts in Funafuti highlight the geophysical characteristics of the island and the various developments and population stresses such as engineering works during World War II that have heightened the vulnerability of Funafuti to sea level rise (Yamano and others 2007). Tuvalu was quoted by IPCC as an example of a small island state that is likely to face exacerbated coastal erosion and land loss, increased flooding, increased soil salinisation and saltwater intrusion into groundwater, increased frequency of coral bleaching in reef systems and other impacts on biophysical systems (McCarthy and others 2001). Of all these various sea level rise impacts, coastal erosion stands out as the main problem that people are concerned with. Participants in the HSQ were asked what impacts sea level rise is causing, and about 121 out of the 150 participants pointed out erosion as being the main one. Some mentioned erosion and groundwater salinity, erosion and reduction in reef fish stocks, while others made mention of coastal erosion and higher high tides and waves. Likewise, interview respondents overwhelmingly attested that erosion is the major impact from sea level rise. A male respondent of 54 years old in Niutao said this:

In the olden days, I put a concrete pin-mark right at the edge of the sandy part of the beach to the reef. Now that pin-mark is about ten metres from the edge of the beach. So, the sea has taken a number of rows of trees. Before there were pandanus but now there is no pandanus just over there [pointing to the beach from where we had the interview]. We also planted trees over there [pointing to the same area] with workers from the Agriculture Department but now there is nothing, all gone (Kuea Pese).

All the islands in which I conducted my fieldwork are experiencing coastal erosion to varying degrees, as shown in Figure 3.10. What I witnessed was that most of the coastal erosion in the islands was more severe at the ocean side than on the lagoon side, except on Funafuti where the lagoon side erosion is more visible, and I suspect that the stonewall that was washed up by a storm surge during Hurricane Bebe in 1972 has helped protect the island from erosion on the ocean side.



Figure 3.10: Erosion in Niulakita (Top) and Lakena, Nanumea (Bottom).
Source: Author's own photos.

Furthermore, the disappearance of some islets in Tuvalu has exacerbated concerns about sea level rise. For instance, Connell (2003) made reference to the case of the disappearing islet of Te Pukasavilivili as a true testament of the devastating effect of sea level rise in Tuvalu. While Te Pukasavilivili islet in Funafuti was the only disappearing islet covered in the literature, there were indeed other islets that had already disappeared. In Vaitupu, the islet of Ogikogi (Hong Kong) at the north end of the island disappeared around late 1990s. My grandparents lived there for many years. In Nukufetau, the Te Afuavee and Te Afualoto islets where some people

lived in the past, and home to a number of plants such as coconut and pandanus are now left with only sand banks, soon to disappear completely (respondent–Kaino Ielemia, 50 year old man). Likewise, in Nukulaelae the islet of Puniu (also known as Te Motu o Maika) disappeared completely around the late 1980s, while another islet called Kalilaia is receding quickly and is on the verge of becoming another victim to sea level rise (respondents – Tausegia Tafia, 70 year old man & Galu Moeava, 55 year old man).

While the above accounts of sea level rise correlate with the IPCC (2014) report, there is little that can be verified with those accounts prior to the 1990s as having been caused by climate change. Erosion noted by the people did not acknowledge that at other parts of the islands there were intermittent accumulations of sand beach over the years. Atolls' geomorphological formations generally change shape – eroding at some part of the island but accumulating at other parts – as a result of ocean currents, waves and extreme events (Kench and others 2006; Kench and others 2014b; Webb and Kench 2010). Core to the concern about erosion was the perceived submergence of the islands due to sea level rise. In their latest finding, Kench and others (2014b, pp.826-827) argue on the basis of Jabat island in the Marshalls, that the islands:

should remain stable in the face of projected sea level over the next century as (i) the conglomerate platforms provide resistant core to the island, and (ii) rising sea level will raise the elevation of the process regime to levels at which the island was formed during the mid-Holocene highstand.

In simple terms, the atolls will not sink despite the fact that sea level is rising as generally projected by IPCC.

Furthermore, seawater intrusion causing contamination and increasing salinity of groundwater is worsening. Flooding from storm surges during cyclones or strong wind seasons concomitant with high tides or king tides further exacerbate the salinity of groundwater resulting in dying trees and crops. Tropical Cyclone (TC) Pam that tumultuously devastated a number of Pacific island countries in early 2015 has left considerable damage to all the islands in Tuvalu except Funafuti. According to the government's assessment report after the cyclone:

Between 10 and 11 March 2015, waves caused by Tropical Cyclone Pam – category 5 – swept across the low-lying islands of Tuvalu. The sea waves, estimated to be from three to five meters in height, caused significant damage to agriculture and infrastructure on the islands of Nanumea, Nanumaga, Niutao, Nui, Nukufetau, Nukulaelae and Vaitupu. Water supplies were contaminated by seawater and hundreds of people were temporarily displaced. The Government declared a state of emergency from 14 to 27 March 2015 (Office of the Prime Minister 2015).

Marine resources such as reef fish and shellfish, which were the main sources of protein for the people in Tuvalu, have declined in stock in the recent past due to ocean acidification that causes depletion of coral upon which these marine species survive. Even the movement of migratory fish stock within the island territorial waters has been affected causing great difficulties to traditional knowledge of determining their whereabouts. One known *tautai* (lit. master fisherman), of 69 years of age in Nanumea shared this with me:

As a master fisherman, I noticed one major impact of climate change is on the traditional knowledge of predicting the movement of migratory fish like tuna and bonito. Before, I can tell in the morning that tuna and bonito will be at that specific side of the ocean at a specific time. But now it is different, that forecasting will not happen at that time but it will happen 48 hours afterward. This is new and I just realised it after several unsuccessful attempts (Tie Maheu).

In addition, a considerable number of students who participated in the essay writing made mention of the devastating impact they witnessed along the coast of their islands which they claimed to be caused by sea level rise. The essay script of a student from Tolise Primary School given in Box 3.2 is an account of how the younger generation witness the impact of sea level rise.

* Taku tala ki mafuilifuliga o tau-o-aso mote tai fanake, taku fakatau ki luga i Tuvalu a Tuvalu ite 20 tausaga mai mua a Tuvalu, e pokotia kii loa nete tai fanaka; taimi mua i taku folikiga ate kavone ite motou fakai ko Ava ate tafatai nofo loa i tai kae ko omotou gasu ko' tuu foki loa; mote omotou fale e tuu loa ki uta, kae i taimi nei au ko matua ate tafatai ko nofo² loa pili ki uta ite omotou fale kae ko omotou gasu foki ko Seai i koga kola ne tuu muamua, it i tai.

(English Translation)

My story about climate change and sea level rise, I think in Tuvalu, Tuvalu in the next 20 years to come Tuvalu will be severely impacted by sea level rise. In the past when I was young the sand bank at our village named Ava [in Vaitupu] the beach is very far out and our *gasu* [saltbush plant] and our house are located well inland, but now I am grown up, the beach is very near to our house and our *gasu* that were there at the beach side of our house have gone.

Box 3.2: Essay script regarding sea level rise impact.

Source: Author's own fieldwork.

3.7.5 Tuvalu islands disappearing: speculation causing uncertainty

While the two preceding subsections made mention of sea level rise and its impacts on the islands, this subsection offers a further discussion on the issue relating to islands disappearing. The discourse about Tuvalu disappearing as a result of sea level rise (Connell 2003) is threatening to Tuvaluans and is causing great uncertainty among them. Media representations of this yet-to-be proved scenario have overwhelmingly painted a very strong negative mindset among the people of Tuvalu and those in similar situations around the Pacific region. Tuvaluans perceive climatic events, particularly tidal surge causing erosion and flooding, as tangible evidence that the islands will one day disappear. Such strong perceptions as illustrated further in the subsequent chapters have been strongly reflected by Tuvaluan leaders in their public statements regionally and internationally.

However, there is no convincing scientific evidence that specifically suggests the entire archipelago of Tuvalu will disappear, even though the IPCC reports that sea level is generally rising due to climate change. Webb and Kench (2010) and Kench and others' (2014b) research on atoll geomorphology are worth considering as it helps shed light on this delicate issue of islands disappearing. In a study they jointly

conducted in 2010 on the dynamic response of low-lying islands to sea level rise on a decadal-scale, Webb and Kench (2010) concluded that the majority of the islands surveyed have been largely stable. In Funafuti, they found that six islets have undergone little change in area, seven have increased in size, and only four have decreased. Given in Figure 3.11 is a satellite image of their findings of the morphological changes of some of the islets in Funafuti from 1984 to 2003.

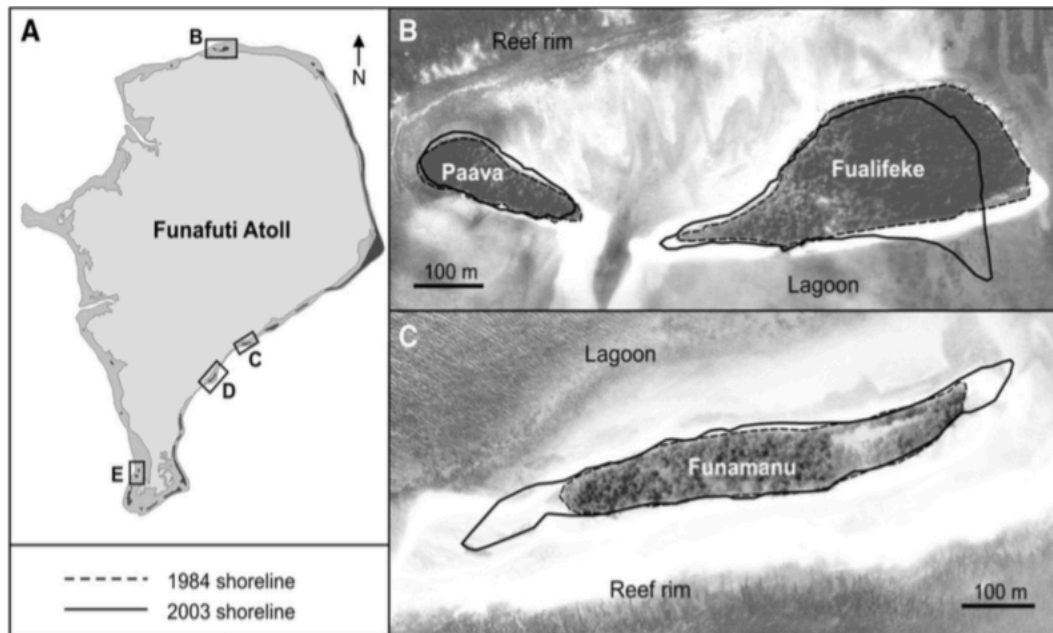


Figure 3.11: Changes in planform characteristics of islets in Funafuti 1984-2003.
Source: Adapted from Webb and Kench (2010, p.240).

Kench and others' (2014) survey of the geomorphology, development and temporal dynamics of Te Puka islet in Funafuti revealed similar findings and indicated that sand islands constantly change shape and are highly dynamic. Interestingly, they said that island formation does not depend on sea level change alone, but it is also dependent on the depth relationship between the reef platform and sea level. In an earlier study, Kench and others (2009) also noted that reef islands are dynamic landforms that can reorganise their sediment reservoirs in response to changing wind, wave and sea level conditions. In general, Kench and Webb suggest that the discourse about islands disappearing within the course of this century is not conclusive. Indeed, Dickinson (1999) in studying the impacts of sea level rise on Funafuti said: 'the metastable state of atoll islets places a special premium on accurate prediction of the effects that global greenhouse warming may have on the future of global sea level rise'.

Irrespective of the truth of islands disappearing, there is a strong concern about habitability of the islands. If the islands remain unsubmerged, the question of whether or not they can still support human habitation still renders an important line of consideration. The most pivotal issue here is the impact of sea level rise on freshwater lens, as it is the main source of life to vegetation and people in general (Hay and Mimura 2005). A study by Tekinene (2013) shows that sea level rise is already causing contamination to Tuvalu's freshwater lenses and rootcrops such as *pulaka* are being affected. Given its potential impact in the foreseeable future if it is not addressed properly, it may well be that the islands may be deserted or only a very small population will remain. Such a consequence is no less damaging than speculation about islands disappearing.

3.8 *Te Kaniva: Tuvalu Climate Change Policy*

Tuvalu's climate change policy entitled *Te Kaniva* contains the aspirations of the people of Tuvalu on how to address climate change and sea level rise. It is a ten-year plan that runs from 2012 to 2021. Prior to its formulation, and since the emergence of climate change as an alarming issue for Tuvalu in the late 1980s, the government has constantly advocated the importance of immediate action to be taken by the international community, especially major GHG emitting countries. The government has consistently advocated as part of its policy position the following broad issues:

- (i) The need to maintain global temperature level below 1.5°C over pre-industrial levels;
- (ii) The Kyoto Protocol to be honoured by Annex 1 (developed) countries;
- (iii) A new protocol to lock in new commitments on adaptation and to broaden the scope of efforts to reduce emissions after the Kyoto Protocol ends in 2012; and
- (iv) That relocation is not an option.

Non-government organizations (NGOs) such as religious bodies and charities, and civil society in Tuvalu joined the government in impressing upon the international society the need for urgent action through their own networks and forums. In every COP, United Nations General Assemblies (UNGA), and other international and regional gatherings, Tuvalu government, NGOs and civil society representatives have continued the fight for drastic actions and pleaded for the international community to do something to save Tuvalu and Tuvaluans. It was however, not until 2011 that the government noted the importance of a holistic approach and a

united position by all sectors including the government to guide Tuvalu through local, national, regional and international climate change and sea level rise related meetings and activities. This saw the birth of Tuvalu's first ever-comprehensive climate change policy, *Te Kaniva*.

3.8.1 Formulation process

The formulation of the 2012 Tuvalu Climate Change Policy (TCCP) took three phases in 2011 and was launched in 2012. Phase I involved a workshop with relevant stakeholders, which included government ministries/departments, NGOs, members of the private sector, and representatives from civil society. The objective of the workshop was to allow stakeholders to brainstorm their ideas and views about the issue so that broad thematic topics could be identified. Phase II was the nation-wide consultation in all the islands of Tuvalu, including island communities on Funafuti. Its aim was to collect the views and solicit the support or otherwise of the people on climate change and sea level rise related issues that were identified and synthesised during the stakeholder workshop. Phase III was the one-day National Climate Change Summit (NCCS) that was attended by islands' head chiefs, council presidents, women's leaders, youth leaders, and representatives from NGOs, the private sector, civil society, public enterprises, government officials, members of parliament, and cabinet ministers. The summit was conducted under the theme of "Charting Tuvalu through the challenges of climate change". The NCCS concluded with a communiqué, signed by all island chiefs, the Prime Minister, and the two co-chairs, which serves as the preamble of the *Te Kaniva*.

3.8.2 Outcomes

The TCCP was crafted in ways that fully reflect the people's wishes and aspirations. Its name, *Te Kaniva*, refers to a set of stars that our ancestors used as part of navigational aids when they journeyed to explore the ocean, traversed from place to place, and in fishing expeditions. It is the Tuvaluan word for the Southern Cross stars (constellation) in the Milky Way, sometimes known as Crux, a Latin word for

cross. Coined by me²⁴, *Te Kaniva* embraces the theme of the NCCS, which is to serve as a guiding star as Tuvalu journey through the uncharted waters of climate change and sea level rise. Enshrined in the NCCS Communiqué, the participants reaffirmed their joint responsibility for the development and security of Tuvalu, and reiterated their grave concerns about the impacts of climate change with particular reference to the increased severity and frequency of extreme climate events, which undermined their responsibility, tested their capacity, and rendered Tuvalu more vulnerable to the impacts of climate change. *Te Kaniva*'s vision is:

To protect Tuvalu's status as a nation and its cultural identity and to build its capacity to ensure a safe, resilient and prosperous future (Ministry of Foreign Affairs 2012).

Seven broad thematic goals emerged from and were approved by the NCCS including:

- (i) Strengthening adaptation actions to address current and future vulnerabilities;
- (ii) Improving understanding and application of climate change data, information and site-specific impacts assessment to inform adaptation and disaster risk reduction programmes;
- (iii) Enhancing Tuvalu's governance arrangements and capacity to access and manage climate change and disaster risk management finances;
- (iv) Developing and maintaining Tuvalu's infrastructure to withstand climate change impacts, climate variability, disaster risks and climate change projections;
- (v) Ensuring energy security and a low carbon future for Tuvalu;
- (vi) Planning for effective disaster preparedness, response and recovery;
- (vii) Guaranteeing the security of the people of Tuvalu from the impacts of climate change and the maintenance of national sovereignty.

Each thematic goal contains key issues that have been identified as the main problems that need to be addressed. In addressing these issues, each goal also embodied strategies that need to be followed. Linking to the strategies under each goal are expected outcomes. The outcomes entail both mitigation and adaptation aspirations of the people.

²⁴ I coined the title of the TCCP *Te Kaniva* during one of the deliberations of the TCCP Core Taskforce under my leadership as Permanent Secretary of Foreign Affairs in which climate change is one of the key portfolios.

3.8.3 Implementation

Te Kaniva's implementation, monitoring and evaluation arrangements are provided in a separate document that was developed simultaneously throughout the formulation process of *Te Kaniva*. This document is called the 'National Strategic Action Plan for Climate Change and Disaster Risk Management' (referred hereinafter as NSAP). This is a medium-term plan that ran from 2012 to 2016. The NSAP contains detailed actions that are required, and the leading agencies and possible partner agencies needed, for each of the strategies related to the seven goals. It also contains indicative budget figures for each of the goals as provided in Table 3.2.

Table 3.2: Indicative figures of each goal for the implementation of *Te Kaniva*

GOALS	FINANCIAL COST (A\$)	IN-KIND (A\$)	CONTRIBUTION	TOTAL (A\$)
Goal 1	1,527,096	581,023		2,108,119
Goal 2	1,207,285	205,819		1,413,104
Goal 3	676,317	94,963		771,280
Goal 4	921,109	205,594		1,126,703
Goal 5	369,861	198,188		568,049
Goal 6	906,474	157,595		1,064,069
Goal 7	729,862	221,222		951,084
TOTAL	6,338,004	1,664,404		8,002,408
% of Total	79%	21%		100%

Source: Tuvalu National Strategic Action Plan for Climate Change

Without effective implementation plans, *Te Kaniva* would just be another decorative book that would sit on the shelf only to be touched when cleaning is required. Noting the importance of implementation, the NSAP stressed the need for an integrated approach by the government, *Kaupule*, the private sector and the community at large. Leadership is crucial in the successful implementation of *Te Kaniva*. Recognising this, institutional arrangements were being set up for the purpose of driving and coordinating the implementation process. At the national

level, the National Strategic Action Plan for Climate Change and Disaster Risk Management Coordinating Committee (shortened as NDCC) took charge in coordinating national programmes. At the local level, each island has a committee responsible for the implementation of *Te Kaniva* and NSAP activities. As shown in Figure 3.12, the implementation of the *Te Kaniva*, through the NSAP has been aligned with the overarching development policy of the government entitled *Te Kakeega II*. Both *Te Kaniva* and NSAP are available in both English and Tuvaluan.

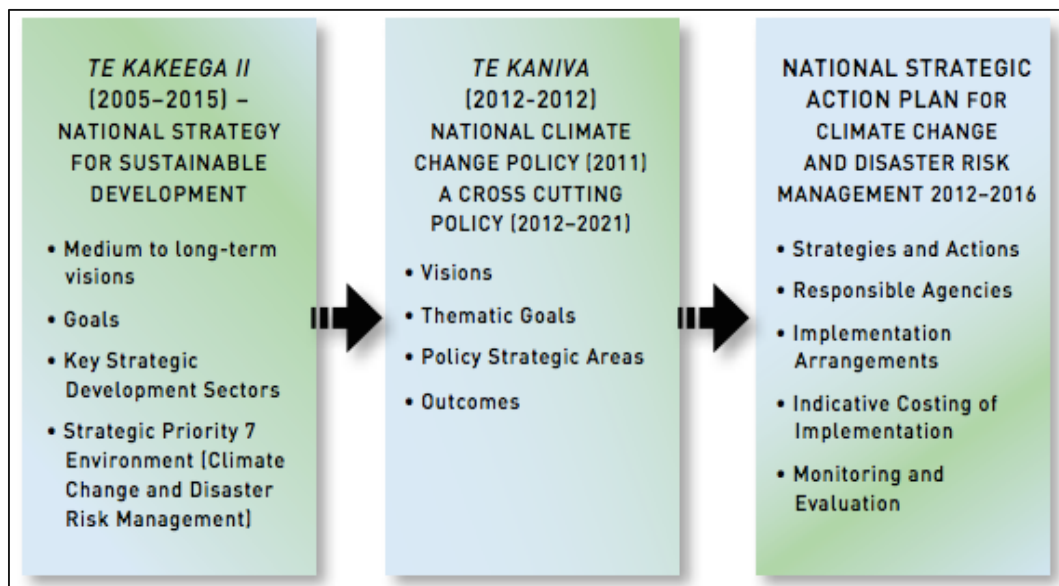


Figure 3.12: Flow chart of *Te Kaniva* and NSAP from the *Te Kakeega II*.
Source: *Te Kaniva*, 2012, p.11.

3.8.4 Climate change programmes and projects in Tuvalu

Since the emergence of climate change and the financial support that cascaded from it, there has been a significant increase in the number of projects and programmes in the country. The inflow of funding for climate change projects and programmes has provided great support, though it will never be sufficient, in building Tuvalu’s resilience to the impacts of climate change. The programmes and projects that began implementation prior to *Te Kaniva* and those that came after are all being aligned with the various goals of *Te Kaniva*. Listed in Table 3.3 were the active climate change projects/programmes that were being implemented in Tuvalu as of December 2016. Most of these projects/programmes are externally funded under

the GEF²⁵, AF, GCF and by other development partners such as Japan, Australia, European Union, Asian Development Bank (ADB) and World Bank (WB). All these projects/programmes are coordinated and administered by the Government of Tuvalu under the support of agencies such as the UNDP, SPC, UNESCAP, PIFS and SPREP.

Table 3.3: List of active climate change projects in Tuvalu as of 2016.

Theme/Sector	Current Active Project
Climate Change	NAPA 2 (GEF)
	2nd National Communication (DoE)
	Beach Nourishment (JICA)
	SWAT Waste Management Policy (SWAT /SPREP)
	Ozone Depleting Substance (DoE)
	Ridge to Reef (GEF/SPC)
	Tuvalu Coastal Adaptation Project (GCF/UNDP)
Social + Economic	Climate Change + Migration program (ESCAP)
	Health Systems Strengthening (WHO)
	Comprehensive Schools Program (UNICEF/STC)
	Adaptation Fund Accreditation
	Building Safety & Resilience in the Pacific (SPC/EU)
	C-CAP (USA AID) FINPAC
	SPCR - IR (SPREP/ADB) - community base
CCPIR (SPC/GIZ)	
Infrastructure	Outer Island Infrastructure Project (ADB)
	Asset Management (ADB)
	Ship to Shore review
	Telecommunication Recovery (MFAT)
	Water Security in Vulnerable Island States (MFAT & SPC)
	School Infrastructure Program (DFAT & GIZ)
	Health Facilities Program
	Water Security Project (ICDF)
	Water Resilience Project (MoH)- (SPC/DFAT) End Nov 2016
Agriculture & Fisheries	Taiwanese Garden - (Funafuti & Vaitupu) - Taiwan
	Taiwanese Milkfish Aquaculture
	Fisheries Support Program (MFAT)
	Pacific Region Ocean scope Program (WB)
Energy	Tuvalu Energy Sector Development Project (WB) 2015 - 2018
	Biogas (GIZ / SPC) 2016 -2018
	FASTNET (GEF)
	Energy Efficiency (DBT)
	RE + EE Demonstration (Italy) 2015?
	ACSE (EU / GIZ)
EU Renewable Energy (EU) \$ 2 m	

Source: Climate Change Policy & Disaster Coordination Unit, Office of the Prime Minister, Government of Tuvalu (Personal communication with Technical Adviser, Kate Morioka).

²⁵ Global Environment Fund established in 1990 as an alternative asset manager dedicated to the energy, environment, and natural resource sectors (GEF website).

In financial terms, climate change related projects/programmes constitute a significant percentage of funds injected into the economy for all types of projects/programmes in Tuvalu. Whilst the direct benefit goes to the purposes that these various projects/programmes are intended to achieve, the increase in both short-term and long-term employment is a remarkable spinoff. Almost each different climate change project provides each island with one or more staff to administer and oversee on-site implementation activities, with an additional three or more casual workers to carry out the actual work programmes.

3.9 Conclusion

In this chapter, I have explored the core elements of climate change and sea level rise from the perspectives of science and social science disciplines. I discussed the relevant literature and how the people of Tuvalu understood these phenomena to set the scene for the following chapters. I noted that the discourse about climate change and sea level rise has gone beyond scientific circles.

Apparently, there is an overwhelming consensus among the majority of scientists that climate change is real, as IPCC unequivocally stated in AR5. Paradoxically, the Pacific region is identified as one of the most vulnerable, particularly coastal areas and low-lying atoll states such as Tuvalu, to the impacts of climate change, especially sea level rise. My fieldwork findings revealed that the people of Tuvalu attested to this on the basis of their own exposure to and experiences of the various climatic and weather events. International processes driven by UNFCCC and IPCC and other groupings, and regional and national efforts, have thus far made some strides in addressing these phenomena. Despite ups and downs, the 2015 Paris Agreement has revived hope in addressing climate change. Tuvalu's own TCCP, *Te Kaniva*, contains the people's aspiration but it requires the support of development partners. In the next chapter, I turn to how I carried out the entire research.

CHAPTER IV

RESEARCH APPROACHES AND PROCESSES

*If we knew what it was we were doing, it would not be called
research, would it?*

(Albert Einstein)

4.1 Introduction

Today, we live in a world where information is crucial to our daily life; be it in policymaking, scientific discourse, customary activity or family work plans. Well-informed decisions are based on well-founded information. The opposite is obvious. However, well-founded information depends largely on the process through which the data have been collected and analysed. Salkind (2012, p.3) points out that good research is ‘driven by data which is increasingly dependent on what the research process is all about, how it is carried out, and what the benefits (and drawbacks) might be’. A choice of methods and methodology to be employed is therefore of paramount importance.

In this chapter, I set out the approaches and processes taken from the initial to the concluding stages of the research. It begins with a short account of my interest in the topic. This is followed with an overview of the method and methodology that were used to inform the discussions that will follow. The chapter then gives an account of the three different phases of the research: (i) pre-fieldwork; (ii) fieldwork; and (iii) post-fieldwork. The chapter ends with a section on the ethical considerations.

4.2 Author’s interest in climate change

My interest in the topic was triggered by recent developments on the impacts of climate change and sea level rise. This emerged from my participation in climate change related conferences as a senior representative of the government, and the nation-wide consultation that I led a team in 2011 in the formulation of Tuvalu’s first ever comprehensive climate change policy. However, its genesis could be traced back to my youth, especially echoing words of my late father; “*te koga ne*

fati iei tou laupua". I discuss this phrase and its ingredients in detail later in Chapter VI but in short it literally means 'the place where my *pua*¹ leaf was taken'. I remembered the times when I used to play on the beach on Vaitupu before joining my father for a swim in the sea near our remote residence at a place called Alae. The then undisturbed white sandy beach of Alae stretched some one or one and half kilometres north and south from where our traditional house was situated. Sadly, this is not the case now as erosion has reshaped the beach's landscape.

My late father also stressed the importance of land. He said that land is not only a property from which we can eat, but it also determines our identity on the island. As the only son staying with them, since my three elder brothers were all adopted out, he said that I needed to look after our piece of land when I grew up. This, he said, is my obligation and I should not forsake it. I remembered him telling me that if I happen to travel afar, I should never leave Vaitupu forever because that is the '*koga ne fati iei toku laupua*'.

Some thirty years on, my memories of the past were revitalised when the issue of climate change and sea level surfaced in the Tuvalu public sphere. As years passed I started to understand the basic science of climate change and sea level rise, and from my own observations, I began to acknowledge that it is a serious issue as I saw important changes taking place. I noticed the changes in the annual weather seasons that I knew from the last two decades or so, and seawater intrusion in Funafuti that was becoming rather unusual. As the discourse about this phenomenon began to reveal the implications for Tuvalu, my "mental ears" started to hear my father's pronouncement about returning to Vaitupu, the place where my *pua* leaf was taken. As I attended climate change regional meetings and international conferences, discussions on the issue of migration and possible relocation of low-lying communities touched my heart deeply. Resonating unmistakably in my mind was my father's utterance of taking care of our piece of land, as it is my obligation. I knew that it is my duty as the custodian and guardian of our land – the land that has been well protected by my father and forefathers – to do something. As an individual, I know this was far beyond my capacity. I have

¹ *Pua* is a species of shrub or flower tree, which is scientifically called *Guettarda Speciosa*.

faith in God but I know that I need to do something. I think this is the only thing I can do, to tell through this research work what and how the people of Tuvalu feel about their land or *fenua*, their cultural identity and national pride. I hope that my tiny voice through this piece of work will be heard and that amicable and appropriate solutions can be found to protect and save my land, my cultural identity, *toku tia* Tuvalu and the world at large.

4.3 Methodology and method: Conceptual overview

In research, methodology and method are core parts of the process that should be well understood as they determine the manner and fashion upon which the research should be carried out to achieve the desired outcome. Often researchers fall into the trap of mistakenly using, for example, methodology as method and vice versa. Notwithstanding that, these two terminologies are interchangeably used to mean the same thing although they have distinctive meanings that are ‘well recognized in some geographical circles, where researchers acknowledge the consequences of different epistemologies for research practices’ (Hoggart and others 2002, p.1.). In human geography, method is generally used to refer to data collection and analysis processes. Methodology on the other hand is ‘a more encompassing term than method as it embraces issues of method but has deeper roots in the bedrock of specific views on the nature of “reality” (ontology) and the grounds for knowledge (epistemology)’ (Hoggart and others 2002, p.1).

In undertaking this research, I employed both qualitative and quantitative approaches for collecting and analysing data. While the qualitative approach was predominantly used in the research, given the nature of my research topic, the quantitative approach was also employed to inform and contextualise the research. It has been recognised in social science research that ‘where possible, using multiple methods – both quantitative and qualitative – can be valuable, since each has its strengths and one approach can often overcome the weakness of the other’ (Patton 1997, p.267). Ritchie and Lewis (2003, p.15) also supported the importance of both methods when they said, ‘that qualitative and quantitative research should not be seen as competing and contradictory, but should instead be viewed as

complementing strategies appropriate to different types of research questions and issues’.

4.3.1 Qualitative research

Hay (2000) states that qualitative research seeks to elucidate human environments, individual experiences and social processes. Many social science researchers express the view that seeing through the eyes of the people being studied will provide a more meaningful representation of the event and the environment (see Armstrong 1993; Bryman 2012; Lofland and Lofland 1995). Lofland and Lofland (1995, p.16) propound two central tenets; ‘(1)...face to face interaction is the fullest condition of participating in the mind of another human being, and (2)...you must participate in the mind of another human being (in sociological terms, ‘take the role of the other’) to acquire social knowledge’. Qualitative research inquires not only the *what*, *where*, or *who* types of question, but more so it looks at the *why* and *how* questions of the topic under investigation. In other words, qualitative research focuses on words whereas quantitative research on numbers (Bryman 2012). The following are the qualitative methods I adopted in my data collection:

4.3.1.1 Interviews

Interviewing is the most common method used in qualitative research (Whiting 2008, p.35). It is a method whereby one (the interviewer) asks questions of another (the interviewee or respondent) (Polit and Beck 2006). For clarity’s sake, I use throughout this thesis the “interviewer” as the person asking the question, that is my research assistants and myself, and the “respondent” as the person or persons being interviewed.

Interviews may be performed either face-to-face, by telephone or the Internet using modes such as Skype. The face-to-face interviews offer a number of advantages over the other modes. They expose the interviewer to the respondent’s environment and also allow the interviewer not only to hear the respondent’s answer but also gives the interviewer the opportunity to see the respondent’s physical reactions and emotions, which may provide a deeper meaning to the issue under investigation. Its downfalls are the costs associated with conducting the interviews, and time

constraints (Robinson 1998). Kobayashi (1994) also pointed out that the other disadvantage of face-to-face interviews is the unequal relationship between the interviewer and respondent, embedded in the issues of gender, race, ethnicity and power, which can influence responses. However, it is to be noted that it is not always the interviewer who has the power because interviewing of elites can be very challenging too (Mikecz 2012). During my fieldwork, this was the mode of interview I employed throughout my data collection. Although face-to-face interviewing is an expensive method, I chose it because the other modes are not a good option due to the poor telecommunication system in Tuvalu, and that not all respondents have access to the Internet and telephones.

Interviews can also be categorised in terms of whether they are structured, semi-structured, or unstructured (DiCicco-Bloom and Crabtree 2006, p.314). Structured interviews use closed questions more or less like a survey questionnaire in quantitative approaches (Whiting 2008). The questions and choices of answer have been structured in advance. Structured interviews give little flexibility to the respondents, as it is mostly the “yes” or “no” type of question or certain choices of an answer that have been prepared. Bryman (2012, p.211) referred to this as ‘closed, close ended, pre-coded, or fixed choice’. The main advantage of this interview method is that it reduces interviewer variability and also greatly facilitates the processing of data (Bryman 2012). Semi-structured interviews are those where the questions are open-ended allowing the respondent the freedom to answer as he or she pleases. They are organised around a set of predetermined questions, and where other questions would emerge from the dialogue. One of its main advantages is that they are flexible and also minimise variation among respondents’ answers (Patton 2002). Dearnley (2005, p.22) states that: ‘[t]he open nature of the questions [sic] aimed to encourage depth and vitality and to allow new concepts to emerge’. Unstructured interviews, as the name suggests, are where the interviews are not based on predetermined questions, or where the order they occur in is not set. They are very flexible, which can create difficulties in the analysis stage because of the variation of responses. The benefits of this approach include that the interviewer is free to follow threads of information established by the respondent.

In light of the nature of my research topic, I employed a semi-structured interview model for all the interviews. I prepared three different sets of semi-structured interview questions; one for the general respondents category, one for the religious respondents category, and one for the migrant respondents category (see Appendix 5). During the interview process I found that this model worked quite well because the predetermined questions provided useful and consistent guidelines for me. It really helped in avoiding me becoming carried away with, or being distracted from, a particular issue.

4.3.1.2 Focus Group Discussions

Focus group discussion is another qualitative research method that I used. It is a method where the researcher meets with a group of normally between six and twelve people to discuss the researcher's topic². In fact, a focus group discussion is another form of interview, but where the questions are asked to a group of individuals. Bryman (2012, p.712) defines focus groups as:

a form of group interview in which: there are several participants (in addition to the moderator/facilitator); there is an emphasis in the questioning on a particular fairly tightly defined topic; and the emphasis is upon interaction within the group and the joint construction of meaning.

It is a handy research method because the researcher can collect information from several people simultaneously for comparatively little time and expense (Clifford and Valentine 2003). Similar to individual interviews, focus group discussions are useful because the researcher can investigate the minds of the participants through his or her facilitation role in the discussion. Moreover, focus groups are particularly useful because they encourage participation from people who tend to be shy and reluctant to participate in a one-to-one interview, although a minority can dominate it as well. Synergy among respondents can stimulate the discussion and give an opportunity to probe, enabling the researcher to reach beyond initial responses and rationales.

² Focus group was first introduced after World War II to evaluate the audience responses to radio programmes, and were initially known as focus interviews (Manoranjitham and Jacob 2007).

During the fieldwork, I used focus group discussions in Nanumea, Nui, Vaitupu, Funafuti and Kioa. The focus group discussions were really useful because they allowed me to understand the issues through the lens of more than one person. I conducted the focus group on the basis of certain guidelines (see Appendix 6)

4.3.1.3 “*Sausautalaaga*” (Story-telling)

Sausautalaaga is the Tuvaluan equivalent of “talanoa”. “Talanoa” is a concept rooted in oratorical tradition in some Pacific countries such as Fiji, Samoa, Solomon Islands, Niue, Hawaii, Cook Islands and Tonga (Farrelly and Nabobo-Baba 2014) and is being studied and used by a number of Pacific scholars (c.f. Halapua 2008; Vaioleti 2006). It is an informal way of conversing between two or more people. Halapua (2008, p.1) defines “talanoa” as, ‘engaging in dialogue with, or telling stories to each other of concealment of the inner feelings and experiences that resonate in our hearts and minds’. Vaioleti (2006, p.23) offers a similar definition by splitting the word in two as in the Tonga context, to interpret “tala” as ‘inform, relate, or tell’, and “noa” as meaning ‘nothing in particular’. As such, Vaioleti (2006, p.23) literally defines “talanoa” as “‘talking about nothing in particular’ without any particular framework for that discussion’. In the broader research context, informal discussion is an important research method that has gained popularity in ‘contemporary work and learning research internationally’ (Sawchuk 2008, p.1). I use the word *sausautalaaga* instead of “talanoa” because the latter is not really part of the Tuvaluan vernacular although it has been used in contemporary discourse.

Throughout my fieldwork, I employed *sausautalaaga* extensively in casual and semi-casual manners. I refer to “casual *sausautalaaga*” as a one-on-one conversation where I do not even record the discussion there and then. I would bring up an aspect of my research topic to a friend or family member during coffee, bathing in the lagoon, riding on a motorbike, or during indoor games. I would then record whatever transpired to the best of my recollection at a later time. “Semi-casual *sausautalaaga*” refers to an organized discussion with some people but the setting is very informal; one can lie down or do whatever one likes but contribute to the discussion, and I would take notes accordingly (see Figure 4.1). In Nanumea

and Vaitupu I held semi-casual *sausautalaaga* with groups of people. What I noticed was that this form of research is very lively and stimulating. In explaining group story-telling and oral histories, Clifford and Valentine (2003, p.170) state that they are ‘common data collection vehicles in PAR [participatory action research] that enable partners to share perspectives and generate empirical data’.



Figure 4.1: Informal group discussion at Nanumea jetty - the *sausautalaaga*.
Source: Author’s own photo.

4.3.1.4 Personal Observation

The researcher’s personal observations of the daily lives of the people being studied further enhance the findings from the interviews and focus group discussions. The researcher’s personal observations are critical, as they can serve as check and balance measures against what is being acquired through face-to-face interviewing and focus group discussion. Observing places, the researcher is in a vantage position where he or she can see as well as hear what is going on (Corbin and Strauss 2015). Patton (2002, p.302) stated: ‘[c]reative fieldwork means using every part of oneself to experience and understand what is happening’. He went on to say: ‘[c]reative insights come from being directly involved in the setting being studied’. These observations are recorded in what is commonly called research field notes. The field notes contain what the people say, the researcher’s own feelings, reactions to what occurs before him or her, and reflections about the personal meaning and

significance of what has been observed (Patton 2002). They also contain direct quotations, or near as possible recall of direct quotations which Fetterman (1989, p.380) referred to as ‘the heart of most ethnographic research’. With the dawn of technology, field notes have been made easy through the use of devices such as Universal Serial Bus (USB) microphone recorders, and video cameras, as well as the use of computers for taking notes. Advances in technology, though, still have not replaced the element of judgment in interpreting the data.

Additionally, personal experiences of the researcher as being someone from the same society in which the study is undertaken may add the icing to the cake. An insider researcher avoids barriers that an outsider would struggle to overcome, such as understanding the language, adapting to traditional customs, and living the lifestyle of the society being studied. The researcher’s personal experience of the studied sites and the targeted population also helps reduce the time required for the research. As a Tuvaluan, I acknowledged that although visiting islands other than my home island of Vaitupu was tough because of different customary protocols and practices, I was able to easily acquaint myself with the local customs, which really made my fieldwork less problematic. However, on the other hand, I may have missed things taken for granted by insiders, but noteworthy to outsiders.

4.3.2 *Quantitative research*

Equally important is the quantitative research approach because it provides not only information on quantitative aspects of the social issues in the research but also ‘it has a distinctive epistemological and ontological position that has a good deal more to it than the presence of numbers’ (Bryman, 2012, p. 160). In other words, the use of the quantitative approach in this context serves to enlighten the study not only by the quantification of the social issues involved but more so by providing a broader understanding of the knowledge of the society in which the research is held. Quantitative research uses ‘standardized measures so that the varying perspectives and experiences of people can be fit into a limited number of predetermined response categories to which numbers are assigned’ (Patton 2002, p.14). The validity or otherwise of the quantitative results depends largely on how the instrument that was used to administer the research has been designed.

4.3.2.1 Questionnaire Survey

Questionnaire survey is a method whereby the data are collected through the use of a standardised set of questions. It is one of the most widely used data collection methods in human geography and related areas of research. Parfitt (2005, p.78) asserted that the ‘questionnaire survey is an indispensable tool when primary data are required about people, their behaviour, attitudes and opinions and their awareness of specific issues’. The researcher can administer it personally or through a research assistant by taking the questionnaire to the respondents and filling out the predetermined questions, or, the questionnaires may be distributed to the respondents to be completed by them. To have an effective result from a questionnaire survey, it is imperative that the questionnaire is designed in as concise a way as possible while ensuring the desired outcomes are not compromised.

Employing this quantitative research method, I used a survey questionnaire to collect views and perspectives of people according to household. The one-page Household Survey Questionnaire (HSQ) contained basic questions about climate change impacts, culture and migration in Tuvalu (see Appendix 8). The questions were based on the semi-structured questions that were employed for face-to-face interviews. This method was adopted because it has an advantage in that it is possible to measure the reactions of a great number of people based on a limited set of questions, thus facilitating comparison and statistical aggregation of data with those collected using qualitative methods (Patton 2002).

4.3.3 Essay writing

In addition, an essay writing exercise was also carried out with senior primary and secondary school students in Tuvalu. This method is both quantitative and qualitative because the views expressed in the essays, although mostly qualitative, may also be analysed quantitatively by looking at the numbers of parallel responses. Essay writing was used because it was deemed to be the most suitable method through which the research could ascertain the views of the younger members of the population being studied. The inclusion of this age group is vital as they are the generation that is likely to face the brunt of climate change and sea level rise in

Tuvalu. Their voice is critical in determining the thesis recommendations on what is best for Tuvaluans in light of all the climate change and sea level rise impacts.

The essay writing exercise was administered by school teachers following the approval granted by the Ministry of Education. I provided them with the necessary papers, including topic questions (see Appendix 7) and letters informing parents/guardians about their children's participation in the research (see Appendix 9). The exercise was carried out in a test or exam format, and since it was a simple exercise, the time allowed for the exercise was only 30 minutes maximum.

4.3.4 Site selection

One of the important elements of social science research is the selection of the targeted population or the research site. Selection involves a number of considerations such as finance, transport, living conditions, and so forth. More importantly, the selection of the site or sites must be based on the expected outcomes the researcher desires to get, which are normally grounded on the research question(s) that need to be answered. As revealed in detail in the following section, the research took place in a number of sites in three different countries, namely Tuvalu, Fiji and New Zealand. In Tuvalu, there were six islands covered in the research including Nanumea, Niutao, Nui, Vaitupu, Funafuti and Niulakita. These sites were selected in a way that two islands represent each of the three regions in Tuvalu. The northern region includes Nanumea and Niutao, the central region includes Nui and Vaitupu while the southern region includes Funafuti and Niulakita. In Fiji, the research was carried out in Kioa Island and Suva, and in New Zealand it was done in Auckland and Hamilton. The research objectives demanded that the research be carried out in these places in order to get a thorough understanding of the research topic by including Tuvaluans, both from within the country and among those who now live elsewhere.

4.3.5 Sampling

Sampling of the population of the studied areas was an essential aspect of the research. Sampling is concerned with the selection of a subset of individuals from within the selected sites or targeted population (Hay 2000). In this regard, the research focussed on three different categories of the targeted population. First, is

the “general respondent category”, which are Tuvaluan people living in Tuvalu. The aim was to ascertain the views and learn the feelings of these Tuvaluan people about the impact of climate change and sea level rise on their daily lives, and what they intend to do in the future. Second, is the “migrant respondent category”, which includes Tuvaluan people who have migrated and live in Fiji and New Zealand, as well as those who migrated within Tuvalu, especially to Niulakita. The migrants in Niulakita, who are discussed in more detail in Chapter VIII, were people from Vaitupu and Niutao who were relocated or migrated there for different purposes.

The objective for this category is to understand how these people compare life in their original homes or their ancestral homes and their new destinations. More so, the aim is to understand how they view Tuvalu or their home islands in light of the threat posed by climate change and sea level rise. Third and last is the “religious respondent category”, which includes church pastors and deacons from the Ekalesia Kelisiano Tuvalu (EKT) and religious leaders from other congregations in Tuvalu. The goal in interviewing this category of people was to examine how religions influences people’s perspectives and judgments about the impact of climate change and sea level rise. Table 4.1 shows the sampling methods and categories employed and the corresponding numbers of people involved.

Sampling is a useful research methodology because it allows the researcher to refrain from interviewing the entire population as well as each and every household of the studied area. However, sampling must be carefully done to ensure the outcomes reflect and represent the population being studied. The size in qualitative sampling is not so important. While it may seem disconcertingly imprecise, Patton’s (1990, pp.184-185) simple advice remains valid:

There are no rules for sample size in qualitative inquiry. Sample size depends on what you want to know, the purpose of the inquiry, what’s at stake, what will be useful, what will have credibility, and what can be done with available time and resources. The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with information-richness [...]and the observational/analytical capacity of the researcher than with sample size.

Table 4.1: Sampling by method, category, gender and age group.

Methods	Categories	Male	Female	25 yrs & Below	26-45 yrs	46-65 yrs	66 yrs & Above	Total
Interview	General respondent	39	39	1	17	45	15	78
	Migration/Relocation respondent	19	17	4	14	13	5	36
	Returned migrant/relocatee	6	3	0	1	5	3	9
	Religious respondent	25	0	0	6	18	1	25
Total =		89	59	5	38	81	24	148
Focus Group	Focus group	Total = 39	4	3	2	36	2	43
	Sausautalaaga	Sausautalaaga	Total = 22	0	N/A	N/A	N/A	N/A
HSQ	General participant (*1)	Total = 63	86	12	49	72	16	150
Essay Writing	Primary school (*4)	41	46	91	0	0	0	91
	Secondary school (*6)	2	6	14	0	0	0	14
	Total =	43	52	105	0	0	0	105
GRAND TOTAL =		256	201	125	89	189	42	468

Source: Author's own.

Note: (i) The asterisk signs with figures next to them and in brackets in the HSQ³ and Essay Writing⁴ categories mark those who decided to stay anonymous so their gender could not be identified. However, they are included in the total count. (ii) There is no age group for sausautalaaga because it was an informal discussion and participants come and go but I did count the total of those who attended.

In view of the different countries covered, the research employed two sampling methods. First was the simple random sampling where respondents were randomly selected from the studied population or sampling frame (Clifford and Valentine 2003). As depicted in Figure 4.2, this method minimises bias and simplifies the analysis results, and is most suitable to use in smaller population sites. Conversely, random sampling could pose sampling errors because the randomness of the selection may not truly reflect the makeup of the population. As Robinson (1998, p.29) puts it: '[i]t is possible for a simple random to overlook some parts of a population and provide over-representation of others'. This methodology was used in Kioa and Suva in Fiji, and also in Auckland and Hamilton in New Zealand because Tuvaluan populations in these sites are smaller compared to the population

³ Household Survey Questionnaire.

⁴ Essay writing was the research exercise taken with children in Primary and Secondary Schools where they were asked to write short essay on climate change.

in Tuvalu. Also, simple random sampling was used because of the difficulty of getting an official list of Tuvaluan people in these studied areas. Detailed discussion of how I randomly selected my respondents is given in the latter part of this chapter.

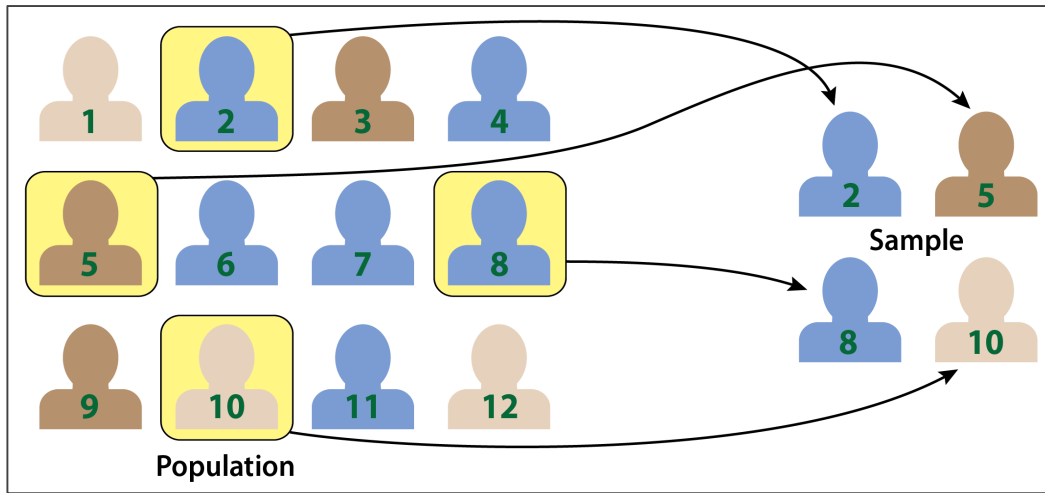


Figure 4.2: Simple random sampling model.
Source: Adapted from Kernler (2014a). Used with permission.

Second is the systematic sampling, where the respondents are selected from a list of the studied population on a regular interval style (Clifford and Valentine 2003). It normally starts with a random selection of the starting point and then proceeds from there on an interval basis as in Figure 4.3. The advantage of this sampling method is that it is impartial and easy to implement. Its main drawback is that it could result in selecting odd or even numbers only which may therefore result in getting just one category, such as all men or all women, for instance. However, in trying to avoid this, I introduced a skip mechanism. That is, if the first selection is a man then the second must be a woman, and therefore if the systematic counting also falls on another male in the list, then it should skip forward or backward from that number to get a female before it moves on to the next interval. At some sites, I followed the systematic sequence all along but kept track to make sure there were equal number of men and women, and used the skip mechanism along the way. I found out that the skip mechanism was useful because in most sites some listed names were either living elsewhere or had already passed away at the time of the fieldwork. This methodology was applied in most of the sites in Tuvalu except Niulakita Island, where simple random sampling was employed.

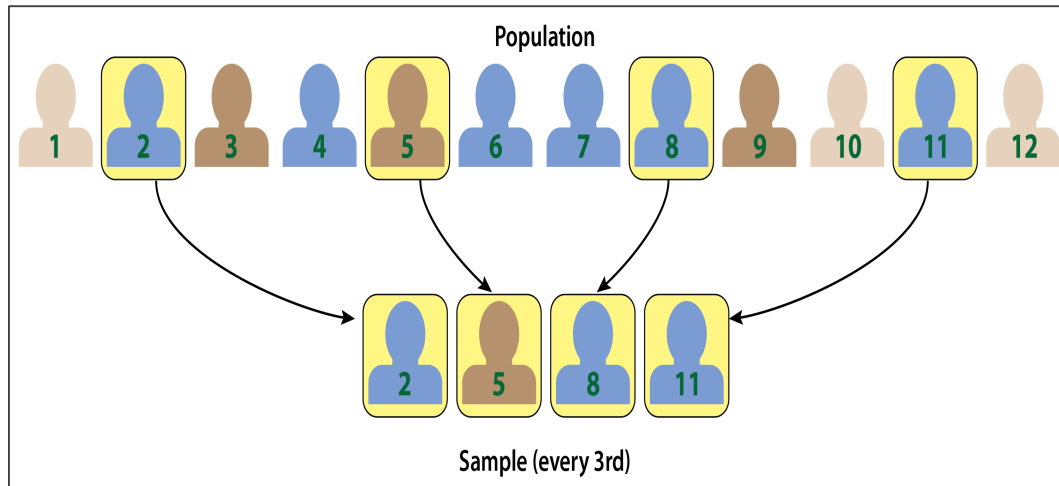


Figure 4.3: Systematic sampling model.
 Source: Adapted from Kernler (2014b). Used with permission.

Lastly, one other important component in sampling is that there must be a list from which the researcher can select respondents. This is what is called the sampling frame. The ultimate goal is that the list should give each member of the target population an equal and non-zero chance of being selected (Flowerdew and Martin 2005, p.380). In Tuvalu, the sampling was made easy because of the official electorate lists provided by *Kaupule* and the Government of Tuvalu.

As can be seen in the following section, sampling of households for the purpose of the questionnaire survey was done according to the number of houses in two main sides, known as *ituala* or *feitu*⁵, of the village on each of the surveyed islands. This method may seem arbitrary in the sense that the numbers of houses in the villages are not the same, which may incorrectly represent the sample households on the island. However, I adopted it because the difference is trivial and because it is the traditional way of dealing with households on the islands.

4.4 Pre-fieldwork phase

The pre-fieldwork phase is crucial as it is the stepping-stone to the rest of the research work that follows. It is a stage where the researcher begins to put together his or her thoughts and formulates the research topic and questions as well as

⁵ The Tuvaluan words for the division of the main village into two sides. *Ituala* or *feitu* is a traditionally important governing notion; this is discussed in detail in Chapter VII.

methodology and method according to prevailing practices and regulations of the discipline with which he or she undertakes the research work or study.

4.4.1 PhD proposal and ethical application experiences

Pursuing the degree of doctor of philosophy (PhD) begins with writing a PhD proposal. This initial phase requires students to undertake a thorough literature review of the research topic of their choice, construct research question(s), discuss the basic research methods and methodologies they intend to follow, outline their proposed theses structure, and offer justifications and theoretical concepts relevant to their chosen topic in their PhD proposals. If the research study involves talking to and obtaining information from people, then an application for ethical clearance from the university's Human Research Ethics Committee is mandatory.

I began my journey as a PhD candidate on 1 March 2014 with writing a PhD Proposal and ethical application. It was a tough experience. I struggled in many aspects of my journey because this was the first research study that I had undertaken. Reading and writing were the main obstacles. Analysing the discourse in the literature review and trying to formulate my thoughts on the topic were the other challenges. Fortunately, the support from the supervisory team, subject librarian and the department administration staff actually made life a lot easier. Also, using new research tools such as the EndNote referencing and e-brary, for instance, had really helped in my struggles.

Ethical consideration is crucial in research. Indeed, I took great care to observe ethical conducts throughout the research process. As someone from Tuvalu, I had the advantage of knowing the customary protocols to follow during the fieldwork but at the same time I had the disadvantage of taking things for granted which had a bearing on the ethical issues. Nevertheless, all ethical issues were strictly followed. Confidentiality of research participants was carefully administered given the ethical sensitivity of the information they shared. Using pseudonyms was not considered because of the importance of the credibility of the information. In the Tuvalu context, using real names not only avoids doubt in people but it adds value to the information. However, this was properly dealt with through seeking their consent (see Appendix 4) for their names and what they say to be used in the text.

Detailed discussions on ethical issues are given in the relevant section later in this chapter. A copy of the Ethical Approval is appended as Appendix 2.

4.4.2 Preparation of fieldwork materials

Four days after the confirmation of my status as a full PhD candidate, I left for Fiji and spent two weeks with my family there before I continued to Tuvalu to pursue the eye-opening task of fieldwork. I worked on the translation from English to Tuvaluan language of all my instruments for the fieldwork during my two weeks in Fiji. I did not expect this work would take up a lot of time until after the first translation work I did. What I found most challenging was the choosing of the most appropriate Tuvaluan words that serve the right purpose in the context in which I would use them in the instruments. This etymological task seemed intractable and this, as most Tuvaluan educated citizens claimed, was due to the fact that Tuvaluan words are too few to choose from when translating. Fortunately, my two brothers-in-law who happened to be in Fiji and staying with my family at that time helped me in suggesting alternative Tuvaluan words as I did the translation.

As part of preparatory work for the fieldwork, one of the things I did was the procurement of certain essentials. In New Zealand, I bought electronic goods such as a USB recorder and video camera. In Fiji, I bought my stationery such as writing pads, pens, envelopes and so on. Conscious of the conditions of traveling within the islands of Tuvalu, I managed to find a waterproof carry bag that could fit all my electronic goods including my laptop. This, I found, really saved all my data that would have been lost during traveling on motor launches between the inter-island ship and the islands, especially through the rough channels of Nanumea, Niutao and Niulakita. I obtained the rest of my requirements such as traditional attire in Funafuti.

4.5 Fieldwork phase

Fieldwork was carried out in two stages and took about eight months in total. The first and most substantive fieldwork stage was conducted in Tuvalu from early August to mid-December 2014, in Fiji from mid-December 2014 to February 2015, and in New Zealand in December 2015. The second stage was a follow up trip to

collect the final bits of data required to tie up the loose ends of findings from the main fieldwork, and was done in Tuvalu and Fiji between November 2016 and January 2017. Fieldwork was a core part of this research because it provided first-hand evidence for my chosen topic. It is widely acknowledged in geography that fieldwork is an important aspect which Rose (1993, p.69) describes as an ‘initiation ritual of the discipline’. Sauer (1956, p.296) who is often regarded as a key founder of North American geography, famously declared that ‘the principal training of the geographer should come, wherever possible, by doing fieldwork’. Fieldwork means different things in different times and places, although it is generally accepted as something that involves first-hand experience outside the classroom (Gold 1991; Lonergan and Andresen 1988). At this point, it is important to note that the field research work is different from field trips because the former is a thorough study of the sites and takes a long period of time, whereas the latter are short first hand observations of the site and are more usually used in teaching.

4.5.1 Tuvalu fieldwork

As noted, Tuvalu was the main focus of the research, and fieldwork there took about five months, covering all the island communities. While the actual fieldwork did not start until I arrived in Nanumea, my first research island site, my first week in Funafuti after arriving in Tuvalu, and while awaiting the departure of the inter-island ship to Nanumea was spent sorting out a few things for the journey. Essentially, I used the time to obtain approval for my visits to the islands and schools from the responsible ministries of the Government of Tuvalu (see Appendix 9) and to get all my printing done.

Nanumea Atoll

Nanumea is the northernmost atoll of Tuvalu. It is the second largest island in the archipelago with a total land area of 3.9 km². As shown in Figure 4.4, Nanumea is an atoll composed of two big islands and a few islets. The 2012 Census shows that the total population of Nanumea is 1,656. However, only 588 people live on the island and the remaining 958 live in Funafuti. The crude population density is 151 persons per square kilometre.

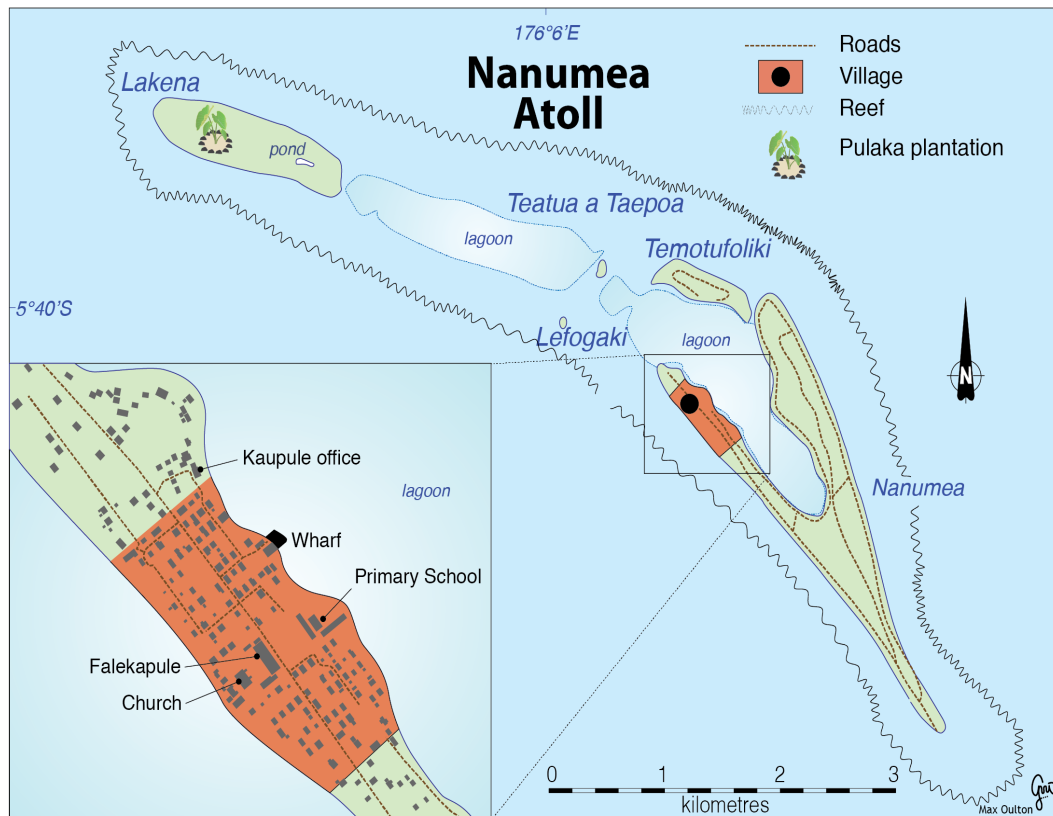


Figure 4.4: Map of Nanumea Atoll.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

It was just after midnight when we approached Nanumea, the first island of my fieldwork. The night was crystal clear and the moon and stars were illuminating the sky and reflecting nicely on the undisturbed sea, so smooth that one could easily see the flying fish happily enjoying the waves from the bow of the ship, M.V Nivaga II. Earlier in the evening while contemplating the arrival time of the ship at Nanumea, some touring officials from the government and I were playing guitar and singing Tuvaluan songs on the deck of the ship. This is a common way of killing the time while traveling on long voyages.

On arrival at the jetty, I unloaded my luggage and went straight to my accommodation at the Kaupule premises that I arranged while in Funafuti. After settling in, I visited nearby places and rounded off my first day, that is Saturday 16 August 2014, by getting my traditional swimming suit known as *sulu* and went to swim in the lagoon. Fortunately, I had two raw flying fish given to me by a staff member of the *Kaupule*, which I ate with coconut while bathing in the lagoon. It was so exhilarating to me because it brought back the good memories of my young

days with my late father. I just floated by myself facing upward and swam gently until it was almost dark.

Serious fieldwork began on Monday, the third day. I met the *Kaupule* Secretary to discuss administrative issues and arrange an office space. I then collected the latest list of all households in Nanumea as well as the list of registered voters during the 2010 General Election for sampling my targeted population. After that, the NAPA Community Officer⁶ (referred hereinafter as CO), whom I had obtained permission to work with from the Director of Environment in Funafuti, and I went to the island's high chief to pay my courtesy call and to seek his customary approval for me to conduct my research on the island.

Using the lists from the *Kaupule*, I sampled my respondents for my interview and household survey employing the systematic sampling method. I divided the 324 registered voters by 15, the number of interview respondents I initially wanted, and then selected every 22nd voter. Applying the skip mechanism explained earlier, I finally identified my 15 interview respondents.

In terms of the household questionnaire survey, I split the 30 households I intended to survey equally between the two sides of the village. This was done according to advice from *Kaupule* staff and the CO although I also knew it because it is usually the way the islands in Tuvalu organize their community affairs. Nanumea village has two main sides, namely *Lolua* and *Haumaefa*, but there are a considerable number of houses on the outskirts of the main village on the *Lolua* side at places called *Mataluafatu* and *Hauma*. I was told that although these houses are located in those two places, when it comes to counting them for island community purposes, they are counted as households of the two main sides according to which of the two sides of the village their descendants, on their fathers' side, hailed from. I finally got 15 households each from the 69 and 42 households in *Lolua* and *Haumaefa* respectively. This was done with the assistance of the CO to ensure the selected households had members available on the island. There were only two households,

⁶ This is the island local officer responsible for the implementation of the National Adaptation Program of Action (NAPA) in the outer islands. All islands have one NAPA community officer each who are employed under the direct supervision of the Director of Environment from the capital but housed under the *Kaupule* Office.

from *Haumaefa*, that did not have any member on the island at the time, so the skip mechanism applied in the selection of interview respondents was also used here, but without any major problem.

Interviewing began on the fourth day. The initial plan was to have three interviews in the morning and three in the afternoon, because I was aiming to complete the interviews within three days so I could carry out the household surveys and focus group discussions on the remaining days. This did not work as planned because my recording devices could only run for three hours before needing to be recharged. I only realised this after my first three interviews when my devices ran out of power. Improvising, I decided to interview two respondents in the morning and two in the afternoon to allow time for the devices to be recharged during lunch break. This problem was further compounded by the fact that the electricity on the island was not running at its normal time from 6 a.m. to 12 midnight due to a shortage of fuel. As a result, the interview task lapsed to the second week and was completed two days before I left the island. In fact, I did not interview all the 15 selected respondents due to concern about time available. So I managed to interview only 12 respondents, which I supposed was a good number and also resolved my concern about gender balance.

Conscious of the time constraints, I engaged two young research assistants to do the HQS on my behalf. Based on the suggestion of the CO, I recruited two young female Form-Seven school leavers, who had survey experience, having been recruited by a researcher who did her survey on the island before my arrival. I ran a one and half hour session with them to explain the survey work to ensure it was done properly according to what I wanted. The following day they began their work and it only took them two days to complete. We had a debriefing session where we went through their work, and having satisfactory results, I thanked and paid them accordingly.

The essay writing exercise with the school was straightforward. As discussed and agreed with the Permanent Secretary of the Ministry of Education, Youth and Sports, the research exercise was only done with the Form Two class under the

supervision and administration of the form teacher. I organised this through the Head Teacher of the Kaumaile Primary School and eighteen pupils participated.

In between the interviews, I had a couple of *sausautalaaga* with one or two persons, mostly mature men of the island. I would find them at the passenger shelter at the island jetty. This is a common meeting place for them because of the breeze from the trade wind side of the island. Some would go there for a short siesta on the hammocks, others would just relax and discuss traditional politics after whatever work they had done for the day. On my second last day, I organised a semi-casual *sausautalaaga* session with a group of about eight men and we discussed various aspects of my research. As it was an informal talk, some respondents were lying on the hammocks and the concrete bench while the rest were sitting facing all directions, and some left the discussion as they pleased and others joined later as shown in the photo in Figure 4.1. I found this *sausautalaaga* very effective and useful because I assumed they felt that they were just talking about something in the manner they were used to in this meeting place, day in and day out. They enjoyed the session because I bought soft drinks and a snack to encourage them to stay.

The focus group meeting I had was with the *Kaupule* councillors and the council of chiefs of the island. This was a joint meeting and was held three days before I left the island. In accordance with the island's practice, the *Pule Kaupule* (lit. Head of the Kaupule) chaired the meeting, but I led and facilitated the discussions throughout. Many of the issues I discussed with interview respondents were mostly endorsed by the meeting. Two or three issues were disputed, causing the discussion to be prolonged as the members disagreed among themselves.

Towards the end of my visit, I joined a group of men to visit Lakena islet to get *pulaka* for the island pastor and his entourage who were due to travel to Niutao for the EKT General Assembly on the same boat that I was to travel to Niutao on as well. Lakena islet is almost the size of the main land. On arrival, I was amazed to see the islet has an old village and a church building. I was told that during World War II, when the Americans occupied the main settlement, the entire Nanumea people were relocated to Lakena and lived there for decades before returning to the

main land. Although only one man lives in Lakena, the *Kaupule* places a worker to live and look after the island on a monthly shift basis. Throughout my stay in Nanumea, I went around the island to take photos of places that have been affected by climate change and sea level rise as well as work activities and sports games.

Niutao Island

The island of Niutao is situated in the northern part of Tuvalu and is the third smallest. Its land area is 2.8 km². As Figure 4.5 shows, Niutao is a reef island and does not have any islets. It has two small brackish lagoons. According to the 2012 Census, there are 1,444 Niutao people in Tuvalu of who 666 reside on the island, 680 live in Funafuti and the rest live on other islands. Therefore, the island's crude population density is 238 persons per square kilometre and it is the third most populated island in Tuvalu.

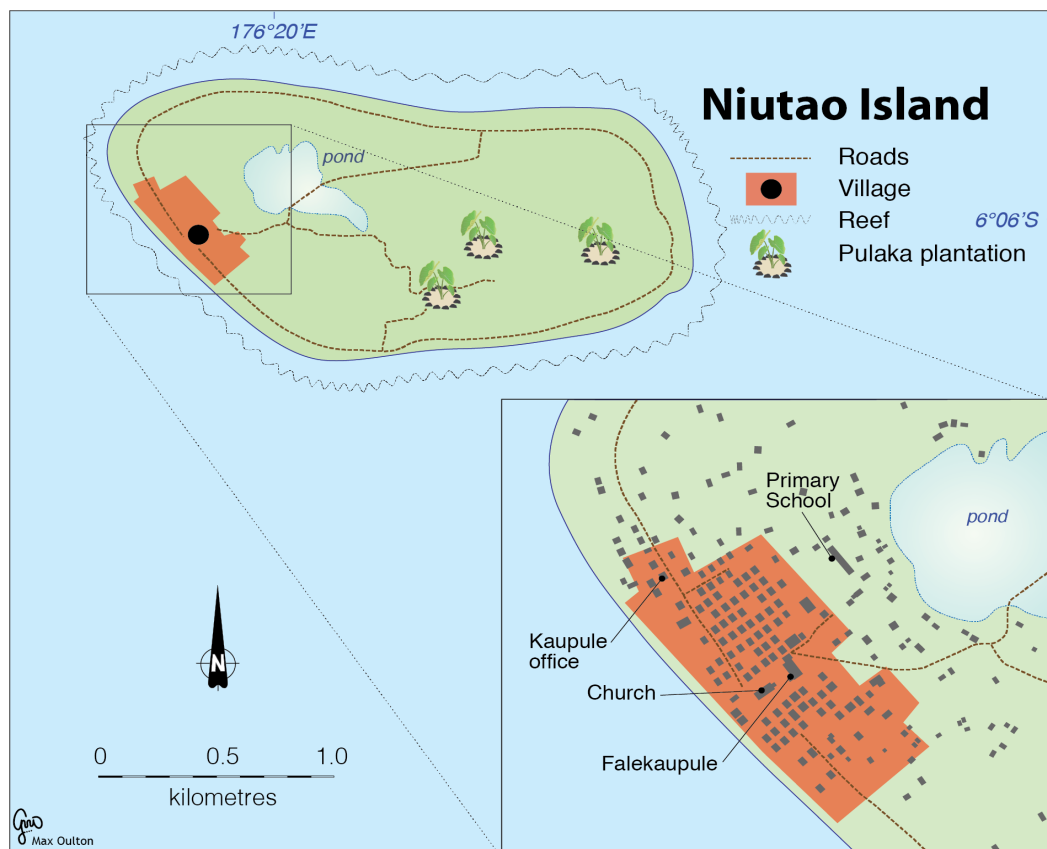


Figure 4.5: Map of Niutao Island.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

The fieldwork in Niutao was rather different since it took place during the culmination of the two weeks EKT General Assembly⁷. This was the biggest event ever hosted in Niutao beside the People’s Forum, a national summit that was hosted there in 1997. The entire three weeks that I was there was full of festivities, as revealed in the photos in Figure 4.6. On arrival, my daughter who lives there received me and took me to my nephew’s place where I lived for the rest of my stay. At lunch the island community invited all EKT delegations and everybody who visited Niutao, including transit passengers for lunch in the *falekaupule*. I went because I wanted to pay a courtesy call to the high chief and to seek his approval for me to do my research. To my surprise, I found out as I entered the *falekaupule* that the high chief was someone I know, a friend! After lunch I walked up to him and we shook hands and talked for a while.



Figure 4.6: Activities during the EKT General Assembly in Niutao 2014.
Source: Author’s own photos.

⁷ The EKT General Assembly is held biennially and since 2004 islands on rotational basis have hosted it. Thus, Niutao hosted the 2014 EKT GA.

I did not start any serious fieldwork until the following week though I took time on my second day, Friday, to meet the *Kaupule* secretary and get the lists for my sampling purposes. Following the same sampling exercise as in Nanumea, in Niutao there were 323 voters registered for the 2011 Kaupule election, and 158 households. In terms of the interviews, I divided the 323 names of voters by 12 (the number of required respondents) and selected every 27th name on the list. Similarly, the household sampling was based on the 158 households on the island divided by the 30 required households for the survey. As in Nanumea, I applied the skip method because there were people on the list who had passed away, but the remainder were present. The sampling exercise was done with the assistance of my daughter because the Niutao CO was tied up with the island's activities.

Since the aim to carry out the fieldwork in Niutao at this time was to also allow me to undertake interviews with EKT pastors while attending the EKT Assembly, I identified my respondents using a list I had prepared earlier of all the Tuvaluan pastors. I did this with the assistance of a cousin of mine who is a pastor by ticking the names of those pastors who were actually present in Niutao for the EKT Assembly. In considering the most appropriate sampling method that served the purpose for this category of respondents, I decided not to use the systematic sampling and random sampling methods that I used for the general respondents. I simply picked the names of pastors who served each of the EKT congregations in Tuvalu at the time, including the pastor for the Kioa congregation and one from Tuvalu congregations in New Zealand. The rationale behind picking these respondents was that they are the ones who are officially posted to work in the registered designated EKT island and village congregations. These pastors work closely with the people and are highly respected in their congregations and therefore have great influence on the lives of the people. Other pastors who do not have official postings to the designated congregations have less influence, hence the reason I left them out. Of the 16 pastors I picked, I managed to only interview nine because the others were busy, and the limited time I had available. Nevertheless, I managed to interview them later in Funafuti because they work and live there. In

addition, I also selected two *tiakono matua*⁸ from Nanumea and Niutao who attended the meeting because they are heads of their island congregations and thus have great influence like the pastors. I did not want to select more because I did not want to sway too far from the targeted respondents.

Furthermore, I selected the third category, the ‘migrant respondents’ that I planned to also interview in Niutao. As provided in detail in Chapter VIII, these are the people of Niutao who were resettled or migrated to Niulakita island to work there as copra cutters but have returned to live permanently in Niutao, at least during the time of the fieldwork. The relocation and migration scheme of Niutao people to Niulakita began in mid-1940s as a result of the colonial government’s effort to address the economic hardship that Niutao had from overpopulation. There was no formal sampling done because there were not many of them. I just searched for those who were there with the help of my daughter and her parents-in-law. As a result, I managed to get about six names, but only interviewed four of them because the other two were fully occupied with island activities.

My interviews began on Monday of the following week and finished on the day I left Niutao. Despite the preoccupation of selected respondents with EKT programmes I managed to interview 27; 12 general, 11 EKT and four migrant respondents. Because the respondents were immersed in the meeting and associated activities, I did not follow a systematic approach of interviewing one category before moving to the next: I knew if I did that I would not be able to get what I wanted because of time constraints. So I carried out the interviews of respondents by moving from one category to another depending on their availability. This was an extremely burdensome and exhausting task, especially the repeated running around to find the respondents. Luckily, my daughter helped me out in most interviews, particularly in finding the respondents and video recording the interviews.

My HQS was carried out by my daughter with the assistance of a male youth. I resorted to them because the other potential research assistants were hectically busy

⁸ A Tuvaluan word for church deacon elders but mainly used by the EKT.

with the island programmes. We had a one-hour briefing of the work they needed to do before they carried out the survey during the second week. It took two days for them to complete the work to my satisfaction. The essay writing was supervised by Webley Primary School teachers and 20 Form II students were involved.

I did not manage to get a focus group discussion because of the unavailability of people due to the EKT Assembly. Although the *Kaupule* councillors and chiefs did agree to meet with me, as prearranged by the *Kaupule* Secretary, I decided to cancel the meeting. I did this out of respect to them, as it is culturally disrespectful in Tuvalu to engage the traditional leaders if there is a major island commitment such as hosting the EKT Assembly. However, I had the opportunity to hold *sausautalaaga* with people mostly in the *falekaupule* during programme intervals.

On Friday 19 September I left Niutao for Nui. The farewell on the beach to the departing EKT delegations was emotional and it really touched me because of the extraordinary reception and hospitality extended to me as well. I was particularly moved by the fact that Niutao women gave me a gift of two *mekei* (lit. decorated mat), which is one of the highest gifts in the Tuvalu culture. And of course, saying goodbye to my daughter was tough but I left her with great satisfaction for her having sacrificed most of her time helping me and ensuring that I finished my research before the ship arrived.

Nui Atoll

Nui is an atoll located in the central region of Tuvalu. It has a total land area of 2.8 km². As shown in Figure 4.7, Nui is made up of a string of some fifteen odd islets with an open lagoon. The southernmost islet named *Fenua Tapu* is where the main settlement of the people of Nui is located. The 2012 Census indicates that the population of Nui is 1,034. Of this number, 684 people live on the island, 300 live in Funafuti and the rest on other islands in Tuvalu. Thus, the population density of Nui is 192 persons per square kilometre. Nui is the only island in Tuvalu where people speak Kiribati language.

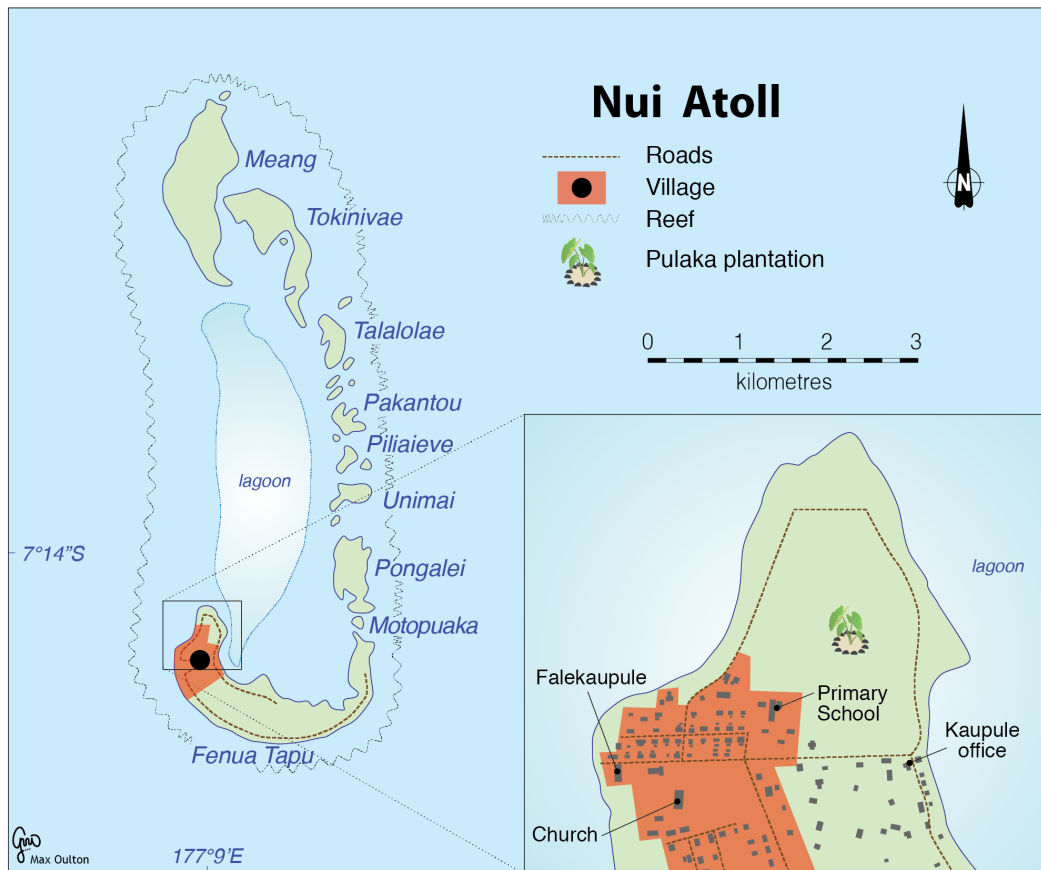


Figure 4.7: Map of Nui Atoll.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

In Nui I stayed with my nephew who treated me exceptionally well. My fieldwork began on Monday 22 September with the usual sorting out of administrative issues. After collecting the list of registered voters for Nui in the 2010 general election and the household list from the *Kaupule*, the Nui CO took me to the *Pule Fenua*⁹ (Island Head) to seek his approval for the conduct of my research on the island. I then worked on the sampling of my respondents. According to the registered voter list for the 2010 General Election, there were 748 voters including those residing on Nui and those Nuians residing in Funafuti and other islands in Tuvalu. So, using the skip method I selected 12 respondents with the aid of the CO. With regards to households, there were 93 houses on the Alamoni side and 80 on the Manutalake side, making a total of 173 households in Nui. Using the same approach as that used

⁹ In Nui there is no chiefly system. So the head of the island community is called the *Pule Fenua*.

in Nanumea, I selected 15 each from Alamoni and Manutalake with the assistance of the CO.

The interview process was not quite as straightforward as it was in the other islands because the language in Nui is not Tuvaluan but Kiribati. Although most interview respondents can understand Tuvaluan and were able to answer the questions in Tuvaluan, some had difficulty understanding and even responding so they did so in their mother tongue. While I can understand basic Nuian words, my inarticulacy in the language gave me no other option but to resort to an interpreter. So throughout all of my interviews in Nui, the CO, who helped in taking photos and video recording the interviews, also served as an interpreter when either the interview respondent or I or both of us were tongue-tied and taciturnly silent.

The household survey was carried out by two research assistants. One was a young female who had survey experience through having worked on the 2012 Census survey in Nui, and the other was a youth who had completed his degree at the University of the South Pacific in July of that year. As they are well educated and experienced, I spent little time explaining to them the work. It took a day and a half for them to complete the survey; their work was extremely outstanding and I was deeply appreciative of them. Furthermore, the essay writing was administered by teachers at the Vaipuna Primary School and 20 pupils participated.

My fieldwork in Nui was also graced by the glamorous festivities that took place during my second and final week (see photos in Figure 4.8). First was the annual commemoration of Nui Women's Day (called *Te Setema o fafine Nui*) that was held from 25 to 29 September 2014. The second occasion was the annual commemoration of Tuvalu Independence Day on 1st and 2nd October. My experience of Nui's celebration of the independence days was not much different from previous experiences in Vaitupu and Funafuti. However, I was fascinated and bewildered by one of the organised sport activities, where men and women competed in a soccer match with an open number of players.



Figure 4.8: Nui Women's Day and Independence Day celebrations in Nui.
Source: Author's own photos.

While participating in all these festivities, I worked my way around to getting my interviews done, which I successfully did well in time before I left Nui. On the last two days before the ship arrived, I held a focus group meeting and a meeting jointly with the *Kaupule* councillors and the island *Pule Fenua* and his deputy. The focus group comprised two young males and two young females along with two women and two men who were members of the council of elders of the island. These participants were selected on the basis of a list provided by the *Kaupule* office of those who could converse both in Tuvaluan and in Nuian. This made my task of facilitating the discussion less vexatious. Following up on what the respondents said about the impact of climate change, I took time to go and see those places with

the CO and took some photos. In between, I held *sausautalaaga* with elders during the festivities.

On departure, the Nui women gave me traditional gifts as tokens of appreciation for the treat I provided by purchasing ten buckets of biscuits to feed the whole island community during the second last night of their day's celebration. I did not expect this, but I accepted the gifts with great satisfaction that I had at least done something so small for the people of the island of Nui.

Niulakita Island

Niulakita Island is the smallest and the southernmost island in Tuvalu. Its land area is only 0.4 km² and only 46 people live there. As shown in Figure 4.9, Niulakita is a reef island. Niulakita is legally owned by the State (Government of Tuvalu) but has been under the jurisdiction of Niutao since 1946. Therefore, the inhabitants of Niulakita are people from Niutao who were sent there to work as copra cutters during the copra-trading era. I cover this in more detail in the relocation topic in a later chapter.

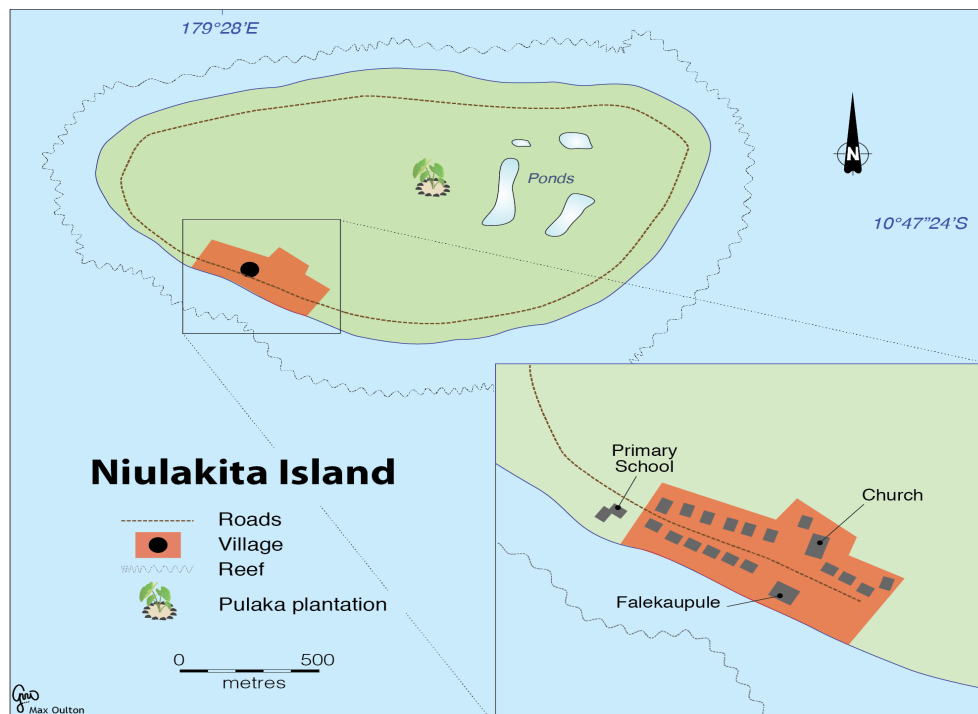


Figure 4.9: Map of Niulakita Island.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

The fieldwork at Niulakita was not so exciting because it was only one day, and also because I was not feeling well. Usually, the ship spends two or three hours at Niulakita unless there is major loading or unloading of cargo. However, this time the ship, M.V. Nivaga II, spent the whole day there so I could finish my research work. I had this arranged with the Director of Marine and Port Service well before I left for Nanumea.

Given the limited time I had to do my research, I quickly sorted out my sampling of the respondents with the help of the island's CO who received me on arrival. With only about thirty people on the island at the time, and only about twenty adults, I decided to select only three male and three female respondents for my interviews. I did not use any of the sampling methods I adopted in the other islands because of the fact that the list was only prepared there and then by the CO. There was no official list available at the time. While we were standing there at the beach with the CO to finalise my interview list, the island chief came by to collect his stuff from the boat so I asked his permission to do my research and he happily agreed. In fact, he said something like, *fenua o manu penei se manakogina se fanoi*¹⁰ and he burst into laughter. What he actually meant is that Niulakita does not operate under any bureaucratic system for me to seek permission to undertake research on the island.

Improvising the limited time and the availability of respondents, I interviewed three respondents in the morning and three in the afternoon. The fieldwork in Niulakita focused on the migration aspect of the research. So the interview respondents were those under the "migration respondents category". Neither did I conduct a household survey nor an essay exercise. This was not due to the limited time I had, but it was due to the fact that I only planned to interview this particular category. However, I took some good photos of the part of the island which was eroded, which was the worst in all the islands I visited (see top photo in Figure 3.10).

¹⁰ This phrase can conveniently translate to mean 'an island of birds like this does not need any permission'.

It was such a short trip that I did not have time to experience the true life of the people of Niulakita. I admit that I have no meaningful personal observations of Niulakita except to say that the island is pleasant and charming. My parents who lived there for two years in the mid 1940s when Niulakita was still under the jurisdiction of Vaitupu, used to talk about life in Niulakita as paradise; with bountiful food such as fish, birds, coconut crabs, turtles and even cattle. All these, except the cattle, according to the respondents can still be found on the island but they acknowledged that it was not as plentiful as it was before. All these thoughts hovered in my mind as I was waiting for the boat to arrive. I left the island just before sun set and the ship cruised straight to Nukulaelae as soon as I boarded.

Vaitupu Island

Vaitupu is the largest island in Tuvalu and is located in the central part of the country. As shown in Figure 4.10, Vaitupu is a reef island and has a few islets and two lagoons. Its land area is 5.6 km² and it is home to the second-largest population in Tuvalu. The 2012 Census reveals that the largest population by island ethnicity in Tuvalu is Vaitupu, which is, the only one with more than 2,000 people. Of its 2,068 total population, there are 1,202 Vaitupians living on the island and 832 live in Funafuti. The crude population density is 278 persons per square kilometre.

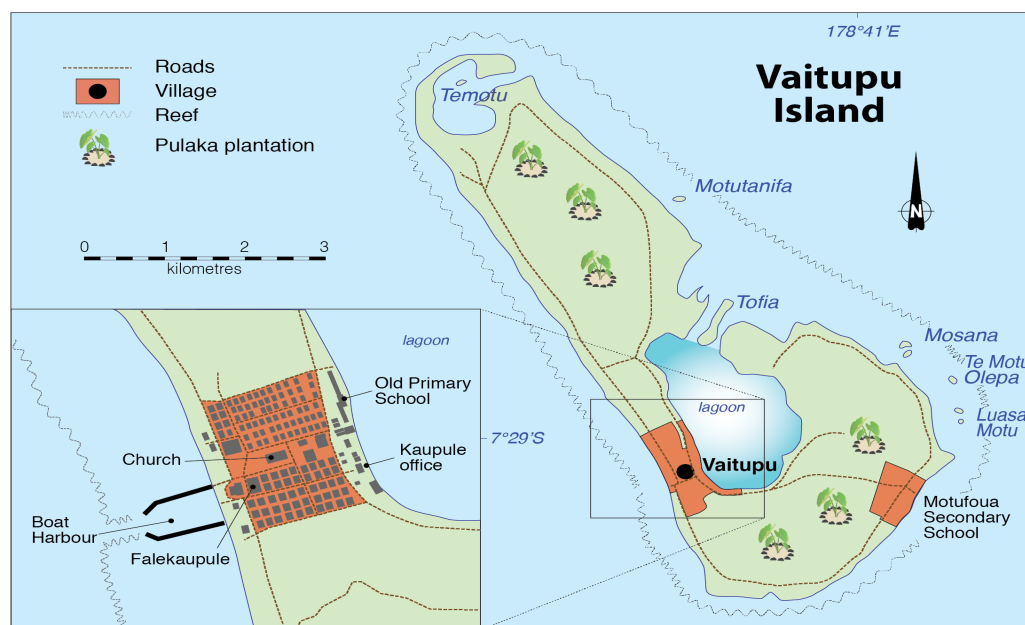


Figure 4.10: Map of Vaitupu Island.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

My fieldwork time on Vaitupu was supposed to be three weeks but I spent just less than two weeks there. Since I am from Vaitupu I had no problem organising my fieldwork within that short span of time. In fact, the main reason for shortening my time in Vaitupu was the unfavourable shipping schedule, which was changed unexpectedly which is not uncommon for our shipping service. It was Tuesday afternoon 11 November 2014 when we arrived at Vaitupu on another inter-island ship called M.V. Manu Folau. I stayed with my uncle as I usually do whenever I go to Vaitupu. He was 87 years of age at the time, and the third oldest person on the island. My uncle, Paitela Maloto, whose photo is given in Figure 4.11, was my father's youngest brother and the fifth of the seven children in the family. At the time, he was physically healthy though his mental capacity had deteriorated so badly that he could barely remember things. He did not recognise me when I shook his hand on arrival. He sadly passed away in March 2016.



Figure 4.11: Paitela Maloto sitting inside his house at Vaitupu
Source: Author's own photo. Used with permission

My fieldwork began the very next day, Wednesday 12 November 2014. After I collected the list from the *Kaupule*, the Vaitupu CO helped me out in sampling my targeted interview respondents. Unfortunately, I only used the list of registered voters for the island's election of *Kaupule* councillors that took place in 2011 because the list of voters for the 2010 General Election was incomplete as there

were two missing pages. Maintaining the number of respondents for the face-to-face interview that I used in the other islands, I selected my 12 respondents from the 560 names on the list using the skip methods where appropriate. In doing so, I was conscious, as someone from Vaitupu, to ensure that my selection process is not biased but truly impartial. I achieved this through the use of the CO to do the selection on my behalf. Likewise, I sampled the households according to the two lists of village sides of the island. I selected 15 households each from the 108 and 86 households from Tumaseu and Asau respectively.

Wasting no time, I began my first interviews in the afternoon. For the rest of my time there I interviewed two to three respondents a day and managed to complete all 12 before I left. In addition, I interviewed the second oldest woman on the island because she was one of the only two still living at time of the fieldwork of those who migrated to Kioa in the first group in 1947. I interviewed her under the migration respondent category. I later learned that she passed away in 2015.

In terms of the household survey, I engaged two research assistants in the second week. As I did in the other islands, I briefed them properly on what they needed to do before they started their survey exercise. One carried out the survey on the Tumaseu side and the other on the Asau side. They reported after two days that the survey went well except that members of one of the households in Tumaseu were so busy that after several attempts the research assistant chose the next one on the list that I gave both of them. This improvisation move was not expected but I was grateful as it showed the merits of their work as also shown in the outcome of their survey.

The essay writing exercise was also organised in the second week. Luckily, although Tolise Primay School had just finished its school term for the year the week before, the Head Teacher kindly agreed to organise the exercise for the Form 2 class and 18 students participated. In a parallel fashion, the Acting Principal of Motufoua Secondary School helped execute the essay writing despite the fact that the school that week was only cleaning up the campus and getting things ready for the 'Prize Giving Day' on Thursday that week before going home that same weekend. In light of the mood in which the school was at, the Principal, instead of

getting the entire Form 6 to do the exercise, only selected 14 students from senior forms.

The meeting with the *Kaupule* councillors and council of chiefs took place at the *Kaupule* conference room on 21 November 2014 (Figure 4.12). It took longer than I expected, but I was happy to have had the opportunity to listen to them as they shared their views on the various issues I raised for discussion in my power point slides. On the following day, I had a *sausautalaaga* with some ten or so men at the Alofi, a passenger shelter, similar to the place in Nanumea, situated next to the harbour ramp (Figure 4.12). Alofi is a popular place on the island, not so much because it is a nice spot to relax but because it is where all the concocted stories start.

It is known as a local parliament chamber where local politics are discussed on a daily basis. It is also a place where the old men would congregate and talk about all sorts of things from around the world that sometimes people would refer to as the CNN and BBC newsroom. There are storytellers among them that are well known for their talent in fabricating things that people would easily believe. To the Vaitupuanans, any story that emerges from Alofi should never be taken for granted, even if the probability of truth is high. The sources themselves are enough to judge the unreliability of their stories, so they said. The *sausautalaaga* with the group went very well, anyway. I did my best to ensure there was no misleading information. I was happy that all contributed well without any exaggeration taking place although there was one made-up story that emerged in the discussion, which was very interesting and worthwhile noting. It is a made-up story of a sinking ship that link to the idea of an underwater island. I discuss this in more details in Appendix 1.



Figure 4.12: Meeting with chiefs and Kaupule and *sausautalaaga* at Vaitupu.
Source: Author's own photos.

During this time in Vaitupu, I also took photos of the affected areas around the island but made few other personal observations. I did not need it because I know the place too well. I left Vaitupu on Sunday 23 November 2015, unhappy that I missed the island's special day called '*Te Aso Fiafia o Vaitupu*' that falls on the 25 November every year.

Funafuti Atoll

Funafuti is an atoll and is home to the capital of Tuvalu. As shown in Figure 4.13, Funafuti has an open lagoon engulfed by islets and the main island of Fongafale lies to the east. Funafuti's total land area is 2.8 km² with a population of 6,152 people. Of this total population, 1,166 are native Funafutian and the remainder comprise people from the other islands in Tuvalu, thus giving a population density of 2,205 persons per kilometre square (Central Statistics Division of the Government of Tuvalu 2013b).

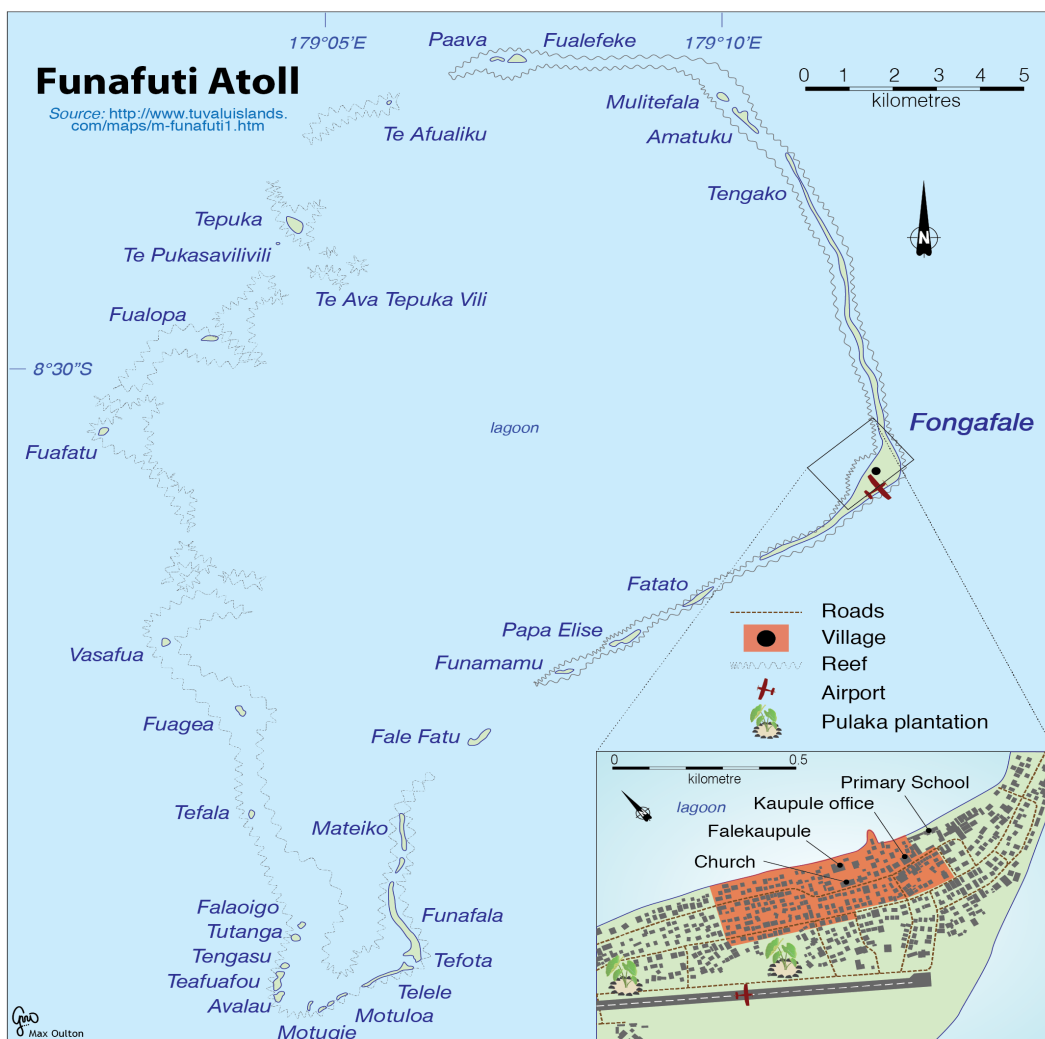


Figure 4.13: Map of Funafuti Island - Tuvalu's capital.

Source: Max Oulton, Cartographer, Department of Geography, University of Waikato. Data supplied by the author.

I spent most of my time during the first fieldwork period in Funafuti on two different occasions, from 12 to 29 October and 24 November to 16 December 2014.

I did this because I had to cover the native Funafuti people, and representatives from Nanumaga, Nukufetau and Nukulaelae people living in Funafuti, because I did not have time to visit their islands due to limited time and shipping difficulties. However, instead of selecting 12 respondents from these three island communities, I only picked six each because of limited time. For native Funafutians I selected 12 respondents, as it is one of the six main research population groups for the research. In addition, I also interviewed four EKT pastors and seven religious leaders/pastors from the other main churches in Tuvalu and three returned relocatees or migrants from Kioa.

So all in all, I interviewed 44 respondents in Funafuti. In light of this high number, I organised my interviews in a way that suited me, and of course the respondents as well. I therefore dedicated my first two weeks to interviewing native Funafutians before I moved on to interview respondents from Nanumaga, Nukufetau and Nukulaelae. My last category was EKT and other religious respondents. However, it did not go smoothly because at some stages a small number of selected respondents were busy so I had to pick another available respondent and had to find another time for them.

In sampling my respondents, again I adopted the systematic sampling method for the Funafuti respondents and the simple random method for the other three islands. For Funafuti, I used the list of registered voters for the 2010 General Election provided by the Kaupule office. Of the 748 on the list I picked my 12 respondents, and again I applied the skip method when someone was absent from the island. For Nanumaga, Nukufetau and Nukulaelae I used the list produced by the Electoral Office in the Office of the Prime Minister and selected the respondents with the assistance of friends from these islands in verifying their presence in Funafuti at the time.

My HSQ was confined to households of native Funafutians only. The survey was conducted with 15 houses each in the Senala and Alapi sides selected from the 70 and 63 households respectively. As with other islands, I engaged two Funafutian youths to carry out the survey. We had a one-hour session to explain the work

before they carried out the survey. After three days they reported back with satisfactory outcomes.

The essay writing exercise was only carried out with some 16 Form 2 students of Nauti Primary School because others were busy. Sadly, I did not manage to carry out the essay exercise with the Fetuvalu High School because the school staff were busy.

4.5.2 Fiji fieldwork

The fieldwork in Fiji was conducted in two sites namely Kioa island and Suva, Fiji's capital city. As mentioned earlier, these two sites were chosen because of the need to ascertain the perspectives of Tuvaluan people who lived there about the aspect of the research topic relating to migration. During my two months in Fiji, I spent two weeks in Kioa and the rest of the time in Suva.

Kioa Island

As indicated in Figure 4.14, Kioa Island is offshore from Vanua Levu, one of the two main islands of Fiji. Situated at Buca Bay, Kioa is 18.60 km² in land size and topographically mountainous, with steep wooded and volcanic slopes with fertile soils. The island of Kioa was first settled by a Fiji *mataqali* (lit. clan) called Salia. In 1853 Kioa was sold by Fiji's paramount chief known as Tui Cakau to Captain Owen of the ship called Packet as a payment for taking people from Somosomo to Bau. The island was then known as Owen's Island for many years (Derrick 1959). Different people owned the island of Kioa before it was put on auction sale and finally bought by the people of Vaitupu in 1946. The number of Kioans living in Fiji is said to be around 1,000 but about half were living on Kioa at the time of the fieldwork.

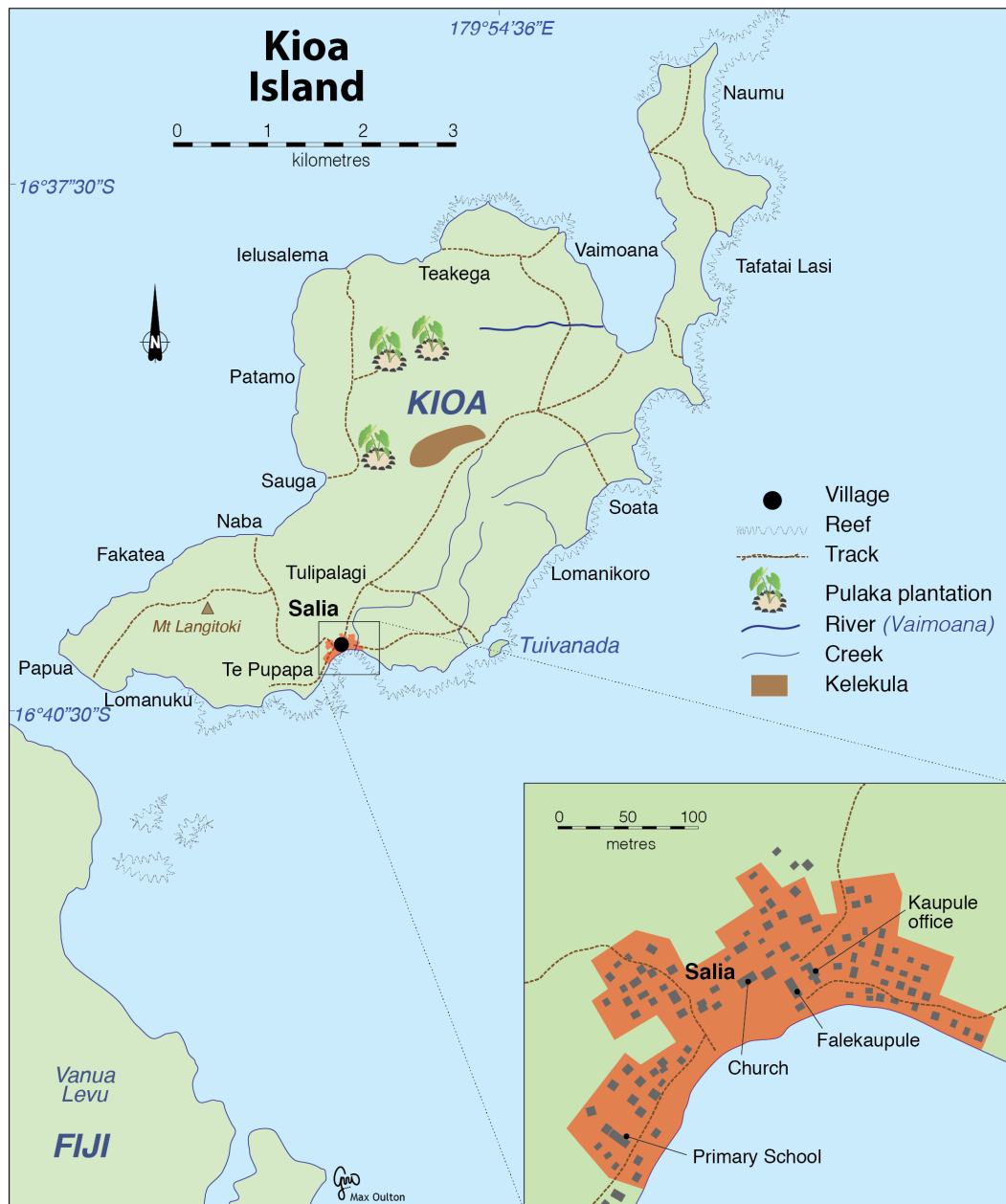


Figure 4.14: Map of Kioia Island in Fiji.
 Source: Max Oulton, Cartographer, Department of Geography, University of Waikato.
 Data supplied by the author based on personal communication with Tusialofa Puafolau.

I arrived with my family in Kioia two days before Christmas in 2014. It was a long journey because we had to travel through three transit points by land and sea before finally arriving in Kioia. As we approached the island, I marvelled at the huge change I saw in the island from my first visit there in 1989/1990. On arrival, my cousin whom I stayed with in Kioia before, welcomed us and took us home.

I began my interviews on the very next day, 24 December 2014, as I was conscious of the many festivities that would take place in the next two days as well as during

the following week. However, the afternoon we arrived, I went to the *Pule Kaupule* to seek permission to do my research, which he agreed to without any problem. Slightly different from the approaches I employed in Tuvalu, I selected my interview respondents using the simple random method but picking according to age groups. I did this with the assistance of Kaupule staff. So I selected one male and one female from the age groups 20s, 30s, 40s, 60s, 70s, 80s and above. The reason I selected my respondents this way was that I wanted to compare their views and perspectives as being migrants to Kioa and/or being born and bred in Kioa. In doing so, I started according to the traditional custom with the oldest man and woman on the island. They were part of the first eight groups of migrants from Vaitupu who were relocated to Kioa in the late 1940s and early 1950s. In fact, one of them (the woman) was the second surviving migrant of the first group who landed in Kioa on 26 October 1947; the other being the old woman that I interviewed in Vaitupu as mentioned earlier.

I carried out my interviews of the 12 selected respondents amidst the festivities that took place on the island. Mindful of the cultural importance of participating in the island activities for the celebration of Christmas and New Year, I only did my interviews during intervals between day activities and on the days when there was no island programme. I also held a meeting with Kaupule councillors during one afternoon while the people were playing outdoor and indoor games; something they happily agreed to. I did not hold any household surveys or an essay exercise with the school children because it was not part of my fieldwork aim for Fiji and New Zealand.

During the two weeks on Kioa, only two or three days involved no island programme or extended family commitment. Besides the three days' celebration each for Christmas and New Year that we participated fully in, we also participated in funerals of two of our relatives that unexpectedly died within that two-week span. Also, there was one day in which the island was fully occupied with a visiting cruise ship (see Figure 4.15) where hundreds of tourists came ashore and the island provided local entertainment and other traditional items. In the last weekend, the island hosted a special *fakaala* (feast) for all students and people who visited Kioa to spend Christmas and New Year with their families. This occasion is not so much

for the food, but for the speeches from the elders of the island to the children, the *food for thought!*



Figure 4.15: Tourist boat and traditional feasting in Kioa.
Source: Author's own photos.

We left Kioa on the 8th January 2015. I was so glad to see that all my children really enjoyed their time there despite their initial dislike of the idea of spending school holidays on the island.

Suva

The fieldwork in Suva took only four days but stretched out throughout my six weeks' time in Suva from mid January to early March 2015. Since the aim of the research in Suva, as was the case in Kioa, was to interview Tuvaluan people who have migrated and live there, I did not carry out any other research method but just the face-to-face interviews. I interviewed six respondents, four males and two females, with ages ranging from 40 to 70 years. The selection of the six respondents was not done according to any of the two sampling methods used in Tuvalu. This was because of the difficulty in identifying those with permanent resident status. The Suva Tuvaluan population is largely made up of students and their families, referral patients, and some expatriates and their families. The majority of Tuvaluan people, who live in Suva with permanent resident status, are those living in a village called Veisari at the outskirts of Suva (see Map in Figure 8.5, Chapter VIII), and Kioan people who work and live in the suburbs of Suva. In the absence of a proper list, I resorted to picking my respondents with the assistance of a staff member at the Tuvalu High Commission who hailed from Veisari. I did not interview any of the Kioan people in Suva because they were being represented by those I interviewed in Kioa.

Conducting research of this kind in a place where the people are scattered across a large city or town is extremely difficult and quite costly. Finding them at the right time is hard, especially those that do not have mobile phones. I had to make numerous calls to their landline phones at work and home to find them and to arrange suitable times for the interviews. At times I taxied to their places, only to find them missing despite prior arrangements. It was a rather different experience from that I experienced in Tuvalu and Kioa. As part of the plan, I spent most of my time with my family who live in Fiji and finally returned to Hamilton on 3 March 2015.

4.5.3 New Zealand fieldwork

The fieldwork in New Zealand was carried out with Tuvaluan communities living in Hamilton and Auckland. It took me eight days to interview my targeted respondents but it was spread out over about three weeks from mid November to

early December 2015. In Hamilton, I interviewed two male and two female respondents. The selection of my respondents was conducted differently from Tuvalu because there was no formal list for me to choose from. In fact, I chose my respondents on two bases; gender balance and two each from those who descend from the northern part and the other two from the southern part of Tuvalu. It is quite common in certain undertakings of national gatherings, either in Tuvalu or overseas, to split community members between northern and southern islands¹¹.

In Auckland, I interviewed eight people. Similar to the approach in Hamilton, I did not use any sampling method because of the unavailability of a formal list of names of Tuvaluans living there. Improvising the situation without comprising the quality, I chose one from each of the eight island communities, and of course maintained gender balance of four male and four female respondents. Besides, I also selected them on the basis of four different age groups (20s, 30s, 40s and 50s and above). I took this approach because I wanted to get a variety of views at different generational levels.

Although my interviews in Hamilton went well, I had difficulties in Auckland. First, identifying respondents on the basis of the above criteria had a lot of problems such as unavailability due to work and other reasons, as well as unwillingness to cooperate, especially among the young ones. Nonetheless, with the assistance of my cousin in identifying the respondents and also taking me around to conduct my interviews, I managed to finish them all in two weeks.

4.5.4 Follow-up fieldwork

I had two follow-up periods of fieldwork. First, in Fiji in 2015 while spending Christmas and New Year holiday with my family. This time I did not visit Kioa but had the opportunity to talk with Kioans living in Suva. While holidaying, I took time to seek information about the Tuvalu community settlement in Veisari and checked on the number of families there. Second, I spent about six weeks in Tuvalu from November to December in 2016; four weeks in Vaitupu and two in Funafuti.

¹¹ The northern islands include Nanumea, Nanumaga, Niutao (including Niulakita), and Nui. Southern islands comprise Vaitupu, Nukufetau, Funafuti, and Nukulaelae.

I did not have any follow up for Auckland and Hamilton because I managed to get all I needed in the first fieldwork period.

The follow-up fieldwork was basically to get a number of crucial data that I needed to tie up the loose ends from the data I collected during the main fieldwork. In Tuvalu, I targeted my follow-up to coincide with the EKT General Assembly that was hosted in Vaitupu from 6 – 20 November 2016. This was to take advantage of many people from around the country and Tuvaluans living overseas who visited Vaitupu for that occasion. I was able to have *sausautalaaga* with key EKT personnel, Tuvaluan migrants who came from Australia, Hawaii, and other places, including a group of Kioan relocatees who were there to support Vaitupu as part of the custom in such major event, and the general population who were there. In Funafuti, I spent time to collect information from certain government departments that I had hoped I could get through email correspondence but could not.

4.6 Post-fieldwork phase

The final phase was not an easy one. It was indeed the most time-consuming phase of all. It took me more than two years to undertake the various tasks under this phase.

4.6.1 *Transcription of data*

I approached data transcription with a misconception that it will be a quick process. It was not until I had transcribed the first four interviews that I came to realise how hard and laborious it was. It took me three straight months to complete the transcription from March to June 2015 with an average of 15 hours per day. On the basis of my supervisors' advice, I transcribed all my interviews, focus group discussions, and *sausautalaaga* in Tuvaluan as per what transpired but not word by word. In fact, I transcribed them mostly in the spirit and the context in which they expressed their views. As a Tuvaluan, I was fortunate to do the transcription this way without great difficulty. I then translated only those that I had used during the analysis and writing process.

Given the number of interviews, focus group discussions and *sausautalaaga* I had, I devised a way to make it easy for me by tabulating them in an excel spreadsheet

in three columns: i) respondents' details; ii) interview transcriptions; and iii) remarks, where I highlighted the main points. This greatly helped in the analysis stage because I did not have to re-read all the transcriptions but only those I put some remarks against.

4.6.2 Analysis of qualitative and quantitative findings

I carried out the analysis of qualitative data by collating them using the excel pivot table. This is a very useful analytical process, because it makes it easy to assemble main themes according to one's preferred way of extracting what is needed. In the same way, I used excel pivot table to analyse my quantitative data. Indeed, this tool is also most useful for quantitative analysis as it has features where you can easily project the figures and extract tables and graphs accordingly.

I took about a month and half to analyse the data before I started writing. However, throughout the writing process I often revisited my data and reanalysed it whenever I needed to get some other information.

4.6.3 Internet and library research (EndNote)

Literature review through Internet and library research is key to the whole research. I could not have been so informed of the body of knowledge on this topic had it not been for the Internet and library research materials. One of the most useful tools I used was the EndNote bibliography software. Building on from the literature review I completed for the PhD proposal, I constantly added to my EndNote library the materials I got from the Internet and library as I progressed. EndNote has several amazing features, such as grouping materials according to whatever one wished and most importantly, it can automatically provide the list of references as you input the in-text citations.

With almost all information now accessible through the Internet, most of my journal articles, reports, and other materials were obtained online. I even used the ebrary¹² on Internet to shelf e-books that I found. Interestingly, the ebrary, like EndNote, has a feature where one can highlight whatever one reads in the e-book and save it

¹² The ebrary is an online digital library.

for later use. Library materials were also used succinctly, particularly books containing key thematic issues that are not available online. Using Internet and the library were a constant part of the process from the beginning until the end.

4.6.4 Writing and rewriting

Writing and rewriting was the most arduous task but quite exciting, nonetheless. As aforementioned, academic writing, especially for a project such as this was extremely hard. I must admit that as a Tuvaluan, I had to continuously translate my thoughts that I formulated and articulated in my mother tongue into English. I am sure this mental process happened unconsciously most of the time but it was painstaking. I had to write several drafts of each chapter before I even submitted it to my supervisors for the first round of their comments. As expected, this was the longest part, about 28 months, of all stages of the entire research programme.

4.6.5 Coconut tree research model

As discussed in the preceding sections, my research was carried out in three major stages. Each of the three stages had certain activities specific to it, such as the proposal writing under the pre-fieldwork, HQS under the fieldwork, and analysis under the post-fieldwork. There were also activities that occurred in all stages such as literature review, reading and writing. In view of the centrality of the coconut in my research, as discussed in detail in later chapters, my research study was therefore pursued under what I call a coconut tree research model as outlined in Figure 4.16. The model signifies the growth or progress of the research in three stages as a growing coconut, from the pre-fieldwork, fieldwork to the post-fieldwork phases, and concludes with coconut fruits as the final product or thesis that contains the researcher's theoretical contributions to the field.

Coconut Tree Research Model

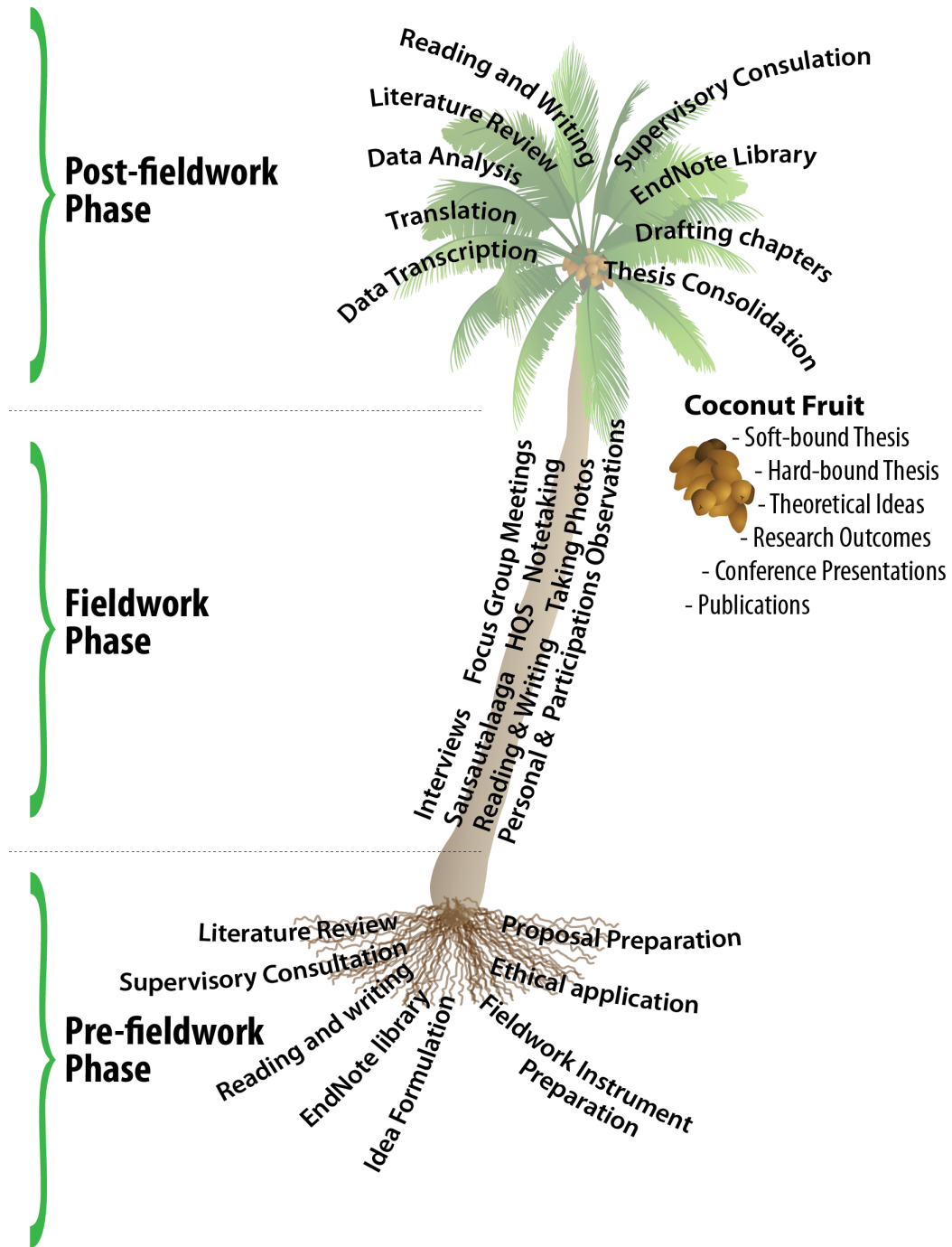


Figure 4.16: Coconut tree research model.
 Source: Author’s own model designed by cartographer Max Oulton, 2017.

4.7 Ethical considerations

Ethical issues are core to social science research. As alluded to earlier, one of the major submissions I made to be able to confirm my status as a full PhD candidate was to provide an Application for Ethical Approval. In this submission, one should

give detailed information on how one will deal with ethical issues in one's research, especially during fieldwork.

Ethics is not a new issue in academic circles. The ethical issues concerning social research became apparent in the mid twentieth century, which eventually saw the establishment of the Helsinki Declaration in 1964. What is ethical for research purposes? This is a question that is still debated by scholars. At the very basic level, in order for research to be considered as ethical, it must ensure that the dignity, rights, safety and well-being of participants must be upheld at all times (Broom 2006). This is central if the research involves human subjects. Ringheim (1995, p.1691) says that: '[t]he ethical foundation for research on human subjects [...] the research does not involve an infringement of individual human rights'.

My experience in observing the university's prescribed ethical issues is that it was quite difficult. Often, as I tried to follow the ethics requirements (such as informed consent) the respondents would say that I do not have to be formal. Even with issues like reading the information sheet (Appendix 3) to the respondent prior to the interview, the respondent would say that I do not have to read it. Or, sometimes if I read the information sheet I noticed that the respondent had lost concentration because either he or she interrupted implicitly telling me that he or she was not quite interested in the details or formalities. But despite these distractions, I tried to ensure that the procedures were administered properly and according to the ethical requirements. In fact, I established a strategy where at the very beginning I explicitly told my respondents that what I am about to read or do is a Faculty requirement and that I needed their indulgence, otherwise I would fail. This really worked.

As revealed earlier, I sought permission from the relevant authorities prior to the commencement of my research. I obtained approval from the Ministry of Education and Ministry of Home Affairs and Rural Development. On the outer islands of Tuvalu and Kioa, I received the chiefs' blessing to do my research freely on the islands. I even received the verbal agreement of the Secretary General of the EKT to interview the pastors in Niutao notwithstanding the tight schedule of the General Assembly.

In every single face-to-face interview I carried out, I began by seeking the respondent's agreement to participate. Once agreed and welcomed by the respondent, I administered the information sheet (Appendix 3) properly and particularly stressed the participants' rights before I handed the consent form (Appendix 4) to be signed. Since nobody disagreed with the process, all respondents voluntarily signed the consent forms. It was only after the consent forms had been duly signed that I commenced the interview. Of the 148 respondents, only three did not personally sign the consent form, but agreed for me to sign on their behalf due to their inability to write. I also administered these formalities in all my focus group discussions but not the *sausautalaaga*. Even for the household questionnaire survey, the research assistants administered these procedures and had all of the consent forms signed. However, for the essay writing exercise there were no consent forms signed by the participating pupils, but there were letters informing their parents that were distributed to them in advance, where they signed acknowledging their acceptance for their children to participate, except at Motufoua Secondary School (Appendix 9).

Furthermore, as a Tuvaluan, I took great care in observing our customary protocols from seeking permission of the chiefs and addressing the elders to even participating in the activities that were not related to my research. It is important in Tuvalu for an outsider to ensure that he or she participates in community activities. This shows respect to the people. Non-participation can be seen as disrespectful. In Nanumea, for instance, I was involved in an activity where the men went around one end of the island to burn an invasive ant species that have been causing a lot of irritation and are a source of vexation to the people. Similarly, in Niutao I associated myself with EKT Assembly delegates in most of the island activities. As aforesaid, I also aligned myself with programmes in Nui and Kioa. This is an advantage of an insider researcher because he or she is familiar with the customs, and therefore he or she knows what to observe in addition to the standard research ethics prescribed by the institution.

4.8 Conclusion

In this chapter, I have demonstrated the research approaches and processes I employed in the entire research programme. I highlighted the significance of using the proper methodologies and methods such as quantitative and qualitative. From this, the qualitative approach was predominantly used given the nature of the research topic but quantitative methods were also adopted to contextualise the qualitative findings.

Given the extent of the research and the importance of projecting a complete picture of what transpired, I decided to split it into three phases. The three phases of the entire research program had been what Padgett (1998, p.1) termed as a ‘voyage of discovery’. Undertaking interviews, focus group discussions, *sausautalaaga*, and conducting household survey in the seven months of the fieldwork timeframe, was a demanding and exhausting exercise, but it was also a great learning experience. I must admit that I truly enjoyed it and will cherish the fond memories of this practical and provoking experience. Analysing the data and writing the findings were both painstaking, because they were time consuming but also exciting because I learned many new things especially many Tuvaluan customs that I thought I knew prior to the research. I now turn to substantive discussions of my research findings, starting with the chapter on the connectedness of people whom I called “coconut people” to their land.

CHAPTER V

COCONUT PEOPLE: *TE NIU FAKAMAUGANIU*

Te fea la nei te niu fakamauganiu
Tela ne vevele kae ne pogapoga ne Ia
Te inu tumau o Motulu
[Where is the coconut-tying coconut
That has been pruned and fastidiously picked
The staple drink of Motulu¹] (Silo Telito)

5.1 Introduction

The opening quote above is a popular *fatele*² composed by a man named Silo Telito of Vaitupu in 2003. I was told that the *fatele* was composed as a token of appreciation and a dedication to the late Tusiga Saitala, who built the Motufoua church, and died almost immediately after it was completed. The English version gives the literal translation of the *fatele* but its full cultural meaning is much deeper, and is given in more detail in a section below. In short, this *fatele* draws on the essentiality of the coconut, and particularly the special coconut tree locally called “*te niu fakamauganiu*”, to the lives and livelihoods of the people of Tuvalu.

In this chapter I introduce my “coconut people” symbolic concept to explain the significance of, and the relationship between, land and people through the coconut in the Tuvaluan context. I begin with a literature review of the notion of place, its material importance and sense of attachment to place, and theories of people’s relationship to the land. I then underscore the centrality of land – as a place – to the people of Tuvalu and draw comparisons of the meaning of land from other Pacific countries and the western world. In doing so, I discuss the essential and relevant aspects of Tuvalu’s land tenure system to highlight the significance of land to Tuvaluans. Further, I expound on two key elements of “coconut people”; the “coconut roots” and “coconut fruit”, the latter of which is discussed in detail in Chapter VIII. I then sum up the “coconut root” symbolic concept by explaining the “*te niu fakamauganiu*” and the cultural ideology that is embedded within it.

¹ Motulu is a term that is given to students of Motufoua Secondary School.

² *Fatele* is a unique Tuvaluan cultural dance.

5.2 The notion of place and land

Place is a word too often taken for granted by ordinary people as a specific area of land or building, or even something as tiny as a book. As a starting point, the *Dictionary of Human Geography* defines place as ‘... a geographical locale of any size or configuration, comparable to equally generic meanings of area, region, or location’ (Gregory 2009). Geographers and anthropologists have attempted to explain place in multiple ways such as place attachment (Hernández and others 2007; Ramkissoon and others 2013), emotional experience (Davis 2016; Johnstone 2012), sense of belonging (Aitken and Campelo 2011; Relph 1976; Tuan 1975) and so forth. Relph (1976, p.1) asserts that place ‘is a profound and complex aspect of human’s experience of the world’. It is something that is ‘known not only through the eyes and mind but also through the more passive and direct modes of experience’ (Tuan 1975, p.152).

One fundamental physical element of the notion of place is land. Land is generally defined as a place on ‘the surface of the earth that is not sea’ (see *Oxford English Advanced Online Dictionary*). It is a place composed of solid material of the earth whatever the ingredients may be, whether soil, rock, or other substances. In common law countries, land also includes most, if not all, fixtures to it. This extension of the definition of land comes from the legal maxim ‘*quicquid plantatur solo, solo cedit*’, which means ‘that which is fixed to the land becomes part of it’³. In Tuvalu, land is legally defined to include ‘land covered by water, any estate or interest in land, all things growing on land, and buildings and other things permanently fixed to land and any cellar, cistern, sewer, drain or culvert in or under the land’⁴.

Land is important as it gives life. Not only does the land prevent people from being drowned in the deep ocean, it is also the foundation upon which people’s sources of food and drink, except for seafood, are produced. ‘Land was and is both a means of earning current livelihood and of providing for one’s family’ (Clawson 1972, p.1). Traditionally, land was considered a common good (Freyfogle 2003). As a

³ This land law principle was derived from the famous case of *Holland v. Hodgson* (1872) LR 7 CP 328.

⁴ Tuvalu Interpretation and General Provision Act 2008, Section 10.

valuable commodity, land has been the core of most human conflicts. The raging warfare throughout history and the advent of statehood were but some of the historical testaments of the value that lies within the soil and boundaries of the land (Bundervoet 2009; Lund 1998).

As briefly revealed in the introductory chapter, in Tuvalu the notion of a place carries a culturally powerful meaning when it is expressed using the Tuvaluan phrase *te tia*. However, when Tuvaluans talk about place in the general sense of the word they generally use the term *te koga*. The phrase *te tia* is generally applied in the context where the attachment to place is deeply felt by the people involved due to their cultural connection to it. *Te tia* is often used by elders in cultural settings to communicate the significance of the place, generally the islands, to younger generations. In Vaitupu, *te tia* carries two meanings: (i) the position or area of cultural significance; and (ii) birthright (Kennedy, 1931, pp.125 & 149). Often this phrase is used in traditional songs and *fatele* as expressions of the place's special meaning to the people, for instance, *te tia fakamau* (lit. the rooted place), *te tia o tamana* (lit. the fathers' birthright), *te tia fakagasele* (lit. the dearest place) and so forth. In other islands, especially Funafuti, Nukufetau and Nukulaelae, the expression *te nuku* connotes a parallel cultural meaning to *te tia*. Indeed, *te nuku* is defined in the Tuvalu Dictionary by (Jackson 2001) as island or village. I use *toku tia* in the title of the thesis to embrace the possessive nature of people when they refer to Tuvalu as their place. It is a phrase that equates to 'my home', so to speak. Indeed, one Form 2 student in Nui expressed her feeling of Tuvalu using the same phrase '*[t]oku tia Tuvalu ka mafai o galo atu, kae ui iei a tino ko la i fenua lasi e tau o kilo alofa mai...*'. Her expression is translated as 'my place Tuvalu is going to disappear, nevertheless people in big countries must look with love upon us'.

5.2.1 Sense of place

Sense of place gives meaning to "the place". It is people's senses of affection and emotion that attaches them to a place. Sense of place, however, is a vague notion and 'is one of the most abstract and illusive concepts' (Shamai 1991, p.347). Notwithstanding that, sense of place can be explained or understood on the basis of human behaviour rather than trying to define it in precise terms (Lewis 1979, p.28).

Sense of place, according to Shamai (1991, pp.349-350), can be scaled at several levels, which include: i) knowledge of being located in a place; ii) belonging to a place; iii) attachment to a place; iv) identifying with the goals of a place; v) involvement in a place; and vi) sacrifice for a place. People's sense of place in the context of their connection to the land is not merely a sense of touch to the birthplace, but it includes all the senses in what Sell and others (1984, p.75) call 'total sensual experience'. It is people's total sense of attachment to a specific place. Relph (1976, p.55) identifies the deepest mode of place experience as "existential insideness". Seamon (2013, p.14), explaining existential insideness, said that it is:

A situation where one feels so completely at home and immersed in place that the importance of that place in the person's everyday life is not usually noticed unless the place dramatically shifts in some way – for example, one faces a progressively debilitating illness..., or one's home and community is destroyed by natural disaster.

Often we hear people, particularly "natives", express a strong sense of connectedness to the land in ways that reflect their unity and oneness with the land. Some feel what the land would feel, as Ms Bonnie Johnson, an Australian Aboriginal family worker, said 'if the land's sick, we're sick' (Rigby and others 2011, p.249). She describes their relationship as if the land is an integral organ of her physical body. Aldo Leopold, an influential early ecologist, wrote in 1949 that '[w]e abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect' (quoted in Mayer and Frantz 2004, p.504). Indigenous communities tend to feel that their lives are embedded in the land. To them, land makes them who they are, shapes their thinking, their culture, emotions, physical and social lives. Land binds them together as a social unit. These people believe that the land recognises them and knows them, and that the land does not belong to them; they belong to the land (Akiwenzie-Damm 1996). Māori, for example, describe themselves as '*tangata whenua*', which means people of the land. In discussing the '*tangata whenua*' relationship, Patterson (2000, p.14) said that 'at the centre of this relationship with land is the idea that the Earth-mother herself, Papatūānuku, is the ancestor of Māori'. Clearly, the Māori worldview of land is that they are part of it.

Interestingly, people with deep sense of place and place attachment, not only talk about their land as their place of living, but they also talk about land as their place of burial. Māori take the dead to their ancestral marae and bury them in '*te u kai po*', which is interpreted by Metge (1995, p.111) as 'the land of one's ancestors'. Such tradition is based on the understanding that if people are from the land then people should go back to the land. Historically, the bodies of the dead in Tuvalu were buried in their family land. However, during the protectorate and colonial era, the dead were buried in designated cemeteries. In recent times, the practice of burying the dead in their own land has regained popularity and some families bury members of their families just next to their houses (Koch 1984), as a symbol of closeness of the living and the dead. A 26 year old female respondent from Nanumea said this to me: 'because I grew up here, even if I travel somewhere I want to come and live here. Like some sick people who demand that they be returned here to die here, I think I will be like those people' (Malia Taupaki).

5.2.2 Metaphors of the meaning of land

Land, to some people, means more than just its materiality. 'Land has mystical connotations, which may be harmful if abused or helpful if propitiated, because in some societies it is a function of social relationship that is interwoven with issues of kinship, family system and the entire field of human relationship' (Acquaye 1984, p.11). The relationship between land and people, especially people who have strong sense of attachment to the land, is well described in the following metaphors.

The first metaphor I examine is the "roots and routes" that encompasses multiple sociological issues. The roots represent people who have strong ties to a place, normally their place of origin. The routes, which I discuss in detail in Chapter VIII, signify movement of people. The literature on the roots reveals appealing but contrasting views. On one side of the divide, roots have been applauded as a great metaphor that depicts belongingness, and on the other side roots have been criticized as rigidly fixing human identities. The general conception of roots, as the word suggests, entails the attachment of one thing to a greater or more fundamental whole. It portrays the embedded nature of people in places they call homelands or native lands, or simply place of birth. It highlights the notion of belongingness

(Christensen and Jensen 2011), as well as affective and cognitive bonds between individuals and places (Altman and Low 1992).

Contrastingly, Malkki (1992, p.38) contested the roots metaphor that depicts people's attachment to places when she said: '[t]o plot only "places of birth" and degrees of nativeness is to blind oneself to the multiplicity of attachments that people form to places through living in, remembering, and imagining them'. Similarly, Rushdie (1983, p.86) criticises the roots metaphor by saying that:

[w]e know the force of gravity, but not its origins; and to explain why we become attached to our birthplaces we pretend that we are trees and speak of roots. Look under your feet. You will not find gnarled growths spouting through the soles. Roots, I sometimes think, are a conservative myth, designed to keep us in our places.

Different people perceive the roots metaphor differently. In trying to understand the sense of belongingness of transnational migrants, Christensen and Jensen (2011, p.153) concluded that there is a distinction between roots seen from the position of strangers, and the roots seen from the position of homecomers returning to their place of origin. It is quite common in the Pacific that when a stranger enters a local public place, local people would ask two questions: "who is he or she?" and "where is he or she from?", but often the latter is the first question to be asked. The second question is one of curiosity about the roots of the stranger. It is a question that gives rise to the issue of 'countries and roots, nations and national identities' (Malkki 1992, p.26). This is the root that one would identify one's self as belonging and/or being attached to. According to Anderson (1983), the roots "denote something to which one is naturally tied".

Secondly, the connectedness of people to the land in the Pacific context is eloquently illustrated by Bonnemaïson's (1994b) metaphor of "the tree and the canoe". Although it was based on research in the context of Tanna in Vanuatu, the metaphor can be truly applied in most, if not all, Pacific countries and territories, and certainly in Tuvalu. In this chapter, I examine the part of the metaphor pertaining to "the tree" which is directly related to the "coconut" metaphor that I introduce later in this chapter. At the outset, Bonnemaïson's distinction of the worldview of space and place appears to emphasise the importance of land. Space,

as he put it, is an expanse that also goes upward to the sky but 'place', to the Melanesian, is the land. And for the Tannese, this is what he said:

They are not from the plain, but from the island; not of space, but of place. Their attention digs into the ground all the more that they seek not to soar in the skies. They are the trees, those trees with deep roots piercing downwards, towards the magical bed of the world. The truth, the beliefs of these people are fastened there, not in the infinite expanse of the sky, but in the dizzying depths of place and in communion with the entrails of the earth, a belly in which they are its blood (Bonnemaïson 1994a, p.21).

Land is identity. Tannese identified themselves with land during their journey and when they settled down, they gave names and turned their stopping points into places. There they placed stones into the ground and became connected with the underground power (Bonnemaïson, 1994a, p. 122). Explaining his metaphor of the tree, Bonnemaïson further stated that:

Man is a tree...Man's identity is given by his place...As the land is punctuated with trees so the space is sown with people-places. Implantation is without doubt the first among all Melanesian values...The island people have conserved the memories of their origins, they are as much people of voyage as of roots, people of place as much as peoples of roads (Bonnemaïson, 1994a, p. 21).

Based on the myth of Semo-Semo which tells of the creation of humans, Bonnemaïson (1985, p.37) argues that the relationship of Tannese to their land is 'compared to a tree whose roots thrust deep into the sacred earth. If the banyan [tree] leaves the soil it dies, its land and political rights are extinguished, its magical and life-giving powers fade away'. In analysing this metaphor of the tree, Jolly (1996, p.917) concluded that the place of origin and the connectedness of the people to the land is central to the traditional lives of Tannese. She added that: 'suffering and dislocation as a result of warfare had caused people to become refugees, and as they did the land "died"'.

Overall, the metaphor of the tree underscores the essential connection to the land for the ni-Vanuatu, the Melanesians, and the Pacific countries as a whole. As much as the tree would need land for survival, the people of the Pacific also need land to survive. Land is the only identity of the people in the Pacific and the source of power and authority in their traditional political and social configurations. If land

were to be taken away from native people by way of invasion, or in the case of low-lying atolls like Tuvalu, by virtue of disappearance as a result of an unprecedented phenomenon such as climate change and sea level rise, there would be no land to which their roots could be traced or attached. Their identity would be extinguished and gone for good. They would no longer have the full extent of national and cultural identity, because they know their identity only comes from their ancestral land.

Third and lastly, the *fenua* and *fanua* metaphor offers another perspective of the Pacific people's relationship with the land; the connection of the people to the land and the land to the people (Metge, 1995; Pere, 1982; Talia, 2009; Tuwere, 2002). The word *fenua* in Tuvalu means land or island. In other Pacific countries, the word for land is *vanua* (Fiji), *whenua* (Māori), *fanua* (Samoa), and *fonua* (Tonga), which is also the same word that they use for the placenta. In Tuvalu, however, the word for the placenta is *fanua*, which is spelt slightly different from *fenua* but with parallel meaning. Why the same or similar word was used for the land and the placenta is not known for certain, but there is a cultural ideology that explains it. To Pacific people, the function of the land is equivalent to that of the placenta, hence the use of the same word. The placenta is an organ that plays a crucial role during pregnancy in keeping the baby alive and well. Its main function is to supply the unborn baby in the mother's womb with adequate nutritional substances and oxygen. Without the placenta, the unborn baby would die. The placenta is the ultimate source of life for the unborn baby. In the same vein, land is the source of life for the Pacific people. Without land, people in the Pacific would not be able to survive. The Māori proverbial saying:

“*[h]e wahine, he whenua, a ngaro ai te tangata*” is often interpreted in English as meaning, [b]y women and land men are lost, but it can also be interpreted as meaning that women and land both carry the same role in terms of providing nourishment, and without them humanity is lost (Pere 1982, pp.17-18).

Given its important role during pregnancy, when the baby is born the placenta would be taken care of by the family to be buried in a specific part of the family's land. This tradition is based on the understanding that the placenta should go back to where it belongs. In the Māori tradition, the *whenua* (placenta) is buried in a

special *whenua* (place) where it would not be walked over by any person, and a marker would be placed on top. Each family has its own marker and the marker is seen as possessing harmful power for people who transgress the vicinity wherein the *whenua* is buried (Pere 1982, p.20). The Māori myth of god Tāne and his mother Papatūānuku (Earth-mother) tells how the Māori tradition of burying the placenta came about⁵. In Tonga, the placenta is also buried as a tradition of returning what belongs to the land. However, before the placenta is buried, hot water is poured into the hole in which it would be buried to make it warm before the placenta is put in. This is done so that the placenta is not spontaneously exposed to the coldness of the soil but to be warm as it was in the womb⁶. Likewise in Tuvalu, the placenta is buried. Traditionally, it is buried in the land of the baby's father but in exceptional cases, particularly if it is an illegitimate child, the placenta is buried in the mother's land. Today, this tradition is fading quickly because of health related regulations where most pregnant women, especially during their first birth, are referred to the capital for delivery.

The *fenua* and *fanua* clearly illustrate that the importance of land to the people goes beyond its material values. In Tuvalu's customs, if a woman is pregnant, the families would provide the best food for the mother to ensure that the placenta has adequate nutritious supplies for the baby. In Nanumea, there is a traditional custom known as *niu hihī* (lit. coconut flesh) where the mother is fed with coconut and fish. Similarly, in Nanumaga there is a custom known as *te niu* (lit. the coconut). Whenever a woman gives birth, her male cousins take turn to feed her with local foods made of coconut, served in a basket made of coconut leaves. By the same token, the people in the Pacific take care of the land by cultivating it properly and plant food crops to provide sufficient food for the family. Land is essential to Pacific people and to dichotomise the relationship is the same as dissecting the unborn baby

⁵ The myth was that god Tāne searched for a female principle to be the mother of humankind, his mother Papatūānuku told him to take earth from her pubic area, stained with blood when she was forcibly separated from Ranginui by Tāne himself. Tāne shaped this red earth into Hine-ahu-one and, mating with her, brought humankind into being. When she gave Tāne part of herself for this purpose, Papatūānuku told him “*ka puta to hua tuatani, whakahokia tona whenua ki te whenua*”, which literally means when your first child is born, return the *whenua* (placenta) to the *whenua* (land). That is, return the placenta to Papatūānuku, who is at once land and ancestor (Metge 1995, p.110).

⁶ Personal information from a Tongan friend named Mr Sione Lolohea.

from the placenta. In the words of Tuwere (2002) p.36, ‘the *vanua* is a “social fact” which for the Fijian people holds life together and gives it meaning. To be cast out from one’s *vanua* is to be cut off from one’s source of life: one’s mother as it were’. Any change in territorial boundaries also means that it ‘dispossessed people of their ancestral burial grounds, their placenames, their history – the keys to their songs, poetry, and oratory’ (Pond 1997, p.17).

5.3 Land in the Tuvaluan context

The foregoing section highlights land and meaning of land to people, both in the Pacific setting and in a more general context. In this section, I offer a short account of Tuvalu’s land tenure system to give light to its centrality to the people of Tuvalu. The evolution of land tenure in Tuvalu, like in many other places in the Pacific, came about as a result of discovery and settlement of the islands, with the chiefly system of stewardship being the earliest establishment (Brady, 1974, p.134). This has changed shape and practice over time from the pre-contact period with the Europeans to the present time. Land tenure is traditionally based on kinship (Isala 1994, p.157). Kennedy (1953, pp.349 - 350) asserts that the land tenure system in Tuvalu can be conveniently divided into three classes: (i) communal or common land; (ii) land held by family groups; and (iii) land held by individual owners. Isala (1994, p.158) added a fourth class as leasehold and acknowledged it as being the product of European influences. In the following subsection, I briefly discuss the different classes and other aspects of tenure based on my fieldwork findings and the existing literature.

5.3.1 Classes of landholding

Communal or common land, known as *luamanafa fakagamua*⁷, is believed to be the first land tenure system prior to the arrival of European explorers and missionaries (Isala 1994; Leupena and Lutelu 1987). This belief may have been based on the assumption that when the first settlers arrived on the islands they jointly lived, worked, cultivated, and used the produce from the land. There was no boundary concept at the time, and thus they possessed and owned the island as one

⁷ The word *laumanafa* literally means plot of land and *fakagamua* in this context literally means unrestricted land that is free for all; communal land system.

whole property. The ownership and authority over the land was traditionally vested in the chiefs⁸ (Samuelu, 1983, p.38). Brady (1974, p.150) nicely framed the communal system and the chiefs' authority over the land as follows:

The actual nature of this earlier pattern of communal tenure is obfuscated somewhat by antiquity and by the multiple cultural influences in the Ellices since the first settlement. But all of the legendary evidence that is available suggests that local chiefs began to allocate land in title to their constituents long before the arrival of the first missionaries.

Under this system, people of the islands traditionally carried out work on a communal basis especially when it was to do with clearing and cultivating the land. Isala (1994) alluded to three different forms of *fakagaamua* which he distinguished in terms of (i) the users or beneficiaries of the land in question, (ii) the use made of it, and (iii) the authority controlling it. Although this appears to be similar to the feudal system used in Europe, it is a distinctive system because under the *fakagaamua* system lie the people, and the people's way of life. According to Isala (1994, p.158), '[t]he *fakagamua* concept has been important in the development of Tuvalu. The traditional values of caring and sharing inherent in it have made *fakagamua* land the islanders' contribution to the development of their islands'. Nowadays, this *fakagaamua* land tenure system is only seen in Nukufetau, Nanumea, Funafuti and Vaitupu.

The family landholding, locally called *laufenua kaitasi*⁹, is the second class of tenure that was practised in all of the islands prior to the arrival of the Europeans (Kennedy, 1953, p.349). This was a result of the original land system of *laumanafa fakagamua* being slowly eroded as the chiefs gave land to their subjects for their own use but retained the title to it, and this existed until the arrival of the missionaries (Samuelu, 1983, p.38). It was then further eroded and became private family landholding without the chiefs' rights of ownership. Under the *kaitasi* system, members of the extended family jointly own the *laufenua*. According to Kennedy (1953, p.353): '[l]ands held under the *kaitasi* system of tenure are

⁸ The Tuvalu Lands Code (2008) section 16, however, says that the council controls communal land.

⁹ *Laufenua* denotes land heritage that includes land plots and *pulaka* pits. The word *kaitasi* is transliterated as "eat together" and thus in this context it refers to family land heritage shared by family members.

equivalent to a *joint estate in fee tail*'. That is, the land is held jointly and passes through joint inheritors. Traditionally, the most senior¹⁰ male member of the extended family is vested with the ultimate authority over the *laufenua kaitasi*, and the introduction of legal formalities of land title registration thus placed him, in principle, as the legal owner of the *laufenua kaitasi*. This person is called the *matua* or *pule o te kaiga* in the northern islands and the *matai*¹¹ in the central and southern islands of the group. However, it must be noted that all members of the extended family are coparceners of the *laufenua kaitasi*¹². I wish to note that after thorough analysis and thoughts about the *kaitasi* system, it appears to me that *kaitasi* is a notion of wider importance than it is used in the land context¹³. However, in short, I think *kaitasi* is a doctrine equivalent to that of unity or togetherness, which is also discussed in the Nanumean context by (Chambers and Chambers 2001).

Family divided landholding, known in Tuvaluan as *laufenua vaevae*¹⁴ is the next class, which Tito (1994) asserts is something that emerged from the introduced notion of commerce. This landholding class is the division of the *kaitasi* amongst members of the extended family. The *vaevae* system, however, only occurs when there is a dispute between members of the extended family (Leupena & Lutelu, 1987), predominantly due to unfair distribution of money received from the produce, or unfair treatment exercised by the *matai*.

To this end, I wish to note that the *kaitasi* and *vaevae* tenures appear to me as a circular system in the sense that the *vaevae* landholding will become a *kaitasi* landholding in a later stage and then become a *vaevae* landholding again, and continue to oscillate between these two poles. There are two possible ways in which this may happen. First, the *kaitasi* members divide their lands (*vaevae*) so that each member has his or her own share. As they each grow older and have children and

¹⁰ I prefer to use 'senior' instead of 'eldest', as used by Tito Isala and others because there are many cases where eldest male members were not given the privilege of family head due to the fact that either they were from the female lineage or there was a young male member of the remaining first generation still surviving.

¹¹ *Matai* is a term believed to have been introduced by Samoan pastors. Detailed discussion of the *matai* system is covered in Chapter VII.

¹² See the Tuvalu Lands Code (2008) section 17 for the legal definition of *kaitasi*.

¹³ Given the extent and breath of this notion that I wanted to expound on, I decided to leave it for a later publication because I do not have space for it here.

¹⁴ It means division; the division of family land that used to be shared among members of the family.

grandchildren, their *vaevae* landholding will become a *kaitasi* for their children and grandchildren. If their children decided to further divide, it will again become a *vaevae* landholding. Second, it can happen when extended family members, who once jointly owned the *kaitasi* landholding, get married and thus the couple's *vaevae* landholding would once again converge and become a *kaitasi* landholding for their children. The diagram in Figure 5.1 illustrates that as the family expands in membership it will diverge, and as the individual members reproduce and/or get married the landholding will converge, and the system continues on and on.

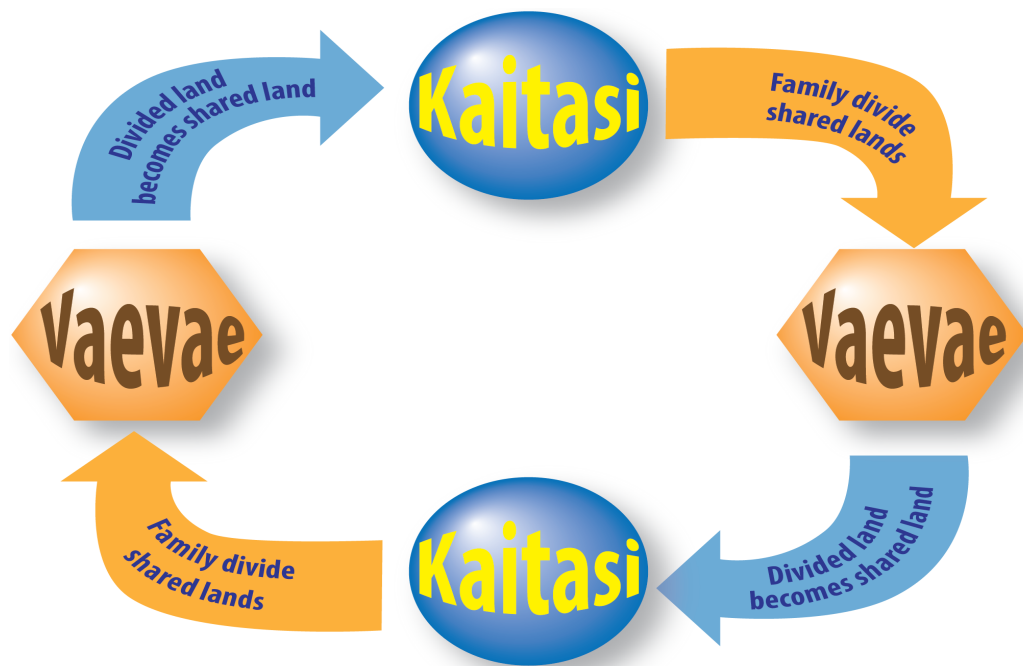


Figure 5.1: *Kaitasi - Vaevae* circular model.
Source: Author's own model.

The leasehold land tenure system, which is a modern undertaking under the purview of the introduced legislative frameworks, operates in much the same way as it does in other countries. There are three categories of lease landholding as follows: (i) the lessor retains usufruct rights, (ii) the lessor gives usufruct rights and lessee assumes responsibility for the upkeep of the land and tax obligations, and (iii) the lessor and lessee share the produce from the land and other responsibilities (Brady 1974, p.153). The operation of lease landholding is protected under three main Acts (Revised in 2008): Native Lands Act (1957), Tuvalu Lands Code (1962) and Native Land Leases Regulations (1974).

Initially, this form of tenure was not common and less attractive to landowners and the general public at large. However, in the past two decades leasing has become a significant issue both at the family level as well as in the political arena. The unprecedented increase in the monetary value of lease holding has been the primary cause of the rising interest, and this has brought about certain benefits and drawbacks. Obviously, the increase of lease rent has doubled and tripled the purchasing power of landowners thus improving their standards of living. Landowners have been able to build new houses, buy motorbikes and send children to schools in Fiji and Samoa. Concomitantly however, the increase in lease money has disrupted family unity particularly if the family head, to which the lease title was being registered, unfairly distributed or did not distribute at all, the lease money among the members. This problem has proliferated from family to family over the years, with some families ending up dividing the *laufenua kaitasi* and others even taking legal action against other members of the same family. This dilemma has been further exacerbated by the increase in the number of infrastructure projects and overseas migrant business people wanting to lease land.

5.3.2 Ownership of land

Traditionally, the land ownership system in Tuvalu is patrilineal. Land is passed through the male lineage of a kin group. According to Brady (1974, p.138): ‘kinship status is defined in large part by the manner in which land is shared with particular persons. Both land and blood symbolise communion with ancestral past’. Isala (1994, p.157) pointed out, however, that ‘land is inherited from both the father and the mother’. Brady (1974) also made mention of the ambilineal system, but only in relation to Tuvalu’s descent ideology of tracing ancestral linkage. Thus, I assumed that this ambilineal ideology might have had great influence on the evolution of land ownership as pointed out by Isala above. However, Leupena and Lutelu (1987, p.158) had this to say: ‘Tuvalu descent can be traced either from fathers or mothers, but most people inherit and live on lands inherited from their fathers’.

While it is true in the modern days that land ownership can be inherited ambilineally, partly perhaps because of the operation of modern laws, the original

customary law of Tuvalu, as revealed by findings from the fieldwork below, was that ownership was only vested in male members and thus passed through their male inheritors. I suspect that patrilineal ownership evolved from the fact that the islands were discovered, conquered and ruled by the early warriors who were mostly men¹⁵. In addition, I suppose the culture of Tuvalu which was moulded on the basis of community contributions traditionally given in the names of heads of the families who were men¹⁶ – also played an integral part in the establishment of the patrilineal system.

In trying to underscore the land ownership issue, I asked my respondents and the vast majority of them concurred that patrilineal is the traditional ownership tenure as per some of the interview excerpts below:

Nanumea - Land is passed through the male lineage. A female is entitled to use the land but could not own it (Eli Teuea, 60 year old man). Land tenure is patrilineal. Before land cannot be owned by women but now it has changed (Iliala Lima, 65 year old man). Woman is entitled to eat from the family land but she cannot own a piece of land, especially when she is married (Fakagalo Umea, 64 year old widow). Here in Nanumea men have the superior power over our land property. Like in our family, my brother looks after our land and if I want something from the land I just go and ask him. This is because women are said to be members who move out of the family (Malia Taupaki, 26 year old woman).

Nanumaga - Land is passed through the male siblings. The females, in my understanding, can eat from the land but they are not allowed to take the family land (Teumalie Peia, 47 year old married woman). Land in Nanumaga stays with male members and passes through them only. Female members cannot take land when they are married. If a married female member wants a piece of land, the male member can give her land for use only. The land cannot be given to her to

¹⁵ Island legends indicate that these men were Tefolaha (Nanumea), Tuimalae (Nanumaga), Papau (Niutao), Peau (Nui), Failua, Tauasa and Lagitupu (Nukufetau), Telematua (Funafuti and Vaitupu), and Valoa (Nukulaelae).

¹⁶ It is common in all the islands that if there were a community feast to mark a special island day, families would provide a certain number and sizes of *pulaka*, *taro*, coconut and pigs. These contributions would be given under the name of the family head or *matai* who would be a male member only (although now females have started to get this title), hence the reason land ownership is patrilineal.

own. Indeed, she is expected to eat from her husband's land (Sefuteni Liki, 47 year old married man)¹⁷.

Niutao – Land here is passed through men. The women are entitled to eat from the land. But land can also be passed to women if the father sees that his male children are not trustworthy (Seu Talapai, 66 year old man). The custom here, land is passed to male siblings but the female siblings are entitled to eat from it but the males have the authority over the land. If there is no male sibling, the land will then be passed through the female (Saulupe Kailasi, 78 year old widow).

Nui – In Nui's custom, the eldest, especially the men, will stay with the land. Yes, land is passed through men. If the land has not been divided [if still *kaitasi*] the power to give land to be used by male/female members is vested in the eldest male member of the family (Lepana Filipino, 56 year old man). Our custom, land is passed through men, and they can give land to their female siblings. Like me, I was given those but my husband returned them because he has sufficient land and *pulaka* pits (Selaina Alepaio, 59 year old widow).

Vaitupu – In Vaitupu's custom, land is passed through the male but it is possible to pass through a female if there is no male sibling (Lafaele Esekia, 71 year old man). All I know is that land is passed through men (Vaepa Teuso, 51 year old woman). What I know, if the family land is divided, it will be put through the men. The reason land is passed through men because women if they are married will go with their husbands. But they still have the right to eat, if they want, they can go back to their brothers. And nowadays, it has changed. I think it is because of the elevation of women's status (Faailo Liufau, 57 year old woman).

Nukufetau – The traditional Nukufetauan custom, land is passed through the male lineage (Laloni Samuelu, 75 year old man). In terms of land, if there is a family of five siblings, they will have the same share, but if it is a *kaitasi*, the authority is vested with the men (Nuese Apinelu, 76 year old woman).

Funafuti – Land is passed through male descendants. The reason is that the family land is passed within the family because if a female member owns the land and then married, the land can disappear within her husband's family land (Kaitu Nokisi, 62 year old man). In the olden days, according to what my father told me, it only passed through men. However, due to misunderstanding nowadays, it has been inherited profoundly out of order (Finiki Siasosi, 53 year old man). Land here is passed through men, and women were to listen,

¹⁷ Kennedy (1953, p.358) made mention of Nanumaga's custom where a female who inherited land from her father for being the only child would relinquish her right of ownership to her father's brother upon marriage.

and that is why there is a *matai* system (Tepola Raopu, 51 year old woman).

Nukulaelae – Land is passed through men (Tausegia Tafia, 70 year old man). Land is passed through men but if there are no men then it will be passed through the women (Leata Loleni, 49 year old woman). Land is inherited through men, but it can be passed through women if there is no male child of a couple (Galu Moeava, 55 year old man).

The accounts by the above individuals on the patrilineal ownership system were further attested by the council of chiefs and Kaupule members of the island of Nanumea during my meetings with them:

Traditionally, land tenure is patrilineal. Female members are however entitled to use and possess but have no ownership right. They are expected when married to live under their husband's land property.

Respondents' references to land that can be passed through a female sibling mostly only occur if there is no male sibling, but the female sibling assuming the ownership title would pass it again through her son and therefore it once again realigned back to male lineage albeit through a different male lineage. If land were strictly passed through male lineage without an exception, the *laufenua* of a father without a son would be lost to someone else who is not related to him. This system is similar to the Fijian traditional system known as "*i curucuru ni gone*" where land can be passed to a female member, especially the eldest, by the maternal uncle but would be taken back later (Bolabola 1986, p.6).

5.3.3 *Usufruct right to land*

Having no ownership right to the land does not mean that one would not be connected to the land. In fact, there are other land rights that are important to highlight as they also have great significance in determining one's connectedness to the land. All members, male and female, of the kinship group, except under the ownership right as discussed above, by and large have the rights to possess, use and enjoy the land, legally known as usufruct right. As apparent from the earlier

discussion, women or female members of the kinship¹⁸ group are customarily those whose land right is usufruct right only. The chiefs and members of the Kaupule of Vaitupu Island attested to this traditional understanding as revealed to me in my joint meeting with them:

Women's rights to land are the same as men's, except that they cannot own land in the custom of the island. We acknowledged, however, that the introduction of modern laws has changed that custom and women now can own land.

It is therefore clear that the women are as closely connected to their ancestral land, as are the men. However, usufruct rights of all members are recognised unless a family member has been sanctioned for something he or she had done that had tarnished the family's image, or he or she had not obeyed an instruction from the elders of the family. The connectedness of family members to their land will continue until such time the joint owners decide to divide the family land among them. In this eventuality, the new family groupings of two or more would only continue their connections to the pieces of lands that have been allocated to them, although their blood ties may not be ended spontaneously.

Another important usufruct right is the absentees' land rights, which are recognised by the customs of all the islands. These rights are where a family member who leaves the island will not forfeit his right to the land in the traditional custom of Tuvalu. Absenteeism is recognised because of the understanding that if a landowner travels overseas for work or other purposes, the remaining family members know that he will one day come back, hence the saying '*tou kafaga tenei e faitali atu*'¹⁹ (Samuelu, 1983, p.39). Interestingly, despite the growing population in Tuvalu causing potential land hunger, all respondents from the eight islands shared the same understanding that absentees would maintain their right of ownership or usufruct. Some however, said that absentees' land rights would only be recognised

¹⁸ Kinship is a term of considerable interest in anthropology as it has a 'strong organizing principle of ramified relationships extending far beyond the face-to-face communities of anthropological yore' (Herzfeld 2007, p.314). It is defined as the blood relationship (*English Oxford Living Dictionaries online*).

¹⁹ This Tuvaluan slogan literally translates as 'your climbing rope awaits you'. It refers to Tuvaluan male migrants who work as seafarers and mining workers, whatever the length of absence they may be away for, they cannot escape the tradition of climbing the coconut when they return. The saying thus implies that the absentees' right to the lands always exists.

if they return, but others said that they still have the same rights even if they are physically not in the islands. It is therefore important to note that absentees' land rights are a clear testament of the recognition of their traditional close connection to their family land, irrespective of where they may be²⁰.

The discussion above reveals the close association of all the people of Tuvalu to the land. Indeed, it shows that land is of paramount importance to Tuvaluans. With a land area of just 25.6 km², land is very precious to the lives and livelihoods of the people of Tuvalu. 'Tuvaluans value land more than any other of their possessions' (Leupena and Lutelu 1987, p.154). Culturally, land determines ones' status in the community; the more land one has the higher one's status is (Samuelu 1983a). Many of the Tuvaluan traditional customs were connected or related to land, and thus land has had great influence in shaping Tuvalu's culture. I now turn to introduce my metaphor of "coconut roots" – to further illustrate the closeness of the people of Tuvalu to the land.

5.4 Coconut people: Their roots to their land

Before discussing the "coconut root" metaphor, I start with my overarching notion of the "coconut people". Coconut people is a phrase I use to denote Pacific people who have a long and strong history with this incredible tree called the coconut, and by which their lives and livelihoods have been so indelibly branded. The literature on "coconut people" is limited. In fact, there is no specific scholarly discussion of this phrase, although a very small number of scholars have used the coconut to denote other theoretical propositions²¹. Given its importance, or perhaps the lack of bread, coconut was also used in the early days of Christianity for Holy Communion (Garret and Mavor 1973). On the other hand, "coconut" has been used informally to describe brown people living white people's ways of life. That is, the brown part of the coconut depicts people with brown skin and the white flesh inside the coconut

²⁰ The operation of law under the Tuvalu Lands Code (2008) section 10, however, shows that absentees' rights may be lost to their next-of-kin living on the islands if they have been away for 15 years.

²¹ Dr. Sione 'Amanaki Havea used 'coconut theology' in his doctoral thesis where he discussed the importance of localizing biblical teaching in the Pacific and he used coconut to illustrate his point of argument (cited by Palu n.d.). Bhagwan (2011) wrote about 'coconut Christ' in which he, like Dr Havea, argued the importance of developing theologies that are liberating, spiritual and relevant to the Pacific contexts.

portrays people with white skin²². The term “coconut” in some places has negative connotations. In New Zealand, for instance, coconut has been used specifically to refer to islanders in a derogatory manner.

Notwithstanding the negative connotation of this phrase, I have decided to revamp it in a positive fashion, as it is fitting and appropriate to illustrate the core of my theoretical findings. I use “coconut people” as an illustration of my proposition about certain choices the people who are dependent on coconuts in the Pacific would have to make in light of the impacts of climate change and sea level rise. In this particular section, I discuss the coconut palm and its rootedness to the ground to metaphorically illustrate the connectedness of the people of Tuvalu to their land. In so doing, I begin with a brief discussion of what the coconut palm is, its origin, and the relevant legends pertaining to it; also, how it is being used in the Pacific, and how it is treated by Tuvaluans.

5.4.1 *The coconut*

The etymology of the word coconut is uncertain. One stream of the literature identifies coconut with the Portuguese and Spanish word *coco*, which means grinning face or goblin, because of the face-like appearance at one end of the dehusked coconut shell that contains three holes depicting the two eyes and the mouth. Figure 5.2 has a photograph of the human face appearance of the coconut, as well as photographs of two unusual coconut shells I took during the fieldwork, one with two spots and the other with four spots that do not represent a human face feature. According to Losada (2004), the name came from Portuguese explorers, the sailors of Vasco da Gama in India, who first brought them to Europe. The coconut shell reminded them of a ghost or witch in Portuguese folklore called *coco* (also *côca*). In any case, the scientific name for the coconut is ‘*cocos nucifera*²³’. In Tuvalu, and most Polynesian countries, coconut is called *niu*.

²² The Online Dictionary for Contemporary Slang reveals coconut people as non-white people, who collaborate with the white establishments connoting them like coconut as being black on the outside but white on the inside.

²³ *Nucifera* is a Latin word for ‘nut-bearing’.



Figure 5.2: Dehusked coconuts depicting the human face.
Source: Author's own photos.

Like the uncertainty of the etymology of the name coconut, its origin is still unknown and a subject of constant debate²⁴. Cook's (1901) discussion of the origin and distribution of the coconut sheds light on a number of assertions as to where the coconut originated. In one account, it was suggested that the coconut might have originated from India, and in another it was said that it came from the Philippines. However, Cook argued that the coconut originated in the Americas because the American coconut populations predated European contact and pan-tropical distribution of coconut by ocean currents was improbable. Bringing the new science of genetics to the problem, de Vries (1906) supported Cook's theory. However, Ward and Brookfield's (1992, p.478) simulation of coconut drifting indicates that: 'it is extremely unlikely that coconuts could have crossed the central Pacific in either direction as unaided voyagers while remaining viable'²⁵.

Besides the more methodical explanations of the origin of the coconut, there are many myths as to its origin as well. Myths are unproven or made up stories that try to explain how our world works and evolves which were generally told a long time ago before written history came about. They are traditional stories, especially ones

²⁴ Beccari (1917), comparing species of some similar palms in Africa asserted that the 'jubaeopsis caffra' (this species of palm is only found in Africa) commonly known as pondoland palm, had many more affinities with *cocos nucifera* than any other palm and therefore suggested that coconut originated from Africa. Recent findings by Meerow and others (2009, p.1) suggest the nearest botanical relative of coconut is found in South America. However, bewildered by the wide geographical distribution of the coconut, they said that this had been one of the "abominable mysteries" of palm systematics for decades'. Although this may further suggest that the American origin seemed more likely, it is somewhat ambiguous as to whether it is really the 'coco nucifera' or a 'syagrus' or 'attalea' (both are species of palm), but the lack of an endemic coconut is more puzzling (Harries and Clement 2014).

²⁵ Early botanists like Purseglove (1968) and Harries (1978), however, argued that the coconut might have arrived naturally by floating, from NW South America reaching Polynesian islands via ocean currents.

concerning the early history of people or explaining natural or social phenomena, typically involving supernatural beings or events (Oxford English Online Dictionary). The literature on myths about the origin of the coconut offers fascinating accounts that implicitly reveal the importance of the coconut to the lives of people. Interestingly, they all attest to the same mythical ideology that the coconut was made out of man, which is quite fitting in relation to the use of the phrase “coconut people”. Myths and legends about the origin of the coconut are not only something peculiar to the Pacific region because places like Cristobal in Panama²⁶ and India²⁷ also have their own mythical accounts of the origin of the coconut in their respective places. In the Pacific however, almost all island countries and territories have their own account of the origin of the coconut²⁸. While they slightly differ from one another, all Pacific myths subscribe to the story of Sina or Hina and the eel – a half man and half spirit. However, only the Samoan, Cook Island and Tuvaluan versions are recited here.

In Samoa, it was said that Sina, the most beautiful woman in all the islands, met the eel while she dipped seawater for her mother’s cooking. The eel was the King of Fiji, known as Tui Fiti, who turned into an eel in order to get to Sina in Samoa to marry her. Cutting the story short, before the eel died he told her that he was the Tui Fiti and asked Sina to cut off his head when he died and bury it in front of her house. The eel said that a tree would grow out of its head, which would be useful to her. Its leaves could be woven as a fan to cool her when there is no wind, and its fruit would be good for drinking. The eel however stressed to Sina that if she drank

²⁶ In Cristobal, Panama, a mother of ten children passed away leaving her children to ponder how they would survive. As they cried and mourned over their mother’s dead body a white woman appeared and told them not to cry but to bury their mother immediately, and to guard her grave because a strange tree will grow from it as their source of food and drink. They did as told and the coconut grew up and became their staple food and drink. Accessed on 19 August 2015 from <http://www.gintongaral.com/myth-and-legends/the-legend-of-the-coconut-tree/>.

²⁷ In India, it was a king named Trishanku who desired to go to heaven. Vishwamitra performed a yagna and Trishanku ascended to heaven but was stopped and thrown back to earth by Indra, the king of gods. So as Trishanku fell down, Vishwamitra stopped him midair and placed a pole to hold him there. Trishanku turned into a coconut and his head became the fruit and his beard is the fibre around the coconut. Accessed on 25 August 2015 from <http://www.english-for-students.com/Coconut-Tree.html>.

²⁸ See Asekona and Beaumont (2009, pp.105-108) for a bibliography of different myths on the origin of the coconut tree in some countries in the Pacific.

the fruit she would be kissing him. When the eel died, Sina did all she was told to do and there came out of the eel's head the coconut (Ma'ia'i 1960, pp.14-17).

The Cook Islands' version is similar to Samoa, but the eel is half man and half fish called Tuna²⁹, the son of Tagaroa, and Hina the most beautiful woman on the island. They fell in love and got married without Hina's knowledge that Tuna is not human which made her feel sad, sick and unable to eat for days. Maui, a desperate lover of Hina, had been watching her and Tuna from afar in silence. When he learned that Hina was sick he disclosed this to her pretending that he was a god. Because Hina had been hiding that her lover Tuna was not human from the people, she promised Maui that she would marry him if Tuna died. Before Tuna was killed and beheaded by Maui, he told Hina that if he died to bury his head at her favourite spot and water it with her tears and a tree would grow out of it. The tree would bear many fruits and she would see on the fruit matted hair and his sorrowful face. Hina did what Tuna told her and the coconut grew up, and the face of the coconut was subsequently called "te mata o Tuna" (the face of Tuna) (Pomare 1930).

Although there is no specific Tuvaluan myth about the origin of the coconut tree, the story of the creation of Tuvalu, as discussed in Chapter II, tells something relative to the above Polynesian myths. In short, the *pusi* and *ali* (eel and flounder), half-man and half-spirit, lived together and one day they argued, the *pusi* cursed the *ali* that his body would become flat when he dies and that he (the eel) would feed from it. The *ali* died and became flat and the *pusi*'s body turned thin and tall like a coconut tree, hence the reason Tuvalu islands are flat and there are so many coconut trees on all the islands (O'Brien 1983). However, Nanumeans claim that coconut was brought to the island by Tefolaha (Chambers 1984, p.273).

As further discussed in the latter part of this chapter as well as in the subsequent chapters, all these myths appear to include three basic broad issues. First, they tell that the coconut was conceived from a human body hence the face-like form of the coconut fruit shell³⁰. Second, the myths tell that the coconut grew out of the ground

²⁹ The Cook Island word for the eel is also *tuna*.

³⁰ It is to be noted that the eel in these mythical stories was half-human and half-spirit which interchangeably altered its form from fish to human and vice versa.

on some special places as a result of the buried head. Lastly, they reveal the usefulness of the coconut as a source of life. In light of these mythical propositions, the coconut people phrase was employed as it was only fitting to use it in hypothesising the theoretical propositions of the thesis about the connectedness of people to the land, and the usefulness of coconut to the livelihoods and cultural identity of the people of Tuvalu.

5.4.2 *Coconut: The tree of life*

The coconut is an extremely important tree in the Pacific and other tropical places where it grows and naturally is cultivated. In Tuvalu, the coconut is central to the lives of the people, as it is traditionally the main staple food and drink. Given its usefulness as a source of life to the people who greatly depend on it, the coconut has earned a number of glorifying names such as the “tree of life” (Frater 2004), “tree of heaven” (Chan and Elevitch 2006; Foale 2003), “miracle plant” (Duggal 2013), and “symbol of home” (Frater 2004). The coconut is considered the tree of life because all of its parts, from its roots to its leaves, are useful for human life. Most important of all is its fruit because the coconut fruit contains sweet water and flesh that are both good for human consumption. The fruit has four main stages of its useful life, at least in Tuvalu. From stage 1 to stage 2, the fruit is mainly used for drinking. The water inside the fruit is sweet and good for drinking at any time of the day. From stage 2 to stage 3, the fruit’s meat, *gaati*, can be eaten raw or prepared and cooked into other types of food. One of the Tuvaluan delicacies from the fruit at this stage is *pooi*³¹, which can be prepared and eaten raw or cooked for household consumption. At stage 4, the apple inside the fruit, or *utanu* in Tuvaluan, can be eaten raw or processed as food in many ways. Traditionally, the *utanu* is only eaten raw on a casual basis especially in the bush during work or picnic. Of the many local foods that can be made from the *utanu*, the *fekei utanu* is the most delicious dish, which is normally prepared for special occasions of the family or island community³². Furthermore, at this stage of the fruit, the meat inside is what

³¹ The meats of the fruit, particularly the thin ones, would be grated or mashed and mixed with the fruit water and sweetened with toddy or sugar.

³² The *fekei utanu*, like other kind of *fekei* that can be made from *pulaka* and cassava crops, is made from the grated *utanu* mixed with red toddy and flour, which can be boiled or baked in the earth oven. It can only be eaten cooked but not raw.

coconut cream is made from. The cream is extracted by grating the meat and then squeezed using a filter made from the coconut husk. Coconut cream is used in almost all other local processed foods, and as a sauce to make the foods tastier.

Beside the fruit, another source of drink and food comes from the flowering stalk known as the inflorescence, *taume* in Tuvaluan, and the cylindrical stalk of the unopened leaf shoots at the top of the coconut palm locally known as *takale*. The inflorescence is where the sweet sap, known as toddy (*kaleve* in Tuvaluan), is collected by tying it in a special way with a string, then cutting and tapping the sap that comes from it. The sap can be drunk raw and/or used to cook other foods, and can be boiled into syrup, or fermented into an alcoholic drink. The stalk of the unopened leaf shoots is crunchy and has a refreshing taste. This part of the coconut is rarely used because it is considered the ‘heart of the coconut’, and therefore if it is cut the coconut will die. When used in salad, the dish is called “millionaire’s salad” due to the cost of killing the coconut just to harvest the heart or *takale* (Rossi 2014).

Duggal (2013) called it a “miracle plant” because the coconut tree has many products that are of both dental and medical importance. The water in the fruit is useful as a short-term substitute for intravenous drips especially in remote places, good for recovery from sport because it is rich in electrolytes, potassium and sodium; can treat skin disease effectively, and the list goes on. Coconut oil has an anti-cancer effect more protective than unsaturated oils. In Tuvalu, coconut oil is extremely useful for medical treatment especially for massage of torn muscles and fractured joints where special leaves endowed with magical properties are added to it (Koch 1984, p.199).

Coconut is a “symbol of home” for tropical expatriates because according to Frater (2004, p.60): ‘its image – perhaps glimpsed in a magazine or someone’s holiday snaps – will usually trigger a moment of wistfulness, maybe even memories of an incredible reliance on those graceful trees’. This is indeed true for Pacific islanders, because seeing a coconut tree in a foreign country quickly takes an islander’s mind straight home. Often Tuvaluan seafarers who travel around the globe talk about the excitement of seeing coconut trees in far away places because that reminds them of

Tuvalu. On a personal note, whenever I see a coconut tree or a similar species when I travel around the globe to places like Asia, Africa, Arab countries and the Caribbean, I immediately visualise my home island Vaitupu in Tuvalu. Sometimes but not always, my inner consciousness would even meditate about its taste, imagining the sweet coconut drinks back home.

5.4.3 Coconut: Source of power and wealth

Coconut is also a symbol of “wealth”, “manhood”, “taboo” and “love” in the Tuvaluan context. Traditionally, coconut is one of the determinants of wealth. This applies at both the family level as well as the island community as a whole. Families with plenty of coconuts are considered rich and also have many *manafa* or huge *laufenua*. This category of families is called *vakaluga*, which literally means upper class (Samuelu, 1983, p.35). In the olden days, families would provide *pui, fuaniu*³³ and other produce such as *pulaka* from their *laufenua* for the community during ceremonial days. Originally there was no set amount of contribution, and so families would provide as much as they could to show their wealth.

This tradition was later changed and families were to contribute equal amounts of their local produce to avoid embarrassment and as a means of encouraging people to participate. In recent times, the coconut as a symbol of wealth once again resurfaced during the copra-cutting era³⁴. Families with many coconuts would expect to cut more copra and therefore earn more money than those with few coconuts. This is no longer the case because copra trading ceased in Tuvalu in the 2000s. At the community level, coconut is one of the local food-gifts that a community group visiting other islands would take with them. The quantity of the coconut, as food-gift, the group takes would signify the abundance or otherwise of coconuts on the island of the travelling group and hence its wealth.

³³ *Pui* and *fuaniu* are Tuvaluan names of coconut fruits at different stages; the former is the coconut fruit that is still attached to the coconut tree which is good for drinking, and the latter is one that has detached and fall to the ground which is used in many food ingredients and copra.

³⁴ It is a period between the mid-late nineteenth to early twenty-first centuries, at least in Tuvalu, where copra was the main trading commodity and the only cash crop for the people. Copra is made from coconut flesh that is dried and is used mainly for oil but its by-product is also useful for other purposes.

Furthermore, the coconut is a symbol of manhood. Families without *fuaniu* beside their cookhouses or *pīi* in their kitchens are considered '*kaiga seai ne tagata*' (lit. families without men). This is because collecting *pīi* and *fuaniu* is men's everyday duty in Tuvalu. Climbing coconut trees is dangerous and can cause major injuries or even death if one falls. Therefore, climbing requires a lot of courage for men who do it particularly during bad and rainy weather when the coconut trunks are slippery. However, *kaiga seai ne tagata* does not really apply in that literal sense but it was a saying that applied to lazy and cowardly men.

This is also applied to cutting toddy, because able-bodied men who do not cut toddy or only cut toddy from one coconut are considered lazy. Cowardice and laziness are very shameful things in the Tuvaluan culture as they determine one's status in the community, and this determines whether or not one has leadership quality in the family and the community as a whole. Men who were known for laziness would not have a place in the society and if they forced their way to leadership they would not be respected. So old men in the family would ensure that young male members of the family were trained to climb coconut trees to collect *pīi* and cut toddy to prevent the family's status from being called '*kaiga seai ne tagata*'.

As a symbol of taboo, the coconut is the only tree in Tuvalu that has customary laws relating to its protection and usage. Given its significance as a source of life to the people, when the coconut is tied with a coconut leaf it indicates that nobody is allowed to climb and collect the fruits or cut leaves from it. This is called '*tapui*'. The *tapui* is a taboo marker that is used as a way of controlling the misuse of the coconut by family members, and a sign of "no-climb" for anyone who passes by. It is in the Tuvaluan tradition that anyone who is thirsty after working in the bush or after coming from a fishing trip may drink from any coconut one may pass by. So this *tapui* is placed to inform people that the coconut is prohibited. Each family group has its own *tapui* style, like the *tapui* markers in Niutao shown in Figure 5.3.

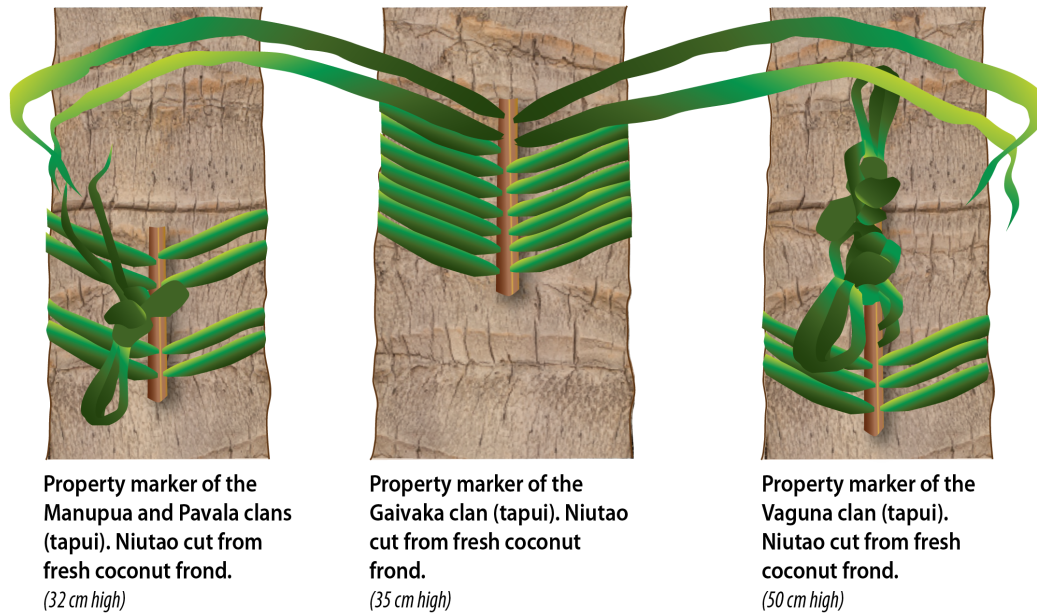


Figure 5.3: Types of *tapui* markers.

Source: Adapted from “The material culture of Tuvalu” by Koch 1984, p.54.

In a different but related way, the coconut itself could also be used as a *tapui* marker to demarcate land boundaries. Before the introduction of modern survey methods, boundaries were marked with a letter ‘X’, one or more, cut into the coconut tree. This coconut or tree marking of boundary method is used in other Pacific countries as well (Crocombe 1984, p.26). In Nanumaga, for instance, planting two coconuts together in one hole facing in the opposite directions serve as the *tapui* marker that would demarcate the boundaries (Koch, 1984). The word *tapui* comes from the word ‘*tapu*’ and ‘*ui*’. The former means sacred, taboo or prohibited and the latter refers to walking past, or to pick any fruit from, that place (Talia, 2009, p.61).

Lastly, as a symbol of love, the coconut can be bequeathed for the specific use of a particular person especially someone from outside the family. Once it is bequeathed by the *matai*, family members would respect it. This would be marked with four stones placed around it as boundary markers. This traditional practice is called ‘*te inu*’ (lit. the drink). It is usually done as a token of love if one’s friend likes the fruits of a particular coconut that is of close proximity to where one lives.

5.4.4 Coconut roots: *Te niu fakamauganiu*

The rootedness of the people of Tuvalu to their land, like coconut roots in the soil, has a long history that can be traced back to the mythical creation of the islands

(O'Brien, 1983). As people started to populate the islands, the coconut was their only staple food and drink that enabled them to survive the unsympathetic conditions of the islands as testified by (Haase 2008, p.720) below:

The coconut tree is probably the most important gift from the gods to the people of the Pacific, for this remarkable plant provides drink, food, containers for water, material for mats and clothing, shade, firewood, and timber for building houses and canoes. Humans would not have been able to survive on the isolated islands they discovered on their journey across the Pacific had it not been for this incredibly useful plant.

Throughout history, the people of Tuvalu have always taken great care of their land and the coconuts on it with great pride. They cherish and treasure their land that has been passed from one generation to the next despite changes in customary land tenure systems. For many years, Tuvaluans have lived on and guarded their ancestral land because it is their identity. Land has shaped their way of life and culture. Their physical and mental lives are rooted in the land like the coconut tree.

During the fieldwork, one of the questions I asked the respondents was about how they feel about their land. The first aspect of the question was focused only on the value of land to them, without due regards to the impacts of climate change and sea level rise, which was the second aspect of the question that I discuss in the next chapter. All the respondents attested to the importance of land to their livelihoods. They expressed the value of land to them in ways that is quite difficult to comprehend. The value of land to them is not merely of commercial and social significance but it is also culturally interwoven into their lives. It is part of them and their culture. 'Land is important. You can't say that you are someone from the island if you have no land' (Tie Maheu, 69 year old man). 'The reason land is important is because it is where you get your contribution of produce for island mandatory activities' (Vasati Fialua, 58 year old woman). 'Land is more important to me than money. It is important because of our custom and tradition. If you have land, your status in the community is high' (Laloni Samuelu, 75 year old man). These respondents' accounts portray the cultural value of land to the people of Tuvalu. Land is such a basic determinant of status in the community that people would ensure they would not lose it for any purposes.

Interestingly, a number of primary school students expressed in their essays a strong sense of connectedness to the islands. Some specifically made mention of their rootedness to the islands where they were born, as per one of the student's essay (Box 5.1).

I want to stay in my own Island. I don't want to go for away from my beautiful Island is Tuvalu. Because Tuvalu is my root or my Island that were i born, I love my own Island very much. I can't let my Island from me, when it is we are born in Tuvalu

Box 5.1: Excerpt showing expression of strong connection to the land.
Source: Author's own fieldwork.

Some respondents value land because it is their identity. One's bloodline can be traced through land, particularly the *kaitasi* tenure system. 'Land is important to be kept properly because it tells where you come from. If someone asks you about the land, it would reveal your family lineage' (Leata Loleni, 49 year old woman). Others went further to say that land is more than identity. 'Land is even more important than people' (Kuea Pese, 54 year old man). 'Land is important and I cannot sell it because I die anytime but what about my children and grandchildren' (Liveti Taua, 32 year old man). These sentiments were based on the reasoning that people come and go but land remains. They consider themselves as only guardians and custodians of the land that should be well protected and passed to the next in line.

The traditional everyday life of Tuvaluan people has almost always been associated with the coconut in one way or another. Besides drinking and eating coconut foods and drinks, people's daily lives would always have to do with something related to coconut. These include old men's traditional daily routine of making local strings known as *kolokolo* (sennit) out of coconut fibre; old women's day-to-day work of weaving cookhouse mats (*pakau* or *kapau*), baskets and fans from coconut leaves; able-bodied men's morning and evening chores of cutting toddy and collecting coconut fruits; young women's involvement with preparing food from coconuts everyday; and boys' and girls' work of collecting coconut firewood and sweeping the house using brooms made from coconut are but some of the ways in which the

coconut has been part and parcel of the lives and livelihoods of Tuvaluans. As a result of such way of life, the coconut has become a strong nexus between the people and their land. Had it not been for the coconut, the people would have not been so closely connected to their land.

The preceding paragraphs illustrate the role of the coconut as a link between the people and the land. The “coconut root” metaphor therefore refers to the strong attachment of the people of Tuvalu, and I believe in many Pacific islands, to the land on which they live, and upon which their livelihoods greatly depend. The significance of the coconut as a connector can be further explained through *te niu fakamauganiu* concept. This term is particularly used in Vaitupu. However, in recent times it has been occasionally used in other islands³⁵. *Te niu fakamauganiu* is literally translated as “the coconut-tying coconut” but “the coconut of all coconuts” may be a better translation given the spirit in which the concept is traditionally used. There are a number of meanings to *te niu fakamauganiu*, all of which reflect the significance of the coconut as a symbol of life connectedness³⁶.

One version of it is that *te niu fakamauganiu* refers to a coconut that is planted on the baby’s *pito* (lit. umbilical cord) or *fanua* that is buried in the family land as a token of life to the baby. The *fenua viz-a-viz fanua* notion discussed earlier is part and parcel of this whole notion of people and land, and the planting of the *te niu fakamauganiu*, provides the link between the two. This particular coconut will provide drink for the child and is sometimes called *tena inu* – the child’s drink (Talia 2009, p.56).

Te niu fakamauganiu is a special coconut to the family because it symbolises the connection of the baby to the family land like an umbilical cord. During pregnancy, the umbilical cord connects the unborn baby to the placenta (*fanua*) in the mother’s womb. It serves as the vehicle through which oxygen and nutrients from the mother’s bloodstream are passed to the baby’s bloodstream, and also serves as a

³⁵ Vaitupu being host to the many educated generations of Tuvalu because of Motufoua Secondary School, much of its culture and especially the language have been widely spread around the other islands.

³⁶ Note that the word “*te*” is a definite article in the Tuvaluan vernacular, and it is usually placed in front of *niu fakamauganiu* to connote the specificity of this one coconut from amongst the rest in the family’s land.

tube through which deoxygenated blood and waste from the baby are discharged for the entire nine months or thereabout of pregnancy. Traditionally, the child would be informed of his or her *niu fakamauganiu* in order to instil in his or her mind the significance of their connection to the land. Although this traditional custom is hardly practised today, due to the introduction of new health exposure controls³⁷, there are still cases where people would ensure that the umbilical cord of the child is obtained so that it can be buried and a *niu fakamauganiu* planted on it.

Another version of *te niu fakamauganiu* is that it is the coconut palm within the family's coconut plantation in which the family would rely on most of the time. Generally, coconuts sometimes were off-season or barely bearing fruits but *te niu fakamauganiu* is one that never stops bearing plentiful fruits. It is indeed, the family's hope during droughts or off-season periods for coconuts. As an important source of life for the family in times of hardship, *te niu fakamauganiu* is always treated with great care to ensure that it continues to bear bountiful fruits. While the traditional significance of the *te niu fakamauganiu* and coconut in general has largely faded away due to imported supplementary drinks and foods (Brady, 1974, p.167), it is still used as a concept of one's connectedness to its original source either by ancestral bloodline or island identity.

In essence, *te niu fakamauganiu* is a traditional notion in itself. It is indeed a cultural ideology that accentuates hope, courage and faith in times of difficulty. *Te niu fakamauganiu* conceptually illuminates and reinforces people's desire for survival when sufferings affect them. Traditionally, elders conceptualise *te niu fakamauganiu* in their public talks to encourage community members to work hard to become *te niu fakamauganiu* for their families and to know their link to the land. The *fatele* in the opening quote of this chapter is a call of distress and despair, for the *te niu fakamauganiu*, the staple drink of Motulu, has vanished.

³⁷ There is a government health policy that all first-born babies must be referred to the main hospital in the capital for delivery. Also, any pregnant mother with complications must also be referred to Funafuti. This policy has had great influence that almost all pregnant women would go to Funafuti for delivery where the placenta is disposed of.

5.5 Conclusion

I have outlined in this chapter the relationship between people and land that is interwoven with threads of different qualities. For some, land is just a place or space where people live, mingle, and socialise with one another without giving meaning to it. For others, land has meaning that they treasure in their lives. To them, land is a place or space to which they are deeply attached – it is their true identity. Relph (1976, p.63) asserts that: ‘the profound association with place is the cornerstone of human existence and individual identity’. The metaphors of ‘the roots’, ‘the tree’, and ‘the *fenua/fanua*’ shed light on the meaning of land to the people in Pacific and Tuvalu in particular.

The metaphor of coconut roots demonstrated the people of Tuvalu’s strong connection to their land and the usefulness of coconuts to the lives and livelihoods of the people of Tuvalu cannot be over-emphasised. It is truly a tree of life and symbol of homeland. *Te niu fakamauganiu* symbolises the connection of Tuvaluans to their homeland which has been *tapui* in people’s mind from time immemorial and is still to this day. Its significance has been conceptualised as Tuvaluan’s strong sense of rootedness to their land.

CHAPTER VI

TE ILOGA ATUFENUA – NATIONAL IDENTITY

...if national identity means anything, it means something that comes with you wherever you go, and stays with you no matter how long you stay away.

(Clive James)

6.1 Introduction

National identity is a complex and contested concept that we often confuse with “nationalism” and “patriotism”, which indeed overlap each other, and is a subject of ongoing debate. The advent of statehood in the modern age narrows down how we identify people in terms of what we tend to call “national identity” (Mandler 2006, p.278). Different from cultural identity, which is a topic of the next chapter, national identity comes in different forms such as the “name”, “national flag”, “emblem”, “anthem”, and other things.

This chapter untangles the issue of national identity in order to shed light on its importance to low-lying states such as Tuvalu, whose national identities are at stake because of the impacts of climate change and sea level rise. In doing so, I begin by examining the literature on the doctrine of statehood, the abstract notion of state recognition, state extinction and stateless person(s). I then explore the specific issue of “national identity” by looking into the basic national symbols and contextualising them in the Tuvaluan context. Towards the end, I dissect the Tuvaluan idioms ‘*toku fenua ko toku fenua*’ and ‘*te koga ne fati i ei toku laupua*’ in order to put into perspective the people of Tuvalu’s convictions about the imperative of protecting and maintaining Tuvalu’s national identity from the impacts of climate change and sea level rise.

6.2 The doctrine of statehood

State is not a newfound concept of the twentieth century or even the last millennium. It is an ancient notion though its definition was different from what is now used in international discourse. The Old Testament's accounts of events that happened among places like Egypt, Israel, Babylon to name a few, reveal that states have been in existence at least since then. The modern history of states, however, shows that the concept of statehood emerged from the establishment of the Peace of Westphalia treaties in 1648 ending the wars that ravaged Europe from 1618 to 1648, and establishing new sovereign states (Gross 1948, p.20). The notion of state was formally cemented, as we know today from the Paris Peace Conference 1919, which saw the creation of the League of Nations, and subsequently the formal establishment of the United Nations in 1945.

The term "state" has not always been clearly defined, and is a subject of continuous debate in international law discourse (Crawford 2006). Many scholars and lawyers have tried to define state, but have failed to have their definitions accepted generally. The first definition was said to have emanated from the seminal work of Dutch scholar Hugo Grotius entitled *De Jure Belli ac Pacis* 1625 (The Law of War and Peace, 1625). Written during the war torn era which resulted in the Peace of Westphalia, Grotius defined state as 'a complete association of free men [sic], joined together for the enjoyment of rights and for their common interest' (Grotius 1625, Book 1, Chapter 1, Section XIV)¹. A profusion of definitions followed suit, most of which complement and supplement one another.

Moreover, a number of international legal instruments have provided working definitions of the state but their usage has been confined only to the purpose of those instruments though there may have been instances where their applications might have been accepted elsewhere. The closest international legal instrument where the definition of state could be found is the Montevideo Convention on the Rights and Duties of States 1933, although it is not widely used because only 16 states have formally ratified it. Its Article 1 says:

¹ Also see Pufendorf (1672, pp., Book VII, Chap 2, Sec 13, para.672), Vitoria (1696) and Vattel (1758) for earlier definition of states.

The state as a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with the other states (League of Nations 1933).

At this point, it is important that a brief discussion of state criteria is provided because it sheds light on the key issues relating to the impact of climate change and sea level rise to national identity.

6.2.1 *Criteria for statehood*

Crawford's most celebrated and highly recommended work pertaining to state in international law provides substance to the Montevideo Convention's criteria for states. Without reproducing Crawford's work, I have below very short discussions of the criteria.

6.2.1.1 Defined territory

A defined territory, according to Crawford (2006 52), 'must consist of a certain coherent territory effectively governed'. In other words, a defined territory is some space of land on the earth's surface which is occupied by people and over which a government has exclusive control². Raič (2002, p.59) similarly asserts that: 'states are territorially defined institutions of authority'. Interestingly, there is neither a specified size of land nor clear and well-delimited boundaries to be qualified as a defined territory for the purpose of this criterion. Crawford (2006, p.46) asserts that there is 'no rule requiring contiguity of the territory of the state'. From this perspective, I argue that the potential territorial loss of low-lying atoll states from the devastating impacts of sea level rise should not therefore be an issue that should result in disqualification of statehood. This is because this criterion requires that as long as there exist some territorial lands, either natural or human-made, it remains a state so far as the prevailing international laws are concerned. As Crawford (2006, p.52) puts it: '[t]he only requirement is that the state must consist of a certain coherent territory effectively governed – a formula that suggests that the

² Lachs (1980, p.36) observed that '[t]he most basic manifestation of a State's jurisdiction is the power exercised in regard to its territory. Here we find the first and basic relationship between the state and nature...territory being the physical foundation of State power in several dimensions.'

requirement of territory is rather a constituent of government and independence than a distinct criterion of its own’.

6.2.1.2 Permanent population

A permanent population according to Crawford (2006, p.52) is necessary for statehood because ‘if states are territorial entities, they are also aggregates of individuals’. Oppenheim (1955, p.118) argues that: ‘[a] permanent population is an aggregate of individuals of both sexes who live together as a community in spite of the fact that they may belong to different races or creeds, or be of different colour’. In the same vein, Raic (2002) argues that the basic requirement of permanency is that the population must have an intention to reside on the territory on a stable and perpetual basis³. Discussion about mass migration and relocation of population due to climate change and sea level rise brings to the fore the issue of whether the affected states would continue to be states or not if the configuration of their population was to be significantly dispersed⁴. This is an important element of statehood to take note of because of pressures for migration and relocation that are now looming for states such as Tuvalu.

6.2.1.3 Government

According to Crawford (2006, p.55), government is a key criterion of a state and ‘evidently a basis for the other central criterion of independence’. More importantly, the government must be an “effective government”. An effective government is a ‘pre-condition for the acquisition of a legal right ... required when this right is claimed or when it has to be proved to exist’ (Raic 2002, p.66). There are two basic requirements for effective government: (i) it must have an institutionalised political, administrative and executive organisational machinery for the purpose of regulating the relations in the community, and charged with the task of upholding the rules, and (ii) it must actually exercise state authority over the

³ It is to be noted that permanent population in this sense is not necessarily the same as ‘people’ because people may refer to an ethnic sub-group within a state (Raic 2002). Furthermore, a permanent population ‘is not a rule relating to the nationality of the population’ (Crawford 2006 52) because the granting of nationality is a matter of the state’s municipal law.

⁴McAdam (2012, p.113) raises a question on this issue and makes reference to the substantive number of Samoan and Tongan populations, 56.9 per cent and 46 per cent respectively, who live outside their countries.

claimed territory and the people residing in that territory (Raic 2002, p.62). In a similar, but short and precise fashion, Crawford (2006, p.56) said: ‘effective government [has] two aspects: the actual exercise of authority, and the right or title to exercise that authority’. This issue is central for low-lying states such as Tuvalu because the effectiveness of their governments to govern could be questioned if the country was eventually uninhabitable, even if there were still territorial lands and handfuls of population surviving on islands.

6.2.1.4 Capacity to enter into relations with other states

This fourth criterion stresses the authority of the state in the eyes of the international law to engage with another state. Crawford (2006, p.62) argues that:

capacity in this sense depends partly on the power of internal government of a territory, without which international obligations may not be carried into effect, and partly on the entity concerned being separate for the purpose of international relations so that no other entity both carries out and accepts responsibility for them.

The American Law Institute shares the same view that ‘[a]n entity is not a state unless it has competence, within its own constitutional system, to conduct international relations with other states, as well as the political, technical, and financial capabilities to do so’⁵. This criterion is a conflation of the requirements of government and independence (Crawford 2006, p.62).

6.2.1.5 Independence

Going beyond the Montevideo Convention 1933, Crawford (2006, p.62) added two new criteria for statehood namely (i) independence and (ii) sovereignty. He propounded that independence is a central criterion because if an entity claimed to be a state, but is subject to the discretion of a dominant state in international relations, its status would be a ‘puppet state’ (Crawford 2006, p.63). Raic (2002, p.75) equates independence to ‘legal capacity to act as it wishes, within the limits

⁵American Law Institute, Restatement (Third) of the Foreign Relations Law of the United States, 1987, Vol. 1, cited in Raic, 2002: Statehood and the law of self-determination, p.73.

given by international laws...the absence of direct or indirect subordination of that legal capacity to the will of a third state or a group of states’.

6.2.1.6 Sovereignty

Independence and sovereignty are sometimes interchangeably used, though they have distinctive meanings in terms of statehood, according to Crawford. The former denotes ‘the prerequisite for statehood’, and the latter refers to ‘the legal incident’ (Crawford 2006, p.89). It is generally accepted that sovereignty is not a fact but an abstract idea or notion. However, sovereignty is one of the terms in international law that ‘has a long and troubled history, and a variety of meanings’ (Crawford 2006, p.32). Many theorists describe sovereignty in many different but parallel ways, and all point to the same conclusion that sovereignty is a notion that best describes a state’s status of authority over its subjects, its domestic affairs and which other states would respect (see Bodin 1606; Hobbes 1968; Locke 1924). Crawford (2006, p.32) argues that sovereignty is a fundamental ‘attribute of a state, not a precondition’. Removing sovereignty from the realm of the state will mean that the government’s sovereign power to act in the interest of its population is questionable. Bull (1977) argued that a community that claims to be sovereign but cannot assert this right in practice, is not a state properly so called.

6.2.2 State recognition

The preceding section reveals the various aspects of what makes up a state in the eyes of international law. While it is of little relevance to most existing states, it is essential for those existing states whose statuses are on the verge of falling short of the legal requirements of statehood due to the impacts of climate change and sea level rise. At this juncture, it is important to review the literature on the issue of state recognition in order to understand how the status of these affected countries as recognised states become questionable, if not disputable under international laws.

Recognition of states has a history of uncertainty. ‘Despite its regular occurrence in world affairs of the last 250 years, there is no scholarly agreement on this question’ of what state recognition is all about (Fabry 2013, p.165). There are two main

schools of thought on the recognition of states, namely declaratory and constitutive theories. The declaratory school holds that the existence of a state as a legal person in international law is a separate matter from its recognition by other states or the international community (Brierly and Waldock 1963; Vattel 1805). In short, declaratorists argue that recognition of a state is simply an acknowledgement of its existence that other states would respect and welcome⁶.

Contrastingly, the constitutive school argues that an unrecognised state is not a state at all (Dugard 1987). That is, recognition is accorded to an entity as soon as it becomes a state, and therefore it is unnecessary for the state to declare itself in order to be recognised. Oppenheim puts it in the following manner:

[i]nternational Law does not say that a State is not in existence as long as it is not recognized, but it takes no notice of it before its recognition. Through recognition only and exclusively a State becomes an International Person and a subject of International Law (quoted in Raič 2002, p.29).

In simple terms, constitutive proponents argue that there is no requirement for a state to be declared a state in order to be recognised. The mere fact that a putative state has met all the required criteria discussed above means that it will thereafter be recognised as a state so properly called.

Both of these schools of thought have merits in their own arguments, but in recent developments it appears that the constitutive proposition is becoming more accepted. Quoting Chen, Dugard (1987, p.126) said:

In view of the fact that states often accord treatment to new entities, not by the criterion of actual existence, but by that of recognition, and in order that the fact of existence may be fairly judged, unprejudiced by selfish considerations of policy, it is highly desirable that recognition be effected through collective action.

Viewing these theories in light of low-lying states such as Tuvalu that may become uninhabitable or disappear, it appears that constitutive theorists would rule that

⁶ Crawford (2006, p.22) explained the declaratory theory, in a similar fashion, as one in which 'recognition of a new state is a political act, which is, in principle, independent of the existence of the new state as a subject of international law'.

recognition of Tuvalu and the like would terminate at the point where one or two of the criteria of statehood have been fundamentally breached. The declaratory proponents on the other hand would maintain that recognition of states such as Tuvalu, being independent from statehood, would continue to exist and be respected.

6.2.3 *State extinction*

The literature on the issue of state extinction or disappearance is very limited, particularly on the issue of a state disappearing because of climate change and sea level rise. Crawford (2006) discussed four different ways in which a state may become extinct. These include (i) extinction by voluntary absorption; (ii) extinction by merger; (iii) extinction by voluntary dissolution; and (iv) extinction by involuntary dissolution. At the outset, these types of extinction are purely based on voluntary and involuntary arrangements or rearrangements by concerned states of their existing territories and governments. Yet, there is no category of extinction relating to a substantial or complete loss of physical territorial land, or defined territory, that low-lying states such as Tuvalu may face as a result of climate change and sea level rise. Crawford (2006, p.700) asserted, however, that '[a] state is not necessarily extinguished by substantial changes in territory, population or government, or even, in some cases, by a combination of all three'.

The lack of conventional practice and international laws on how to address the issue of state extinction due to climate change and sea level rise has recently prompted a number of scholars to come up with certain propositions. Nine (2010) argues that "ecological refugees" should have a legitimate claim on the basis of their right to self-determination. Using John Locke's proviso mechanism on property rights, Nine (2010, p.361) propounded that: 'when the holding or acquisition of property rights unnecessarily threatens human life, we should change something about property dispositions to avoid the unnecessary death caused by these property dispositions'. Here Nine (2010, p.362) was trying to assert that if the 'preservation of humankind is a foundational moral mandate for property rights, then the establishment of justice through the preservation of self-determining groups is a foundational moral mandate for territorial rights'. Interestingly, Nine used Tuvalu

as an example by trying to justify the formation of a New Tuvalu if it became submerged and uninhabitable due to climate change and sea level rise.

Of the various redress theories for saving nationhood of state that may become extinct due to climate change and sea level rise, Burkett's (2011, p.346) proposition of "nation *ex-situ*" quoted below is of great interest and perhaps a plausible solution if at the end of the day, low-lying atoll states eventually become uninhabitable or even disappear:

Ex-situ nationhood would be a status that allows for the continued existence of a sovereign state, afforded all the rights and benefits of sovereignty amongst the family of nation-states, in perpetuity. It would protect the peoples forced from their original place of being by serving as a political entity that remains constant even as its citizens establish residence in other states. It is a means of conserving the existing state and holding the resources and well-being of its citizens – in new and disparate locations – in the care of an entity acting in the best interest of its people.

In this connection, I incline to support the principle of "state continuity" that puts great emphasis on the continuation of community identity. In his proposition of state continuity, Crawford (2006, p.669) argues that 'what matters is principally the historical continuity of the community the State embodies, notwithstanding changes in its population, territory or system of government.' Having explained state or nation, I now turn to the issue of national identity.

6.3 National identity

In the foregoing section, I constructed an understanding of what constitutes a state, recognition of states, and state extinction. This part examines what "national identity" is in order to conceptualise and contextualise the situation of states that are deemed to disappear because of climate change and sea level rise. The aim is to understand how such an event, if it happens, could result in the total loss of their national identities in the minds of future generations.

What is then "national identity"? According to Mandler (2006, p.272), 'national identity is a peculiar kind of identity...more durable and more pressing than all others...national identity [is] the trump identity...People will die for it – and do, in huge numbers. Even when not trumping, it colours all other identities'. National

identity has been conceptualised by scholars by way of assessing how members of the nation understand the characteristics of other members, using a framework that distinguishes ascriptive traits from achievable ones (Brubaker 1992). There are two broad dimensions upon which national identity has been discussed in the literature; the ethnic dimension and civic dimension⁷ (Kunovich 2009; Shulman 2002). Although there is a scholarly distinction between the two notions, each of the two types of national identity is weighted differently across countries (Jones and Smith 2001), and in practice national identity is the manifestation of the simultaneous impact of both notions (Ha and Jang 2014). National identity comes in a number of recognised forms such as “the name” of the nation, “the national flag”, “the emblem” and other basic national symbols outlined in details below.

6.3.1 *The name*

At the outset, giving a name or naming things provides the first marker of identity. ‘Naming is about knowing and defining the other in a Western perspective...we recognize naming as a political act of ascribing identities to ourselves and others...’ (Rivera 2015). Naming can also be viewed as an expression of power, especially place names. People and places are named in order to give identities that differentiate them from one another, or to suppress existing names. Giving a name can be regarded as the onset of a person’s biography, or a place’s historical beginning and the start of a specific life existence (Jagiela and Gebus 2015). Generally, naming usually, but not always, carries a meaning within it and is given purposefully (Berne 1972).

As an identity marker, what is in the name Tuvalu? This is a simple but rather sensitive question, as it embraces historical and emotional factors of those concerned – the Tuvaluan people. As briefly mentioned in the earlier chapters, historically there was no known name given to the group of islands, now known as Tuvalu, prior to European contact, although each of the islands in the group has its own name predating the arrival of non-natives. As a group of islands, Tuvalu was

⁷ According to Ha and Jang (2014, p.473) ethnic conception of national identity ‘links membership with ancestry, nativity, religious or cultural customs...[it is] thus, primarily based on characteristics that are difficult to change, setting very rigid boundaries for group membership. Conversely, civic identity focuses on imagined kinship through shared acceptance of political institutions and norms’.

formerly known as Ellice Islands⁸ prior to its independence from Britain. In October 1975, the group was officially named Tuvalu⁹. This was the beginning of the new era of a newborn state. Who named the new state of Tuvalu is uncertain, but surely it was a name agreed upon by the committee that was instituted to oversee the smooth transition of Tuvalu's separation from Kiribati and towards its independence. Besides, there is no clear etymological evidence of the word Tuvalu. However, Tuvalu was used casually by the people well before independence to refer to the group, which Roberts (1958, p.394) said was the native name of the group.

As mentioned in Chapter II, Tuvalu is a name made up of two words, *tu* and *valu*. The word *tu* has several meanings in the Tuvaluan vernacular. It can mean stand, or customs, or to be stung/stabbed, or being elected (Jackson 2001). The word *valu* also has several meanings, including the number eight, a fish species, and to grate coconut or breadfruit skin (Jackson 2001). The name Tuvalu entails the words 'stand' and 'eight' to purposefully give meaning to its name as a state comprising of eight islands standing together. As noted earlier, although there are nine islands in the group, the smallest island, Niulakita, was never considered an autonomous island and therefore is excluded from the name. Accordingly, Tuvalu means eight islands, with autonomous status, standing together¹⁰.

While that is the literal meaning of Tuvalu, the underlying motive behind the name is much deeper. The name reflects the need for the people of all the eight islands to stand united in taking the country forward and strive for the betterment of each and every island. It is a name that reminds the people that, as a state, the traditional island-only-spirit must come second when it comes to national matters. One popular song that was composed in the name of Maheu Naniseni, one of the two pioneer members of parliament from Nanumea, stresses unity and, is a strong reminder to the people of Tuvalu, particularly the leaders, about the importance of standing

⁸ As mentioned in Chapter II, Ellice was a name given by Capt. De Peyster for the island of Funafuti as a memory of his friend and benefactor E. Ellice, Esq. M.P. for Conventry. a name that they had carried with great honour and pride without knowing what was in it.

⁹ Under section 3 of the Tuvalu Order 1975 – Tuvalu's Constitution on its separation from Kiribati.

¹⁰ Initially the word Tuvalu was prefixed by '*atu*', which means group, chain or cluster of islands, or simply archipelago (Jackson 2001). So traditionally the group was known as *Atu Tuvalu* (Roberts 1958, p.394). However, at independence the word '*atu*' was dropped but it is still used as a pronoun when one refers to the country as a whole or group of islands as '*atufenua*' instead of *fenua*, which means one island.

united as one nation. The first verse of the song called “*Te vii o Maheu Naniseni*” is given in Box 6.1.

Faiga o atufenua e fai ki loto
Faiga o atufenua ke se tu koe ki tou fenua
Fai e koe fai ke papau
Fenua katoa i tou loto

(English Translation)

The nation’s undertakings shall be done with one’s heart
The nation’s undertakings shall not be done in favour of one’s island
One shall make equal
All the islands in one’s heart

Box 6.1: Excerpt of a Tuvaluan song called “*Te vii o Maheu Naniseni*”.

Source: Composed by Noa Monise with the English translation by the author.

With the danger posed by climate change and sea level rise, Tuvalu as a name would become meaningless, if at the end of the day the islands were submerged and uninhabitable, and therefore the people would have to be relocated to some other place(s). This is because the new place is unlikely to comprise eight islands so as to represent the name Tuvalu. In such a scenario, the name Tuvalu may have to be abandoned, as it would be unsuitable to maintain. Its underlying meaning of eight standing united would surely become relinquished over time and thus the people of Tuvalu may result in disunity. It is noted however, that place names sometimes remain unchanged after the reasons in which they have been called were obsoleted. Also, names do not always have to correspond to things in the world and their uses are always arbitrary.

Lastly, the name Tuvalu also contains something that recently brought the country to the international spotlight during the turn of the millennium. As discussed in Chapter II, the dawn of the Internet phenomenon brought about the allocation to every country a Top Level Domain country code (TLDcc), and Tuvalu was assigned ‘.tv’ (Dot TV) because of its name. Therefore, looming concerns about talks of Tuvalu becoming submerged may result in Tuvalu losing grip of its “.tv” TLDcc.

6.3.2 *The national flag*

One of the greatest symbols of nationhood is the flag. According to Reichl (2004, p.206): ‘the flag [is] the national symbol number one’. Every nation has a distinct national flag that entails significant and meaningful characteristics. As a national symbol, the flag may ‘arouse powerful, emotional expressions of national sentiment primarily because [it] uniquely accentuates citizen’s identification’ (Schatz and Lavine 2007, p.332). It is a powerful symbol of national identity. The flag is an expression of a collective experience and a way of constructing communities¹¹. Reichl (2004 207) observed that a ‘crowd of people flying the same flag generates a sense of belonging among themselves’.

What is in a national flag that people are so passionate about and may even die for? History tells many interesting stories of the symbolic use of flags and how they embrace people in many walks of life, particularly during major sports events and in war times, to name two. The hoisting of the US flag by marines on Iwo Jima on 23 February 1945 is one of the most celebrated historical milestones of World War II for the US people, as it reminds them of the courage and bravery of their armed forces (Renn 2015). Understanding the full potential of the national flag – the symbols and colours that it contains – is not straightforward because it is a process of encoding and decoding (Reichi 2004). In their book ‘Practice of Looking’ Sturken and Cartwright (2001, p.45) urged that there are ‘two elements beside the image itself... (i) how viewers interpret or experience the image, and (2) the context in which an image is seen’. An outsider may only see the national flag and identify it as belonging to a particular state and therefore meaningless to him or her but an insider would see and feel it as part of his or her identity¹².

Like all other national flags, the Tuvalu national flag represents national identity for the people of Tuvalu, both living in Tuvalu and those scattered around the four corners of the globe. Tuvalu’s flag (Figure 6.1) was first hoisted during the country’s inaugural independence in 1978. The Union Jack in the upper left canton

¹¹ The national flag has been acknowledged by scholars in many disciplines, such as sociologists (Mills 1959), anthropologists (Firth 1973), and political scientists (Lasswell 1935), as a notion that carries strong impassioned emotion and behaviour (Schatz and Lavine 2007), although it is not always positive, and often contested.

¹² See Bidima (2013, p.73) for a further discussion of meaning of the flag.

of the flag represents Tuvalu's historical tie with Britain and the blue colour of the flag represents the Pacific Ocean in which Tuvalu is located and the nine yellow five-pointed stars represent the islands in the group.

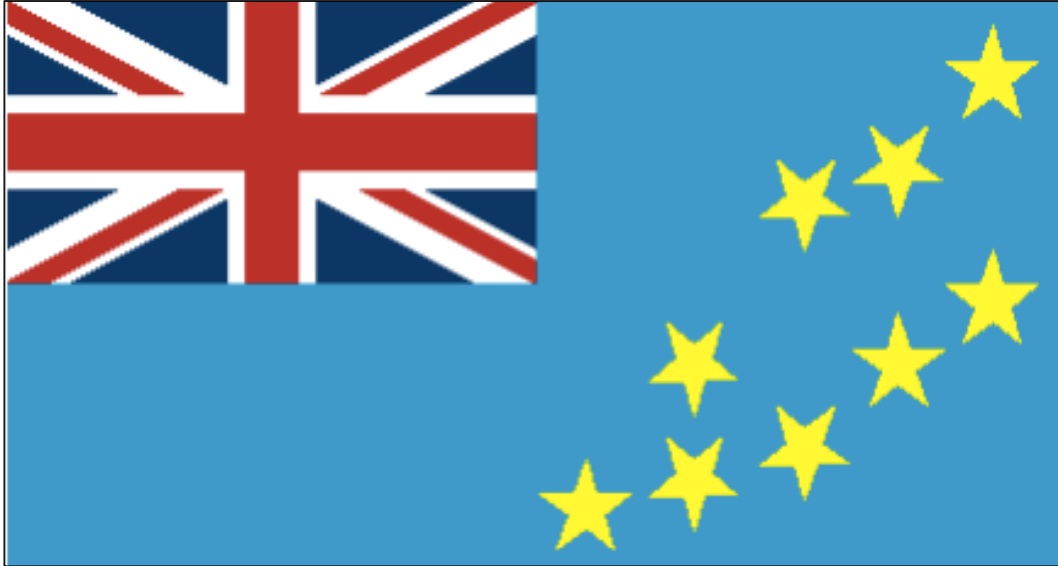


Figure 6.1: Tuvalu national flag.
Source: Tuvalu National Flag Act 1995 (Schedule 2).

During Kamuta Latasi's administration in 1993-1995, he decided to change the flag because the presence of the Union Jack does not reflect Tuvalu as a fully sovereign nation. This move was hotly debated in Parliament and received mixed views from the public¹³. Despite the controversy, Rt. Hon. Sir Latasi decided to go ahead and change the flag, which was designed by Filemoni Paanisi (Figure 6.2). Quite expectedly, the flag was short-lived (less than two years) because when Rt. Hon. Bikenibeu Paeniu returned for the second time as Prime Minister he quickly renounced that flag and re-raised the original flag, which is still flying as the Tuvalu's flag to this day.

¹³ New Zealand and Fiji took the same path in 2014-2016 but did not succeed.

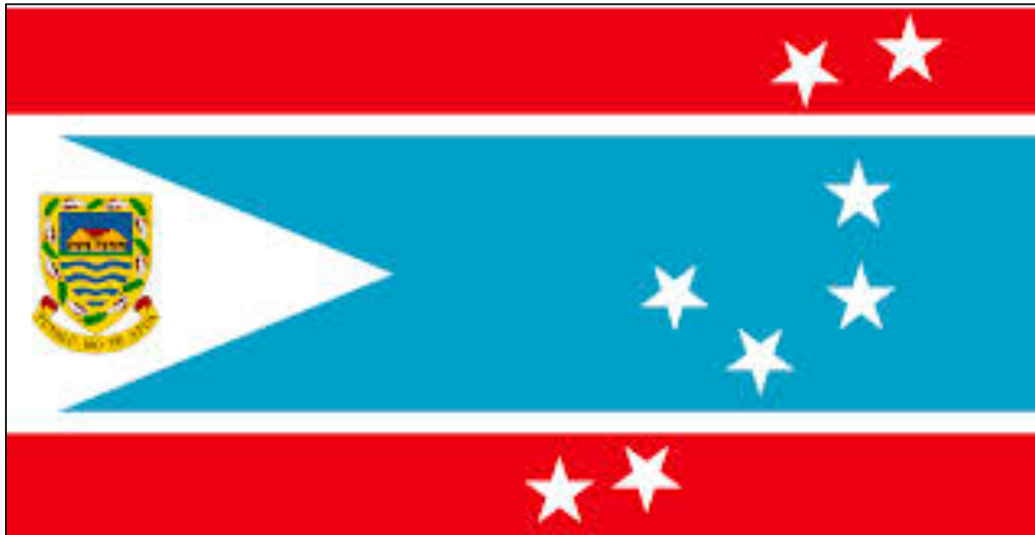


Figure 6.2: Tuvalu national flag (obsolete).

Source: Flag designer Mr Filemoni Panisi's personal copy given with permission.

Notwithstanding the design as a symbol of national identity, flying the Tuvalu flag among flags of major countries in places like the United Nations Headquarters in New York and the Commonwealth Headquarters in London makes Tuvaluans proud as citizens of a recognised sovereign independent state. Similarly, carrying of the Tuvalu flag by athletes attending regional and international sports competitions such as the Olympics and Commonwealth Games also gives a sense of pride to Tuvaluans as a belonging to state among others.

One of the fundamental characteristics of a national flag is that it does not entail any sign of discrimination between powerful and less powerful countries either in military capability or economic form. A flag is purely a symbol of national identity, although it is a form of hegemonic discourse and often subjugates various groups within countries. It is key to showing one's national identity to the world.

6.3.3 Emblem, anthem and others

Other recognisable forms of national identity include the emblem¹⁴ or crest, anthem, motto and to a lesser degree the monetary currency. The emblem concentrates within itself both sign and symbol of the nation and 'forces the

¹⁴ The term emblem derives from the Greek word *emblema* which refers to 'a raised or inlaid ornament (on wood or a vase), meaning 'to throw inside' an inlaying of the sign in man which has generalised religious form, a ritual representation of authority spread across all levels of society from political parties to communities as whole' (Legendre 2001 127 cited by (Bidima 2013, p.72).

speaking and imaging creature that is man to enter the domain of the fantastical and the imaginal, outside of which institutions could not function' (Bidima, 2013, p.72). Tuvalu's emblem (Figure 6.3) contains images and pictures of traditional and cultural importance to the people of Tuvalu.

Placed in the centre of the inner frame of the emblem is the traditional community meeting house called the *falekaupule*¹⁵. Below the *falekaupule* is a symbol of waves or ocean that signifies the physical existence of Tuvalu in the ocean. Surrounded in the outer frame are eight banana leaves and eight cowrie seashells representing the eight islands as well as representing the traditional daily sustenance of land crops and seafood. In addition, the banana leaves and seashells are two of the main decorative materials used in traditional festivities. Embedded at the bottom of the crest is Tuvalu's motto – *Tuvalu mo te Atua*. This is literally translated as 'Tuvalu for God'. As a religious country, the motto is a reminder to the people of Tuvalu that God is the Supreme Divine Head of the nation and therefore all undertakings of the country shall be done for God the Almighty.



Figure 6.3: Tuvalu coat of arms (crest or emblem).
Source: Government of Tuvalu.

¹⁵ It must be noted that the *falekapule* with a small 'f' is the physical hall building and the *Falekaupule* with an uppercase 'F' is the institution comprising chiefs, elders and community members when they meet in the community hall to discuss community issues. The *falekaupule* is perhaps equated to a parliament house in the western world but with multiple usages besides community meetings. Customarily, the *falekaupule* is a sacred place and the hallmark of the community. Each island in Tuvalu has a main *falekaupule* with slightly different traditional taboos; a detailed description is given in the next chapter.

Tuvalu's national anthem, like all national anthems, is a patriotic song that is sung on official occasions and international events such as the Pacific Games when an athlete wins a gold medal. *The Oxford Dictionary of Music* refers to a national anthem as 'the music equivalent of the national flag' (Rutherford-Johnson and others 2013). As given in Box 6.2, the direct English translation of Tuvalu's national anthem resonates with the people's strong belief in the Almighty who bestowed statehood on Tuvalu. The anthem acknowledges God as the ultimate source of prosperity for Tuvalu as a sovereign state for ever.

<i>Tuvalu mo te Atua</i>	Tuvalu for God
<i>Ko te fakavae sili</i>	Is the most precious foundation
<i>Ko te ala foki tena</i>	Is also the way
<i>Ki te manuia katoa</i>	To prosperity in totality
<i>Lotolasi o fai</i>	Have strong courage to do
<i>Tou malo saoloto</i>	Your sovereign nation
<i>Fusi ake katoa ki te loto alofa</i>	Embrace all with love
<i>Kae amo fakatasi</i>	And carry it together
<i>Tuvalu mo te Atua ki te se gata mai</i>	Tuvalu for God for ever more
<i>Tuku atu tau pulega</i>	Give your authority
<i>Ki te pule mai luga</i>	To the authority above
<i>Kilo tonu ki ou mua</i>	Look straight ahead
<i>Me ko ia e tautai</i>	Because he is the master fisherman
<i>Pule tasi mo ia</i>	Rule together with him
<i>Ki te se gata mai</i>	For ever more
<i>Ko tena mana</i>	His grace
<i>Ko tou malosi tena</i>	Is your strength
<i>Pati lima kae kalaga</i>	Clap hands and shout
<i>Ulu fonu ki te tupu</i>	Welcome to the King
<i>Tuvalu ko tu saoloto ki te se gata mai</i>	Tuvalu is sovereign for ever more

Box 6.2: Tuvalu national anthem.

Source: Composed by Afaese Manoa with the English translation by the author.

Besides the above basic or rather official and formal symbols of national identity, historical sites and monuments are sometimes symbols of national identity but in a casual fashion. The Great Pyramids of Giza, the White House in Washington, and the Eiffel Tower are some examples of national identities from Egypt, USA and France respectively. Even a *tanoa*¹⁶ to the Fijians, a *falekaupule* to the Tuvaluans,

¹⁶ A traditional bowl made of wood in which yaqona (kava) is mixed and served.

and an All Blacks rugby jersey to the New Zealanders are all national identity symbols. These are national symbols that people sometimes hold dearly and closely to their hearts. These symbols give people assurance and even shape their very existence (Cameron 1999).

6.4 Toku fenua ko toku fenua

In Tuvalu, national identity is more visible through the lens of collective island spirit, which is a very strong and powerful thing. It is called *loto fenua* in Tuvaluan. It is the equivalent of patriotism and nationalism, so I use the term “islandism” for *loto fenua*. Simati (2009, p.101) equates *loto fenua* as “island loyalty”. Generally, the people of Tuvalu place higher value on their island undertakings than their national undertakings. Tuvaluans are born with islandism, live with it and can even die for it. Islandism is a notion imbued in them through socialisation. It is part of Tuvalu’s way of life. The saying *toku fenua ko toku fenua* is not widely known as a Tuvaluan idiom, but I have decided to adopt it as it is appropriate in this context. As footnoted in Chapter I, this saying was coined by Tito Isala. It is literally translated as “my island is my island”. While Tito did not offer an explanation of what the saying means, it is apparent from it that it is a reminder for the people of Vaitupu not to forget Vaitupu in whatever they do. It is a call of islandism – *loto fenua*; a call that echoes the significance of island identity. It is, strictly speaking a tautology, but no less forceful for all that, as it goes beyond logic.

The *loto fenua* has always been the foundation upon which the country operates at all levels. Farbotko *et al* (2015, p.6) noted that ‘island communities are central to spatial, political, economic and social affairs in Tuvalu’. At its apex, parliament is structured and run according to representatives from islands but not according to party systems as in most democracies. As elected island representatives, Tuvaluan politicians usually do favours for their island at the expense of the country as a whole. While this may be democratic in the sense that they work for their supporters, there is an invisible motive that also drives them to do something for their islands – the islandism mentality. Even contesting for prime ministership has always been based on the motive to bring the leadership to the island, as it is a source of pride for the island people.

This is also true for religious bodies, particularly the EKT. Although pastors and the like are expected to do things impartially and without giving favour to their home islands because they are considered as servants of God, they are not an exception to islandism. They all carry *loto fenua* with them and at times they would show it when it hurts them¹⁷. In sports, all competitions in the capital are organised according to island. Each island has its own club for football, rugby or volleyball, where they compete in various tournaments throughout the year. Every year since 2008, each island would prepare their athletes for the Tuvalu Games; a mini Olympic Games in Tuvalu. This event has grown quite remarkably in terms of participation by athletes and the interest that it generates. It has boosted the island spirit among the athletes and the public at large. Sport indeed is the most visible national enterprise where islandism can be heard and seen.

Further, national programmes such as entertainment or feasting are mostly done by island. Whenever the country holds a special occasion, or hosts a special regional meeting, entertainment and feast preparation are organised according to island. Organising things by island is the most effective way for national functions, because of the notion of islandism. Community members love to do things assigned in the name of the island, even if some feel reluctant or disagree in principle with the purpose, they would still do it. As discussed in the two subsections below, the *loto fenua* is traditionally assessed according to people's participation in island undertakings.

6.4.1 *Inside but outside*

It is not unusual for people to identify themselves with a place in their words but not in their actions. Some people live on an island or participate in island activities but their sense of belonging is elsewhere. I call these “inside but outside” people. According to Relph (1976, p.49):

¹⁷ One obvious incident was the participation of the EKT president in 2014 in a sport protest initiated by Vaitupu, his home island. As head of the EKT, the president was expected to be neutral but instead he joined the protest and vocally said that he could not resist his instinct telling him to join. He admitted in a speech he delivered at the Vaitupu *falekaupule* in Funafuti that his position as president of the EKT was something he could renounce for the name of Vaitupu. This is the *loto fenua* such that even your religious belief may come second under certain circumstances.

The essence of place lies not so much in these as in the experience of an ‘inside’ that is distinct from an ‘outside’; more than anything else this is what sets places apart in space and defines a particular system of physical features, activities, and meanings.

In Tuvalu people identify themselves as belonging to an island in a number of ways. Traditionally, island people are identified according to both what they say and do, but the latter is what counts. In order to be truly identified as someone inside the place, or to be labelled as *tagata* or *fafine o te fenua* (lit. island men or women) one has to prove it in deeds. There are common sayings in some of the islands about proving oneself as an insider or as *tagata o te fenua*. In Nanumea, they say *puhi tau muna kae ke moeakigina* (lit. say it and do it) and in Vaitupu they put it as *se ko pati ako faiga* (lit. not words but deeds). This is similar to the common English saying that “action speaks louder than words”.

Fundamentally, to claim insider status as opposed to “inside but outside” one has to effectively participate in most, if not all, island activities, whether they are voluntary communal work or meetings or sports. Refusing to participate, or being selective in what to participate in is a clear indication of one living inside the island and within the community, but being outside. Many claim that they are insiders but they fall short of others’ expectations because of their level of participation in community activities. There is no clear benchmark of how effective one has to be in community activities to be qualified as not someone “inside but outside”. However, there is a general perception that participating in all or most of island activities and being prepared to volunteer and offer things for the community would qualify one to be identified as an island man; that is, one who is indeed inside. Relph (1976, p.49) wrote that: ‘to be inside a place is to belong to it and to identify with, and the more profoundly inside you are the stronger is the identity with the place’.

Distinguishing an “inside but outside” person from among members of the community is not easy and indeed sensitive. At the outset, an “inside but outside” person can be first determined from one’s ancestral place of origin. In most cases, community members whose ancestral places of origin were other islands are traditionally considered as inside but outside people. This traditional perception is generally dwarfed and overcome if such members are fully committed and dedicate

their time and resources to the island in which they live. Conversely, community members whose origins were from the same island would not be considered as 'inside but outside' unless they do not effectively participate in island community activities. While this distinction may lack clarity, the bottom line in this conception is what Relph (1976, p.51) refers to as “‘existential outsidership’”; a sense of the unreality of the world, and of not belonging’. A ‘feeling of homelessness and not belonging, and at its extreme – separation from place’ according to Amoamo (2017, p.509).

6.4.2 *Outside but inside*

Quite the opposite from “inside but outside”, “outside but inside” refers to someone who lives outside a place but his mind is inside that place. In other words, outside refers to the physical body living outside a place but the mental being is inside that place. Often this sense of belonging comes from those who have moved elsewhere but their minds and hearts continue to long for their home island. Interisland marriage and movement of people within Tuvalu and beyond have resulted in a considerable portion of the population living outside their ancestral home island but retaining that strong sense of insiderness. This is also true for migrants living overseas. However, as revealed later, while this sense of identifying with a place of historical significance such as a place of origin is strongly felt by those closer in the line of descendants, it is becoming weaker as generations pass, and that sense of outside but inside may eventually be lost completely. In Kioa, I found that older people, especially those who were born in Vaitupu or whose parents were born in Vaitupu have stronger ties to Vaitupu than the younger people who, together with their parents, were born and bred in Kioa.

Asking how they view themselves in terms of which place would they consider as their national identity, the majority of respondents living overseas (Fiji and New Zealand) said that they still identify themselves as Tuvaluan. They acknowledged that although they are legally Fijian and New Zealand citizens, Tuvalu is their national identity. Interestingly, a remarkable number of these respondents put their home islands in Tuvalu first as their identity, which therefore makes Tuvalu their national identity. This is more obvious for respondents living in Kioa than those in

Suva. One 66 year old female in Kioa said ‘I am Tuvaluan but reside in Fiji. I chose Tuvalu as my national identity just because of Vaitupu. Tuvalu to me is secondary and Vaitupu is the primary reason for choosing Tuvalu over Fiji’ (Asenati Falu). Another respondent, a 52 year old married man, said: ‘my blood is Vaitupuan. So I consider Vaitupu over Kioa as my island. Therefore, I am Tuvaluan from Vaitupu’ (Edwin Vavasa). A 45 year old male respondent in Suva said: ‘I carry Tuvalu as my identity, not because of something special about Tuvalu but just because that is where I originated from. I cannot deny that fact and I need not explain it as well. My legal status is Fijian, but I have always been a Tuvaluan’ (Peniela Finekaso). Another 70 year old male respondent who has lived most of his life in Suva said this: ‘I am Tuvaluan all the time’ (Talaua Ulufale). In essence, “outside but inside” is just another way of saying that I may live outside Tuvalu but I am Tuvaluan, or I may be a Fijian or New Zealand citizen by virtue of my legal status but I am still Tuvaluan.

Notwithstanding that, this sense of “outside but inside” is neither static nor perpetual. It is something that slowly diminishes over time and from generation to generation. Interview findings in Kioa reveal that the younger generation’s sense of belonging to Vaitupu was not as strong as that of the older generation. The lack of direct connection and contact with their ancestral place of origin and the influence of the environment in which they live contribute to the gradual loosening of their grip on their ancestral identity. Two male respondents who were born and bred in Kioa said this to me:

If someone in Paris or Brussels or even in the interior of Fiji, Naitasiri, asks me where I am from, I would say Kioa. Even if one wants to seek deeper on who I am, I will still answer, I am Kioan but my ancestors were from Vaitupu in Tuvalu. Yes my blood is Vaitupuan but I am proud as a Kioan. (Laupula Avatele, 32 year old man).

If someone asks me whether I am a Fijian because of Kioa or Tuvaluan because of Vaitupu, or ask a deeper question like ‘*ko se tamataene a*’¹⁸, I would still say I am Kioan. I know I originate from

¹⁸ This phrase if translated plainly into English will not convey the cultural deepness of its meaning. In short however, the phrase is about patriotic identity but seeking inner sense of one’s genuine feeling of his true identity in light of one’s roots and ancestral bloodline.

Vaitupu but I am from here. (Setareki Moulogo, 24 year old male youth).

The two preceding sub-sections on “inside but outside” and “outside but inside” reveal the dual existence of one’s status when it comes to identifying place for the purpose of identity. The distinction between insideness and outsideness is subjective, as it is based on one’s intention, which is rather situational and subject to others’ assessment. As Relph (1976, p.50) puts it: ‘if our interest is focused on our home then everything beyond home is outside...and so on. In short, as our intentions vary, so the boundary between inside and outside moves’.

6.4.3 *Te iloga atufenua e pele*: People’s perspective

While islandism remains the driving force, Tuvaluans are united in their position about keeping their national identity despite the threat from climate change and sea level rise. The above saying *te iloga atufenua e pele* literally means national identity is dear. This is the general perspective of the people of Tuvalu, which is becoming stronger than ever since speculations that Tuvalu may disappear surface in the public domain. My fieldwork findings show that there is a strong sense of protecting and keeping the national identity throughout the country. One of the questions I asked the category of general participants was how they consider themselves as Tuvaluan, prompting them to tell me how important Tuvalu’s identity is to them and whether they can forego it for something else like their personal safety and security, or for humanitarian grounds. The question did not specifically raise the threat of climate change and sea level rise but respondents were already conscious of the threat of these phenomena and therefore framed their responses about their national identity in light of the impact of climate change and sea level rise. Of the 93 general respondents, all but two said that Tuvaluan national identity is of paramount importance to them and they would not forego it for anything.

In Nanumea, a 31 year old female respondent said: ‘I highly value Tuvalu. It is important to me. So I do not want to change my national identity. I want to continue to be called a Tuvaluan even if we are relocated elsewhere’ (Fesuiai Sepulona). A 37 year old widow from Nanumaga working in Funafuti said: ‘this label Tuvalu is very important to me, that is all I have. If my passport is changed for whatever

reason, I will continue to say that I am Tuvaluan, that is my true identity' (Lanieta Faleasiu). A 57 year old paralysed man in Niutao said: 'if in the event that the people of Tuvalu were relocated to, say Australia, I personally want to continue to be labelled as a Tuvaluan' (Kapule Lopati). In Nui, a 56 year old man said: 'I want to be called a Tuvaluan, because my citizenship and identity is Tuvalu' (Lepana Filipo). Likewise, in Vaitupu, a 49 year old male respondent said: 'I want to be called Tuvaluan, even if I were relocated to another country. I will steadfastly hold Tuvalu as my national identity because it is dear to me; my island and my country' (Tapuli Paitela). Similar assertions were noted in Nukufetau, Funafuti and Nukulaelae, as indicated by these respective statements: 'the name Tuvalu is important, as it is our identity. It is therefore important to maintain our identity' (Freda Katepu, 50 year old woman); 'even if Tuvalu disappears we should continue to be called Tuvaluan, that is our identity' (Malia Amupelosa, 54 year old woman); and 'Tuvalu is important, I cannot think of forgetting Tuvalu. It is like the Israelites in Psalm 137:1 who always think of their country and cry and long for it during their exile to Babylon. So I do not want to be like the Israelite, to be taken away from my country and start longing for it from afar' (Niu Ioane, 56 year old man).

Uniting to protect Tuvalu's national identity from the effects of climate change and sea level rise is as strong as was the movement to separate in 1975 from the then Gilbert and Ellice Islands Colony and become an independent state in 1978. Despite unfavourable conditions imposed by the British government to discourage Tuvaluans from undertaking separation, the people of Tuvalu were determined to stick to their cause and in a historic referendum in 1974, 92 per cent voted in favour, seven per cent against, and one per cent were declared invalid (Isala 1983, p.164). This sense of strong national identity continues since Tuvalu has become a state as revealed by scholars who carried out research work on how Tuvaluans view the impact of climate change and sea level rise on their identity (Corlew 2012; Corlew and Johnson-Hakim 2013; Farbotko 2005; Farbotko and others 2016; Lazrus 2009; 2015; Mortreux and Barnett 2009; Stratford and others 2013). As reported by Farbotko and others (2016, p.541) a workshop participant described his view of Tuvalu's national identity by saying that: 'Tuvalu is the best place for Tuvaluan

people. Relocation...does not remove the existence of Tuvaluans from the face of the Earth but it removes their identity as Tuvaluans’.

The people’s views of their national identity are clearly enshrined in *Te Kaniva*, the 2012 Tuvalu Climate Change Policy. One of its eight key goals is ‘guaranteeing the security of the people of Tuvalu from the impacts of climate change and the maintenance of national sovereignty’ (Ministry of Foreign Affairs 2012, p.4). This key goal was not a result of the government’s unilateral undertaking, but was the outcome of the nationwide consultation during the formulation of *Te Kaniva* in 2011. One of the issues that was repeatedly raised by the people during the consultation was their concern about Tuvalu’s identity, hence the inclusion of it as one of the key goals of *Te Kaniva*. To most, if not all, Tuvalu’s national identity is vital to their lives. Farbotko and others (2016, p.539) realise this strong sense of national identity of Tuvaluans when they say: ‘Tuvaluan collective senses of place identity and belonging draw upon the Tuvaluan archipelago as a nation and the island with which an individual claims *fenua* ties...’.

6.5 Te koga ne fati i ei toku laupua

I now turn to unpack the expression that invigorated my intellect recollections of my father’s pronouncement I alluded to in the introduction chapter – ‘*te koga ne fati i ei toku laupua*’. This Tuvaluan idiom conveys deep cultural meanings to the people of Tuvalu. It is a cultural expression of identifying one’s place of identity, and is a source of pride if one is asked of one’s identity. On its face value, the idiom is meaningless because it only tells of a place where a leaf of the *pua* tree of someone was being taken. This is quite true for Tuvaluans who were born and bred outside Tuvalu, even the young people now residing in Tuvalu. They would only understand the literal meaning of the saying, but they may not understand what it actually means in the cultural sense, and in what context would one have to say it.

6.5.1 The meaning of the phrase

In order to decipher its true cultural meaning, I have decided to explain it by breaking it up into three phrases; (i) *te koga*, (ii) *ne fati i ei*; and (iii) *toku laupua*. The phrase *te koga* is basically translated to mean ‘the place’. *Te koga*, as in ‘the

place', is an expression that embraces area, region, land, house, and residence (Gregory 2009). In the context of this idiom, *te koga* refers to the location from where one originates. It refers to the place of birth or place in which one's heart is moored. To this end, it is important to note that the place of birth has been used differently, as per the UN's description¹⁹. Relative to the UN's principle for birthplace, *te koga* has been used to refer to both the place where the birth actually took place as well as the place one identifies as belonging to. The use of *te*, being a definite article in the Tuvaluan vernacular usually denoting a single noun, indicates that there must only be one specific place that one has to choose as one's place of origin – "the place".

The phrase *ne fati i ei* is an auxiliary phrase. The *ne* is a past tense verb marker or indefinite plural noun marker, and can also be used as a question marker in the Tuvaluan vernacular. The word *fati* means break, snap or remove, and in the context of this idiom *fati* is being used to mean as 'taken' or 'picked'. The *i* is a preposition that usually denotes position in space and time, and *ei* is an anaphoric particle, which occurs after the preposition to replace the noun (Jackson 2001). Therefore, the phrase *ne fati i ei* literally means 'was taken from'. In the context of the idiom, it is a declaration of originality and uniqueness of the place.

This last part of the idiom *toku laupua* is a possessive phrase. The word *toku* is a possessive pronoun meaning 'my'. *Laupua* means the leaf of a *pua* tree. In Tuvalu the *pua* is a very useful tree for fragrances and ornaments. Moreover, the leaves of the *pua* tree are also useful for food processing. It is one of the leaves of local trees that is used to wrap the food when cooking, especially ground oven cooking. Its leaves are also used to cover food or conceal other things from flies by covering them and also to keep them warm. In the context of this idiom, the *pua* leaf was being used as a sealer and blanket when a baby was born in the old days.

¹⁹ According the UN definition, '[T]he place of birth is the civil division in which the person was born or, for those born in other countries, the country of birth. For persons born in the country where the census is taken (the native- born population), the concept of place of birth usually refers to the geographical unit of the country in which the mother of the individual resided at the time of the person's birth. In some countries, however, the place of birth of natives is defined as the geographical unit in which the birth actually took place. Each country should explain which definition it has used in the census' (United Nations 2008, p.120 Section 2.58).

Therefore, the idiom *te koga ne fati i ei toku laupua* is literally translated as ‘the place my *pua* leaf was taken or picked from’. But what does it mean? To understand its meaning it is important to look into its history. The etymology of the idiom can be traced back to the old traditional way of life of the people of Tuvalu, at the time when there were no cloths and other textile materials. When a baby was born he or she would be wrapped or covered with leaves and other available local materials. And the *pua* leaves were said to be the ones that were commonly used, hence the use of the *laupua* in the idiom. So, the meaning of *te koga ne fai i ei toku laupua* is the ‘original place where one was born’ – the place of birth.

6.5.2 *Its cultural usage*

By and large, the use of this idiom is an utterance of justification of one’s claim of identity. If, for instance, someone asks me why Vaitupu is my identity, I would justify it by saying that it is ‘*te koga ne fati i ei toku laupua*’. Its usage is culturally meaningful and when it is said, it conveys the deepest attachment that a Tuvaluan would have to a place. In contrast, if I justify Vaitupu as my identity by plainly saying that it is where I come from, it does not relay any cultural sense of belonging compared with if I reply using this idiom, despite the fact that they denote the same meaning. Originally, the usage of this traditional expression was only confined to the actual place of birth. It is not clear though whether it refers to the very spot in which the birth took place or the island of birth. Generally, *te koga ne fati i ei toku laupua* is used to refer to one’s home island of birth as opposed to the exact place on the island where one was born. Recently, people started to use this idiom to refer to the island where one grew up for most of his or her youth and not necessarily the actual place of birth. For instance, I was born in Banaba in Kiribati and when I was almost two years old my parents returned to Vaitupu where I grew up until I moved to Funafuti at the age of 17. So for me, *te koga ne fati i ei toku laupua* is Vaitupu although I was born in Banaba. Furthermore, the use of this idiom has occasionally, but not always, been used to refer to one’s father’s ancestral place of origin.

Despite its various meanings, the fundamental rationale behind this idiom is the island that one identifies with. As partly pointed out earlier, the idiom is an expression of a sense of belonging to a place, in this case the place of origin. The

place of origin therefore is the island which one identifies as one's home island. Lynch (1960, p.6) refers to identity of place as 'simply that which provides its individuality or distinction from other places and serves as the basis for its recognition as a separate entity.' As discussed in the previous sections, this idiom reflects how people long for their island. It is how the Tuvaluan people feel and claim their national identity. It is the equivalent of the metaphors 'roots and routes' (Christensen and Jensen 2011; Gustafson 2001) and 'the tree and the canoe' (Bonnemaison 1994b). In short, the idiom refers to one's place of identity. In today's world of statehood, *te koga ne fati i ei toku laupua* basically refers to one's national identity through his or her local place of belonging – the coconut roots.

6.6 Conclusion

I have unfolded that national identity is a crucial part of our world today. The notion of statehood is contested and may make it difficult, at least in theory, to reconcile with situations of states becoming extinct under various means. Each and every one has a national identity; a place that one can identify oneself with. People generally take pride in the name, flag, emblem and other basic symbols of national identity. The Tuvaluan idioms *toku fenua ko toku fenua* and *te koga ne fati i ei toku laupua* speak of how the people of Tuvalu feel about their islands and national identity.

Unfortunately for low-lying states such as Tuvalu, sea level rise and the impacts of climate change, would mean that the status of statehood of these states may slowly fade out and they may become 'extinct'. As a result, all symbols of national identity such as the name, flag and others may no longer truly represent these people in the world of nations. Nobody wants one's national identity to be taken away. Human history is punctuated with stories of great battles and wars between places and nations. Great leaders fell in the battlefield, heroes died in the cause of fighting, and soldiers returned home injured, all in the name of the nation and protecting national identity. This is the struggle that people of low-lying atoll states are fighting with all their might to ensure that their identities as sovereign states are kept safe indefinitely. In the next chapter, I turn to another form of identity – cultural identity – to highlight people's viewpoints about the impacts of climate change and sea level rise on the culture and cultural identity.

CHAPTER VII

TOKU ILOGA KO AKU TUU – CULTURAL IDENTITY

In its widest sense, culture may now be said to be the whole complex of distinctive spiritual, material, intellectual and emotional features that characterise a society or social group. It includes not only the arts and letters, but also modes of life, the fundamental rights of the human being, value, systems, traditions and beliefs

(Mexico City Declaration on Cultural Policies, UNESCO, Mexico, 1982)

7.1 Introduction

Culture is a general term that is used in many disciplines. One of the earliest well known anthropologists, Sir Edward B. Tylor, famously defined culture as ‘that complex whole which includes knowledge, beliefs, arts, morals, customs, and any other capabilities and habits acquired by man as a member of society’ (Tylor 1884, p.1). Culture is a system of shared meanings and concepts that are constructed and reconstructed by members of society. The culture of Tuvalu has been moulded over many centuries since the first settlers occupied the islands. As a small island state, Tuvalu’s culture is largely homogeneous, although there are certain aspects that are unique to each island. Like any other society, Tuvaluans take pride in their culture and strongly identify themselves with it. The title of the chapter ‘*toku iloga ko aku tuu mo faifaiga*’ (lit. my culture is my identity) is a statement reinforcing Tuvaluans’ claim of having a distinctive cultural identity that should be respected.

In this chapter I offer a deeper understanding of the culture of Tuvalu, placing greater emphasis on cultural issues relating to Tuvalu’s cultural identity that are potentially at risk if Tuvalu is eventually submerged or uninhabitable due to the impacts of climate change and sea level rise as represented by the media. I begin with an overview of the relevant literature on the general definition and concept of culture and cultural identity. I then briefly discuss the evolution of culture in Tuvalu and unpack Tuvalu’s customary governing structure and systems at the community and family level to shed light on how customs operate in Tuvalu. Further, I examine the cultures relating to social lifestyle of Tuvaluans such as daily activities, food,

relationships, and so forth. The aim is to portray as thorough a coverage of the customs and traditions of the people of Tuvalu in their daily lives as is possible in this limited compass. It also allows me to reflect on what is meant by Tuvaluans as their cultural identity. At the end, I disentangle the saying ‘*toku iloga ka galo atu*’ to reflect how the people feel about the threat of climate change and sea level rise to their cultural identity.

7.2 Culture and cultural identity

In the words of Smith (2000, p.4): ‘culture is an important but can be a slippery, even a chaotic, concept’. Even the phrase “cultural identity” is cumbersome as revealed later. In view of this, it is vital to explore the theoretical discussions in the relevant literature on ‘culture’ and ‘cultural identity’ to set the stage for the rest of the subsequent sections.

7.2.1 Etymology and definition

Etymologically, the word culture comes from the word ‘cultivation’ which was said to have first come from Marcus Tullius Cicero’s¹ use of an agricultural metaphor for the development of the soul entitled ‘*cultura animi*’ (Jahoda 2012)². It was only in eighteenth century France that the term ‘culture’ began to be used and to acquire the sense of training or refinement of the mind and taste³. Culture becomes the object of knowledge only when humanity constitutes itself as a subject of history. The concept of culture chronologically emerged and consolidated itself between the sixteenth and nineteenth centuries (Castro-Gómez 2000, p.504). Since then culture has become a common term used in many different academic disciplines.

But what does culture mean? Defining culture is not straightforward because culture, according to Allen (2003a, p.17), ‘can be attached to almost anything, from

¹ A Roman philosopher in the 106-43 BC, who wrote this in his well-known series called “*Tusculanes Disputations*”.

² During the Enlightenment era in the seventeenth century, culture re-emerged in writings of famous philosophers such as Samuel Pufendorf and Immanuel Kant. In his exploration of judgment and reason, Kant used cultivation in matters of aesthetics, morality and epistemology, which were seen as emblems of the civilized individual (Smith, 2000).

³ In the latter part of the nineteenth century, culture entered English discourse when Matthew Arnold gave a similar explanation of culture as ‘the acquainting ourselves with the best that has been known and said in the world, and thus with the history of the human spirit’ (cited by Jahoda 2012, p.290).

high art to low custom, from dying to diet, via Botticelli or Budweiser'. Jahoda (2012) noted that Kroeber and Kluckhohn's 1952 monograph listed some 160 definitions of the word culture and they added their own as well. Professor Stuart Hall defined culture in a number of contexts, and one of his simplest definitions of culture is 'shared meanings' (Hall and others 2013, p.xvii)⁴. Schwartz (1999, p.27) highlighted values as an important aspect of the definition of culture by saying that 'the person is viewed as an entity who is embedded in the collectivity and finds meaning in life largely through social relationships, through identifying with the group and participating in its shared way of life'. All these definitions of culture were very much anchored to Sir Edward B. Tylor's famous definition of culture quoted in the introduction section of this chapter. Summing up this array of definitions, culture is simply taken here to include 'customs, traditions, values, norms, beliefs, language, dress codes, food and dietary patterns, and all other things that people learn or acquire that make up the "way of life" of any society' (Browne 2008, p.31).

Cultural identity is not the same as national identity discussed in the preceding chapter because the latter is more to do with relations between states' recognition whilst the former is community driven recognition. Cultural identity is:

an individual's realisation of his or her place in the spectrum of cultures and purposeful behaviour directed on his or her enrolment and acceptance into a particular group, as well as certain characteristic features of a particular group that automatically assign an individual's group membership (Voicu 2013, p.162)⁵.

Abbinnett (2003, p.1) nicely considered the relationship between culture and identity as "performativity" of the subject: that is, the degree to which the person who is engaged in the substantive culture of his or her cultural group is able to exercise a critical reflection upon its established structures of collective identity'.

⁴ This definition simply looks at who we are in relation to what we have in common with all other members of our society, and how we distinguish ourselves from members of those who do not have anything in common with us. It is similar to what Thwaites and others (1994, p.1) referred to as 'the ensemble of social processes by which meanings are produced, circulated and exchanged'.

⁵ Woodward (1997, p.39) defines cultural identity as something that gives us a location in the world and presents the link between us and the society we identify with, or belong to. It involves the conscious and unconscious thoughts and emotions which constitute our sense of 'who we are' and the feelings which are brought to different positions within culture.

7.2.2 Theoretical perspectives

Culture has been theorised using a number of perspectives. Jahoda (2012) considered culture as both “external” and “internal” phenomena. Proponents of the external phenomenon like Schwartz (2009, p.128) argue that: ‘culture is outside the individual. It is not located in the minds and actions of individual people. Rather, it refers to the press to which individuals are exposed by virtue of living in particular social systems’⁶. These theories underpin the distinctive nature of culture from the individual. They argue that culture is something separate from people.

In comparison, proponents of culture as an internal phenomenon argue that culture is part of the individual. Culture is regarded by them as a ‘single, unified, chronically accessible whole that is isomorphic with one’s country of origin’ (Oyserman and Sorensen 2009, p.25). It consists of symbolic elements that members of a society consensually agree to and take as salient personal features (Wan and Chiu 2009). According to this theoretical viewpoint, culture is embedded in people’s lives through a learning process within the social environment that they live in. It becomes part of the individual although it is not a stable end-product, as it is constantly changing (Kroeber and Kluckhohn 1952).

Theories relating to cultural identity generally highlight two main issues. First is the individual’s identity in its cultural aspects. This basically refers to the way one has been brought up which identifies one in various aspects – linguistic and literary background, religious, moral, attitudes and manner, and so forth. Second is group identity which refers to the idea of a group sharing a culture which collectively characterises their whole way of life so that they are distinguished globally from another group (Gilbert 2010, p.2 & 3). The concept of cultural identity is important because it is only through establishing one’s own identity and learning about another’s that we could come to know what makes one similar to, or different from, the other through social connection with them (Browne 2008, p.38).

⁶ Cole and Parker (2011, p.135) made a similar assertion that culture is a dynamically changing environment that is transformed by the artefacts created by prior generations, and it is a medium of human development for interaction with the world.

7.3 Tuvalu culture and cultural identity

Before discussing the substantive parts of Tuvalu culture and what forms part of its cultural identity in the subsections to follow, I begin with a short account of the evolution of Tuvalu culture. Written materials on the history of the culture of Tuvalu may not be as rich as those of its neighbouring countries, but that should not be an excuse to say that Tuvalu does not have any. As in many other places, before the arrival of record-keeping tools, the culture of Tuvalu was passed on from generation to generation through word of mouth, activities, events and other forms (Laracy 1983). The question as to where Tuvalu culture originated from cannot be answered with certainty. Claims that the culture of Tuvalu may have originated from Samoa and Tonga (Macdonald 1982) because of legends and empirical evidence such as similar names used in places and language alike are valuable identifiers. But what about claims that the genesis of Polynesia (of which Tuvalu is part) was from South-East Asia (Lazrus 2009, p.8). So, did the culture of Tuvalu originate from afar places like Indonesia or Malaysia, or was it from neighbouring places such as Tokelau, Futuna or Rotuma, or both? It is not the intention of this part of the thesis to verify and authenticate the genesis of Tuvalu culture. But, be that as it may, and having the benefit of the doubt, the culture of Tuvalu must not be branded and told as a product of outsiders but of insiders. Corlew and Johnson-Hakim (2013, p.4) recognised this when they said that ‘Tuvaluans have lived in Tuvalu for thousands of years, and despite a history of colonisation... Tuvaluan cultures were developed in their islands’.

However, it must be acknowledged that Tuvalu culture, like most cultures in the Pacific, has experienced many drastic modifications and reformations within the last 150 years. Contact with Europeans in the early 1800s and Christian missionaries who followed was the “two-edged sword” that killed many traditions and customs that the people in the islands of Tuvalu had practised for centuries, if not millennia. Oral history through stories and songs tell of many old customs, from chieftainship and deities to social lifestyle and traditional knowledge and cultural materials that had been exterminated. For instance, the custom of amputating the wife’s finger if her child or husband dies as a token of sorrow (Kennedy 1931) was abolished by the early missionaries. Likewise, the custom of banishment was

stopped by the colonial administration. So, throughout this process what has survived today must be acknowledged as a modified form of culture. In other words, the culture that has evolved over the years to this day is an amalgam of old and new ideas, values and practices, demonstrating that custom is neither immutable nor static, but rather adaptive and dynamic (Slatter 2010-2011). Might I also add that the customs or traditions that have survived are being passed orally through generations, and therefore subject to many interpretations, that have had significant bearing to what is now practised as Tuvalu culture.

7.3.1 Tuvalu traditional social structure and governing system

The traditional social structure and system of governance in Tuvalu may be conveniently discussed in two broad categories, namely the *taupulega* and *tautua*. The former is superior in rank to the latter. This categorisation equates to the two broad aboriginal status levels of interaction and social stratification in Tuvalu that Brady (1970, p.34) simply put as ‘chiefs and commoners’. The *taupulega* category comprises traditional institutions that make decisions relating to all community affairs. The word *taupulega* literally means decision-making body. Under this category there are two main traditional institutions that are common in all the islands and these include *aliki* or *kaiga-aliki* and *te-sina-o-fenua*. The *tautua* category, on the other hand, consists of institutions that are responsible for the implementation and execution of decisions made by the *taupulega*. The word *tautua* means “to serve” or “provide support”, but its transliterated meaning is “fight from behind”. While *tautua* institutions vary in number and nature from island to island, the following institutions are common in all of the islands; *mataniu*, *fakaua* or *kapa* (household institutions), *ituala* or *feitu-ala* or *feitu* (island village side), and *malosiga o te fenua* (able-bodied men/women of the island). The diagram in Figure 7.1 provides a general structure of these two categories of institutions in the Tuvaluan traditional social stratification.

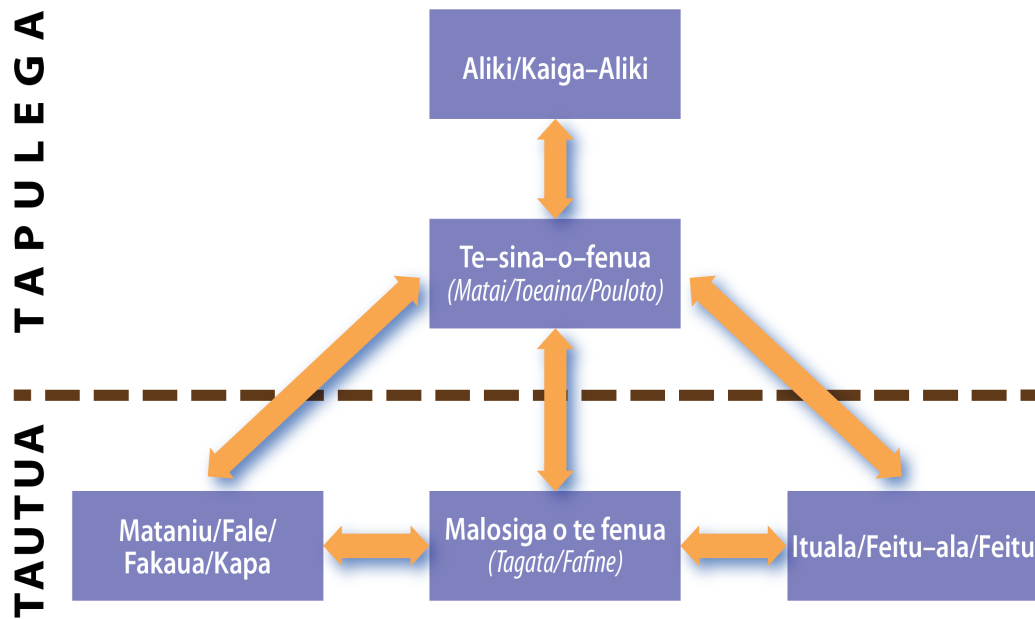


Figure 7.1: Tuvalu traditional social governing structure.
Source: Author’s own model.

7.3.1.1 *Taupulega Institutions*

The *aliki* or *kaiga-aliki* was the highest institution in the cultural system of governance in Tuvalu. The word *aliki* is the Tuvaluan term for chief and *kaiga-aliki* refers to the council of chiefs. Unless otherwise indicated, throughout this section I use only the term *kaiga-aliki*, as it is a more appropriate description of it as an institution than the word *aliki* because the latter is not an institution. The high chief, most commonly called *ulu aliki*, is the supreme head of the people and head of the *kaiga-aliki* institution. Each island has its own high chief and *kaiga-aliki*. I found out during the fieldwork that each island has its own *aliki* structure and the traditional term for high chief varies from island to island⁷. The lower ranked chiefs are generally called *aliki* in all the islands except Nukufetau where *tao aliki* is used.

⁷ In Nanumea, Niutao, Vaitupu and Nukufetau the term is *ulu aliki* (lit. head chief), in Nanumaga it is *tupu* (lit. king), in Nui it is *pule fenua* (lit. island leader) and *ulu fenua* (lit. island head) is the term used in both Funafuti and Nukulaelae. However, the literature reveals that the older term used for high chief in Vaitupu (Hughes 1992; Laupepa 1983) and Nui (Roberts 1958) was *aliki tupu*, and in Funafuti (Roberts, 1958) it was *aliki tutu*. In the 2016 Vaitupu Forum, which I attended during my follow up fieldwork, it was agreed, with lots of reservation, for the word *ulu aliki* to be replaced by *manisi*, and *aliki* by *panisi*, because some elders especially the then high chief argued that those are the original Vaitupuan terms for the high chief and chief respectively.

In Tuvalu, chiefdom is only a male's realm and the inheritance of the title has many traditional restrictions. Women cannot be chiefs according to tradition. This is still strongly observed despite human rights pressures regarding gender equality and the rights of women. Originally, the chiefly title could only be passed through the patrilineal bloodline unless the incumbent did not have a son in which case the title would then be passed to the first male sibling of the eldest daughter. The Nanumaga chiefly system discussed later is a case in point (Luem 1996). In some cases, if the incumbent chief had no biological son but had an adopted son the latter would inherit the title and his descendants would be the rightful claimers of the title thereafter. For instance, in Vaitupu it is generally believed that Fakamua, the high chief who welcomed and accepted Christianity in 1865, adopted Viliamu and bestowed upon him the chiefly title because he did not have a biological son.

Inheriting the chiefly title is influenced or constrained by several taboos, which may prevent the rightful inheritor from getting it and this varies from island to island. One of the most common taboos is if the inheritor was an illegitimate child. Another restriction was that if the inheritor's mother was born out of wedlock, even if the inheriting son is a legitimate son, he would be denied the title. Other restrictions include a major wrongdoing by the inheritor such as committing incest, killing, or even stealing, and other unethical characteristics may also warrant a denial of the *aliki* title. In the early days, it was the prerogative of the chief alone to decide on the heir to the title or in the event of a sudden death of the incumbent chief the elders of the family would verify and appoint the next in line.

However, today as witnessed during the fieldwork, there have been a lot of cases where the appointment of chiefs has been done without careful consideration of the above traditional taboos. In some islands the chiefs are nominated from any member of the family with a chiefly history and on other islands they are nominated from any member of the society, as in the case of Nukulaelae. The influence of the western concept of democracy has had a great impact because on most islands nowadays the chief, particularly the high chief, is voted either by the council of chiefs or by the community as a whole. This is a total divergence from the earlier system of ancestral inheritance of chiefly title.

As the highest institution in the traditional governing system, *kaiga-aliki* has an overarching responsibility over the general maintenance of peace and order on the island. Historically, the *kaiga-aliki* institution was so powerful that it could do anything on the island, and to its subjects. Controlling the use, cultivating and harvesting of coconuts, root crops and other vegetation, the reef and the nearby oceans were the ultimate prerogative of the *kaiga-aliki*. They also had unlimited judicial jurisdiction over the people and they could even order wrongdoers and culprits to be punished by death (see Munro 1982, p.138), especially by way of banishment⁸. The democratic concept of separation of powers never existed in those days in Tuvalu. All powers were virtually vested in the *kaiga-aliki*.

As noted in the diagram in Figure 7.1, although the *kaiga-aliki* is the supreme institution, which gives instruction to the *te-sina-o-fenua* to discuss and strategise the proper implementation mechanisms, the *kaiga-aliki* institution also relies on *te-sina-o-fenua* for advice (Taafaki 1983, p.20). However, since the European contact in the early 1800s, particularly the dawn of Christianity in the 1860s, the *kaiga-aliki* institution began to change shape (see Munro 1982, p.249). Its hegemonic authority significantly devolved (Teo 1983, p.129). Tuvalu's annexation as a Protectorate of the British Government in 1892 and later as a joint colony with Kiribati in 1916, where formal laws and institutions were introduced, saw the *kaiga-aliki* authority weakened further⁹.

⁸ One of the common banishments was *fakafolau* where the culprit was set adrift on a canoe to die at the mercy of the ocean (see Kennedy, 1931, p.316).

⁹ Throughout the eight decades of British rule, there had been a number of laws introduced for the purpose of regulating and controlling the affairs of islands in Tuvalu, but only to the demise of the chiefs' traditional authority and jurisdiction. The first such code of law was the Native Laws of the Ellice Islands Protectorate 1894 (Native Laws), which was formulated by Resident Commissioner C.R. Swayne based on drafts produced by the Samoan pastors. This saw the establishment of the High Chief, Magistrate, and Kaupule institutions with separate responsibilities in the administration of the Native Laws that consequently reduced the *aliki* or *kaiga-aliki* institution's role to little more than ceremonial figureheads. Swayne and his successors' architecture of the governing institutions on the islands to bolster the position of *aliki* did not materialise, as they desired. The irony was that they only appointed one *aliki* as high chief responsible to them, but the ethnographic reality was that on most of the islands there were more than one *aliki* (Munro, 1982, pp.301-302).

The *te-sina-o-fenua*¹⁰ institution was the island's council of elders (Taafaki 1983). It is the second most powerful institution, and one whose decision can only be sanctioned and/or vetoed by the *kaiga-aliki*. This institution's main function is to discuss and make recommendations to the *kaiga-aliki* on matters pertaining to the running of the affairs of the island. It serves as the advisory body to the *kaiga-aliki* institution. Taafaki (1983, p.20) noted that 'they [*te-sina-o-fenua*] could even admonish the *aliki*, though mainly on matters relating to the food supply and to preparation for war. Their word was always respected by the *tautua* institutions, and they were sometimes invited by the *kaiga-aliki* to counsel them'¹¹.

The term *pouloto*, when used in the context of an institution, can be interchangeably used with the phrase *te-sina-o-fenua* or *toeaina* or *matai*. However, the word *pouloto* comes from the alignment of interior posts of the island meeting hall called *falekaupule* as shown in Figure 7.2. However, in the context of an institution, *pouloto* comprises the most senior of the *te-sina-o-fenua*, or *matai*, who sits at and between the interior posts of the meeting hall forming a rectangular-like pattern. Traditionally, to be seated in the *pouloto* is not a taken-for-granted privilege when one is old. Besides the *kaiga-aliki*, who, by virtue of their status are seated, those who sit in the *pouloto* must have a good reputation in the community. Such a seating arrangement signifies the traditional importance of those who occupy that part of the meeting hall. To be seated in the *pouloto* one has to be of hardworking character reflected by the level of his pulaka pits and land plantations, have served actively in community activities since his adolescence days, and have reasonably good

¹⁰ The phrase *te-sina-o-fenua* means 'white hair of the island'. Like many Tuvalu traditional settings, *te-sina-o-fenua*, as an institution, could be a misleading term to non-Tuvaluans because it does not actually refer to anyone with white hair. Neither does it define the age requirement of those who are qualified to be members of the *te-sina-o-fenua* like many establishments in the western world. Indeed, *te-sina-o-fenua* is a very ambiguous system to understand for a number of reasons, which, again, vary from island to island. However, the common trait of *te-sina-o-fenua* is that it comprises old and mature men (irrespective of whether or not they have white hair but those with white hair were traditionally considered more dignified), who are also *matai* or head of extended families. Historically this institution was made up of white haired old men only and therefore it did not include white haired old women. So the term *toeaina*, which means old men, is sometimes interchangeably used for *te-sina-o-fenua* in the context of an institution. It is sometimes also referred to as *pouloto* of the island.

¹¹ Historically, *kaiga-aliki* did not participate in *te-sina-o-fenua* meetings, because their role was to approve and endorse recommendations of the *te-sina-o-fenua*. Nowadays, however, *kaiga-aliki* are part and parcel of the *te-sina-o-fenua* institution under the *Falekaupule* setting, although they still exist as a separate institution.

moral standing. So even if one is already classified as *te-sina-o-fenua*, having a seat in the *pouloto* realm is an added credit. Chambers (1984, p.235) noted the customary protocols of the *ahiga* (lit. island meeting hall) in Nanumea, which show that only those elders who had done something beneficial for the community could speak, because if someone speaks in the *ahiga* and did not do anything beneficial for the community he would be challenged and scolded by others.

In most cases, issues are discussed by all the *te-sina-o-fenua* present in the meeting but the *pouloto* always dominate the discussion and make the final decision. The traditional importance of those who occupy the *pouloto* can also be seen in island gatherings because only those in the *pouloto* can stand up to make a speech. Also, they always have the privilege to be served first with meals during feasting before the rest of the community in the *falekaupule* are able to partake. When the formality of the *falekaupule* begins, it is taboo for anyone, even the young children, to walk past the *pouloto* to the inner part of the *falekaupule*. Breaching this taboo can result in a heavy penalty. The parent of the child could be summoned to the *kaiga-aliki*'s meeting to be warned, or penalised there and then by the *kaiga-aliki* spokesperson with a fine of either a pig or other in-kind food possession, or even money, to be given to the community. Today, the traditional significance of *pouloto* has become less apparent because young elders with high public standing in *kaupule* and government have been occasionally seen sitting at the *poutolo*.

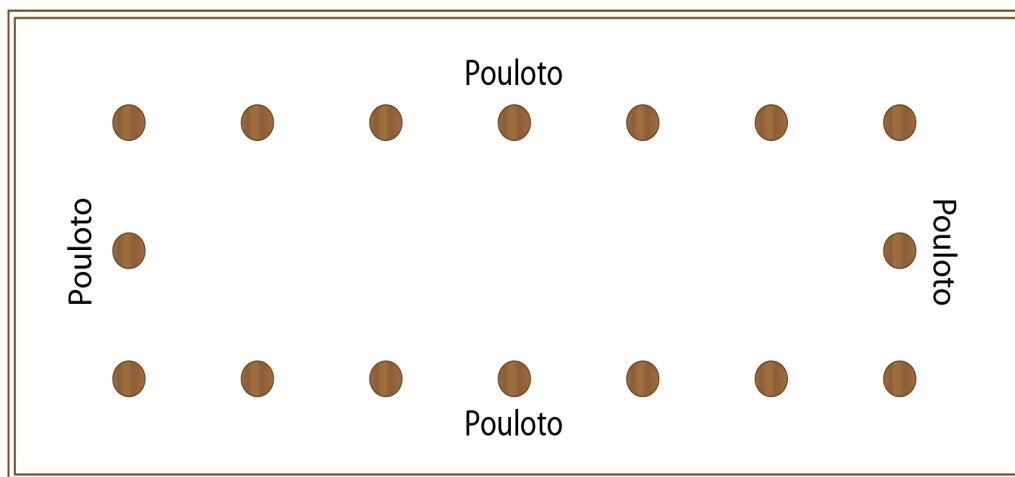


Figure 7.2: The interior lining of posts (*pouloto*) of the *falekaupule*.
Source: Author's own design.

7.3.1.2 *Tautua Institutions*

As shown in Figure 7.1, there are three main *tautua* institutions all supporting the *taupulega* institutions but in different capacities. The *matai* system and its adjunct system called *mataniu* deserve to be mentioned first because the *matai* has a *taupulega* capacity, as some members are generally part and parcel of the *te-sina-o-fenua* institution. These two institutions work hand-in-hand in many aspects. The *matai* is a title assigned to a person, whereas the *mataniu* is a title linked to a family household or family clan recognised in the island's community system. The *matai* system is claimed to be a Samoan custom¹² and it is uncertain how this system was introduced to Tuvalu¹³. Slightly different from the Samoan *matai* system, the *matai* in Tuvalu is not a chief but the head of the extended family. Traditionally *matai* is a men's title only but recently there have been cases where women are being recognised as *matai*. For instance, during the fieldwork I found out that in Funafuti there were five female *matai* and these include Liki, Lita, Puatakato, Puavasa and Nua (Puavasa Matanle, 50 year old woman). Also, the Tuvalu *matai* system does not have a title name attached to it, whereas in Samoa every *matai* carries a distinct title name to identify oneself as the *matai* from a particular family *matai* lineage. The word *matai* is used in most islands in Tuvalu except in Nanumea, Nanumaga and Nui where it is referred to as '*ulu-o-te-kaiga*' (lit. family head). Thus, I am inclined to use *matai* as it is more common in the majority of the islands.

There are two levels at which the *matai* exercises his authority; one at the family level and the other at the community level. As I am more concerned with *matai* in his *tautua* and *taupulega* capacities, I therefore focus only in his role at the community level. In short, the *matai* at the family level is the ultimate figurehead who decides and disposes of all family resources, especially land of the *kaitasi*. In the community sphere, the *matai* is the representative of the extended family or *mataniu* in community meetings or other related community activities. It is generally regarded that a *matai* at the community level is the one who heads the

¹² See Yamamoto (1994) and Mead (1961) for a more detail discussion of the *matai* system in Samoa.

¹³ It could be either by Samoan warriors and marauders who raided the islands of Tuvalu prior to European contact and the arrival of Christianity, or an offshoot of the Samoan pastors' legacy in the early days of Christianity.

mataniu. So, being a *matai* of a *mataniu*, one has the privilege to attend and participate in community meetings and other affairs. The *matai* speaks on behalf of the members of the *mataniu* and whatever he commits to, would be respected by his *mataniu* members. One 79 year old male respondent from Nukufetau shared with me that ‘the *matai* is the only one in our family who could talk on our behalf in island community meetings in the *falekaupule*. Whatever our *matai* says we are bound to follow. We cannot speak in the *falekaupule*, only him’ (Ailesi Apelamo)¹⁴. Furthermore, once *mataniu* are called to make a contribution, for example, one hog and one *pulaka*, the *matai* decides, who within the members of the extended family, should provide, and each member would have a turn.

As the core *tautua* institution, the *mataniu* is a system that operationalises the decisions of the *kaiga-aliki* and *te-sina-o-fenua* especially when it comes to food gifts or any kind of contribution. The word *mataniu* literally means ‘an eye of the coconut’ and it is commonly used in the southern part of Tuvalu. In Nanumea it is called ‘*fakaua*’ and in Nui it is the ‘*kapa*’. In Nanumaga and Niutao they just use the general Tuvaluan term ‘*fale*’, meaning household. Whatever the term, the *mataniu*, *fakaua*, *kapa* or *fale*, it refers to households or family clans that are recognised (or have been registered) and have special positions in the island community. It must be acknowledged that the *mataniu* system is not a Samoan custom like the *matai* system and its etymology is not known. However, in Fiji there is a system called “*matanitu*” which refers to the conferring of a title linking the chief with the locality of the *vanua* (Routledge 1985, p.28). It is simply a governing entity – council or government; the “eye of the land”. Given the nature of the *mataniu* system in Tuvalu, which links the household to the *matai*, it appears, at least to me, that this system and the term may have been adopted from Fiji’s “*matanitu* system” though it has been slightly altered. Nonetheless, if the *taupulega* institutions decide to hold a feast, or send food gifts to the island pastor, or handicraft gifts to a visiting delegation, they call upon the *mataniu*. The *mataniu*

¹⁴ Ailesi has five brothers and although they were part of *te-sina-o-fenua* who could participate in community meetings, the culture dictates that only their *matai* (eldest brother) could speak and is seated in the *pouloto*.

then provides its contribution accordingly, and if a *mataniu* fails that would be a culturally shameful thing for the entire extended family.

The *ituala* is another core *tautua* institution that provides support and implements the resolutions passed by the *taupulega* institutions. The word *ituala* refers to sides of the island village. The *ituala* is an institutional concept introduced by Samoan pastors in the early years of missionary work in Tuvalu. The core and evolution of *ituala* are better understood with a brief account of the historical form of villages in Tuvalu. As part of the unification of scattered settlements and the bringing of people into one larger village, the Samoan pastors instilled the concept of competitive units by constructing the village in a way that one unit of the village is geographically distinct from the other. In so doing, the village was separated by an open space called *malae* for sporting activities, and a church building in the centre together with the pastor's dwelling unit (Munro, 1982; Goldsmith, 1985). The first administrative officer in the Ellice Islands, Mr. Smith-Rewse, improved the villages in 1909. Under his instruction the houses in all of the villages were built in rows neatly aligned with a proportionate number on each *ituala*, as can be seen in the island maps in Chapter IV (Brady, 1970, p.50; Goldsmith, 1985, p.166). The separation of these village units therefore became known as *ituala* or *feitu-ala* or *feitu*. These three terms are used interchangeably, but the former is used here as it is more frequently used in the modern Tuvaluan vernacular¹⁵.

Although today, many dwelling houses have been built around the islands in an ad hoc form, particularly on the capital Funafuti, the *ituala* as an institution is still as much in function as it was in the beginning. It is an institutional concept operated in the spirit of compassionate competition for the purpose of pursuing and implementing island objectives. Munro (1982, p.139) described it:

as a means for mobilizing resources this intra-village [*ituala*] rivalry was extraordinarily successful, as testified by the sudden appearance throughout the group of churches built from expensive European materials. The same spirit of competition applied equally to the regular contributions, both in cash and in kind, to the pastor and L.M.S. [London Missionary Society] itself.

¹⁵ For further details of the settlement pattern of Tuvalu please refer to Brady (1970). .

In most cases, the *ituala* institution in modern Tuvalu supports the decision of *aliki* and *te-sina-o-fenua* on matters and activities requiring larger groups of people to perform at once. Most notable, although not always, are matters such as performing local entertainments known as *fatele*, preparing foods for community feasting, and local sporting competitions. In discussing the community system of Nanumea, Vaimoana Imo, a 42 year old married female respondent said: ‘most of the island community activities were usually done through the *ituala* setting’. As subset entities of the island, each *ituala* in all the islands has its own leader, committee and council of leaders who are not necessarily old men. Table 7.1 provides the names of *ituala* of each island.

Table 7.1: Names of village sides - *ituala* - of each island in Tuvalu.

Island	<i>Ituala</i>
Nanumea	Lolua & Haumacfa
Nanumaga	Tonga & Tokelau
Niutao	Kulia & Teava
Nui*	Alamoni & Manutalake
Vaitupu	Tumaseu & Asau
Nukufetau	Mancapa & Fale
Funafuti	Senala & Alapi
Nukulaelae	Nukualofa & Pepesala

Source: Author’s own table.

*The earlier *ituala* names in Nui were *Tapotali* and *Mataoleala* (see “Report on the Census of Population of GEIC 1947” by Pusinelli (1947, p.40)).

The *malosiga* or *lima malosi* institution is the most fundamental of all the *tautua* institutions¹⁶. It is the backbone of the whole governing structure. The *malosiga* comprises all able-bodied men and women of the island. As an institution, the

¹⁶ The word *malosiga* means stronghold and *lima malosi* means strong hand or right hand.

malosiga is run by a leader and other office bearers elected from amongst members of the island community on a fixed term basis. Being the backbone of the island, *malosiga* plays a critical role in operationalising the resolutions of the *taupulega* institutions. In fact, the *malosiga* also exist within each *ituala*. It would be difficult to imagine an island without a *malosiga* because that would cripple the social governing system of Tuvalu.

7.3.2 Traditional social lifestyle of Tuvaluans

Tuvalu's social lifestyle was very much shaped by its limited resources and the physical nature of its environment (Munro 1982, p.1). Lifestyle, according to Bendix and Lipset (1966, p.8) is a phenomenon determined primarily by people's objectives within a given structure that loosely shapes values and attitudes critical to life experiences. While external influences and the effects of globalisation have caused significant changes to the social way of life of Tuvaluans, certain elements of the traditional fabric of social lifestyle are still strongly practised today. This section examines some of Tuvalu's social lifestyles that are part and parcel of its culture and cultural identity especially those that are potentially at risk due to the impacts of climate change and sea level rise.

As revealed in the foregoing sections, Tuvalu's social stratification is moulded around the concept of collectivism and most activities are carried out collectively. Cultural values of collectivism differ from individualism, in that the former relatively emphasises inter-dependence while the latter encourages independence (Markus and Kitayama 1991). Collectivistic culture, such as Tuvalu's culture, views the self as inherently interdependent with the group to which it belongs (Goncalo and Staw 2006, p.97). Despite the effect of modern perspectives of western culture on the inherent separateness of distinct persons, Tuvaluans still value family connectedness and the interdependence of each other in their daily lives. The various elements and linkages of the cultural fabric of the social structures discussed earlier speak volumes about the collective nature of the social lifestyle of the people. Decision-making on island affairs is done collectively by *taupulega* and the *tautua* institutions collectively carry out the implementation of their decisions.

Communal lifestyle was central to Tuvalu's custom. Oral history tells many fascinating stories of how Tuvaluans survived for generations despite the harsh conditions of their environment, through undertaking projects on a communal basis. One of the communal lifestyle traits is *fakagamua*. The use of *fakagamua* in this context is different from that discussed in Chapter V relating to '*fakagamua* land tenure, which is communal land. As a service, *fakagamua* in this sense refers to the voluntary work service that people would render to any island project. In visiting the islands during the fieldwork, I was astonished by the huge size of dug *pulaka* plantations in the islands that took place in ancient time. The scale of the digging work of these gigantic *pulaka* plantations seems to have been done by some heavy-duty equipment brought by our ancestors. But the lack of such machines on the islands, even to this day, undoubtedly explains that major achievements of this magnitude were only possible through collective efforts¹⁷. Further, the church buildings in all the islands are also living testimony of the cultural collectivism of the people of Tuvalu in the old days. These structures, which remain the largest in most of the islands to this day, were only possible because of the culture of doing things collectively under the *fakagamua* system.

Although in modern Tuvalu this spirit of collectivism under *fakagamua* still exists, the influences of cash transactions and paid jobs have caused significant changes to people's attitudes toward island projects. During the fieldwork in Nanumea, men were called one morning to exterminate the ants invading one side of the island by burning them. In an effort to observe how the *fakagamua* spirit operates, I joined the troops of men and realised that the majority of men were not there. In Vaitupu, there was major renovation work on the church building, which was carried out under the *fakagamua* arrangement for about nine months but a number of people did not bother to participate. By and large, collectivism still exists, but it is practised on the basis of people's own wills rather than obedience to *taupulega* institutions' directives.

¹⁷ Stories passed from our old people say that these pits were hand-dug using traditional shovels known as *kipakipa*. The men were lined up in rows sitting and digging; the first line shovelled the sand to their back and the row immediately behind shovelled those dug materials further back and this was continued by the following lines of men until it reached the final deposit sites.

Another striking aspect of lifestyle of Tuvaluan is “reciprocity”. Gift giving and receiving is part and parcel of Tuvalu’s culture. Reciprocal social relations and transactions are at the core of the everyday construction of Tuvaluan social realities. Culture varies considerably in terms of standards, constraints, rules and styles that are permitted and promoted in the achievement of status in social life, and in the regulation of social relationships, though all social systems of whatever culture seem to have basic core features of social reciprocity in common (Lewis 2006). Of course reciprocity is not a unique Tuvaluan custom, as it is also practised in many societies, but the style and degree in which it is practised in Tuvalu appears to be unique.

In the traditional Tuvalu island lifestyle, giving and receiving is a normal state of household and neighbourhood affairs. Exchange of small items such as fish, local produce and other items necessary for daily consumption is not unusual. I recall from my young days that when my father or uncles returned from fishing with a good catch, I would be sent to distribute some for the neighbours and their families. And, if the neighbours happened to have a good catch the next time, we would receive some fish from them. Reciprocity also happens in times of special family functions such as weddings, funerals or birthdays. In such situations, the gift is more substantial than those in the day-to-day gift giving and receiving situations. The nature of reciprocity in Tuvalu is one that is not spontaneous. It is traditionally impolite for one to give something and expect the receiver to immediately provide something there and then. It is also culturally unbecoming to reciprocate immediately with the same thing.

What makes the reciprocity culture in Tuvalu rather unique, is that it sometimes can start with a request instead of receiving. This is commonly called ‘*akai*’. Another slogan that is becoming common in describing this *akai* tradition is called ‘*tupe falani*’ (lit. French currency). In describing reciprocity in Kioa Island, a famous orator of Vaitupu who lived in Kioa by the name of Puafolau Tusi sarcastically said this during a Tuvalu gathering I attended in Fiji in 1994 while on a short-term official trip there:

Transaction in Tuvalu is done in Australian dollars, and in Fiji it is done with the Fiji money, whereas us in Kioa Island, we used the “*tupe falani*”. That is, if a family is running out of sugar or need salt or a box of matches to light a fire they would just call and resort to a nearby house. And later in the day the giver would come to ask for something else.

It is a strong cultural thing in Tuvalu that *akai* should be respected and honoured as it is a culturally shameful and embarrassing thing if one turns down such a request, particularly if the requested item is available. In fact, *akai* being two-way traffic – that is, one asks someone for one thing and the next time the other one would, in return, ask for a similar thing or something different – is true reciprocity in the Tuvaluan context (see Chambers 1975, p.147 on the *akai* practised in Nanumea). Reciprocity is also seen in the *falepili* relationship culture¹⁸ (see Chambers, 1975). This interaction of *akai* creates favourable relationships among the people and is a form of cooperation that enables people to live in peace and harmony. Indeed, this social interaction increases both the chance of bestowing and receiving benefits on co-operators (Henrich and Henrich 2006, p.230).

7.3.2.1 *Cultural perspectives on food and diet*

Food is also fundamentally important in Tuvalu culture. It represents one’s wealth in the community. Different from the western world where wealth is generally determined by the value of one’s properties and cash investments, in Tuvalu it is generally said that a rich person or family is one with plenty of food. There are certain food crops that traditionally determine wealth in Tuvalu and these include coconuts and *pulaka*. A family with many coconuts and *pulaka* would have a good standing in the eyes of the community. Since *pulaka* and coconut in Tuvalu are not easy to cultivate, having plenty of these foods signifies that there are productive men in the family, or the family have many *laumanafa*. Food is also a cultural determinant of strength and power. In the early days, members of *te-sina-o-fenua* with plentiful food crops and many pigs would possess powerful influence in the community. If they spoke, others would look up to them and generally agree. This

¹⁸ It refers to the social relationship that exists between households in a neighbourhood. The word *falepili* means closed-by house or neighbourhood.

is because they were the people who were deemed to be able to carry out whatever the *te-sina-o-fenua* would decide on. They were the men of their word. The Nanumean saying '*puhi tau muna kae ke moeakigina*' (lit. utter your word and try to do it) derives from this traditional perception that only those who are powerful and strong could talk in the community. It is through hard work to ensure one possesses plenty of food and other valuable items of high cultural value that one would maintain or increase one's status in the community (Taafaki, 1983, p.20).

On the other hand, if one possesses little or no food it not only reflects one's laziness and lack of influential status but it is also culturally shameful. There are cultural norms relating to food in this context. First, if a family breaks open a *utanu* (coconut apple or cotyledon) during dinnertime the neighbours would perceive that that family had no proper food to eat and would come with food for that family. If someone eats *gaati* (young coconut meat/endosperm) in the village during broad daylight that also signifies lack of food in the family. Such situations would invite the community to look at that family as '*kaiga fia kai*' (lit. hungry family). So in the days, when I was young, my parents always told me not to break open a *utanu* or eat *gaati* in public because it would bring a bad reputation to the family. Secondly, with food being a social form of community celebration, it is a bad image if someone, especially a *matai*, contributes food to the community below the agreed size or quantity. To add flesh to this point, in Tuvalu there are occasions when *matai/mataniu* contribute certain size of *pulaka* or *taro* to the island community either for an island feast or gift to the pastor or a visiting entourage. The *matai* and *te-sina-o-fenua* would gather near the *falekaupule* to inspect the contributions. This is an important cultural moment because the community would congregate to see and marvel about each *matai's pulaka*. It is an occasion of either reinforcing one's status or tarnishing one's image. If a *matai's pulaka* or *taro* are not up to the required size, they would be contemptuously thrown away and the gathered public would make scornful gestures to the *matai* and his family. Also, the words would reach all corners of the village making it very shameful for family members to appear in public. Such family shame would continue for generations.

In this connection, it is important to elaborate on this traditional custom, as it is central to what characterises Tuvalu cultural identity. Culturally, one's identity is

determined by what one does. And what one does can only be measured or determined when the community calls for a contribution to be inspected, be it *pulaka* or *taro* for men, or a decorated mat for women. The site or scene where community contributions are inspected is called ‘*te mata mouku*’¹⁹. The ‘*te mata mouku*’ is an open-area of lawn immediately surrounding the community hall or *falekaupule*. As revealed earlier, inspection of community contributions is culturally important because this determines one’s status. Thus, the ‘*te mata mouku*’ has become a powerful rhetoric in all community contribution and competition events. It is a strong means of motivation in itself. Tuvaluans go about their daily life doing whatever they would desire, but they always have in the back of their minds the ‘*te mata mouku*’ because one day the community would call upon its members to make some contribution. This is where community members would prove their wealth and worth to the community. It is a calling that members would die for to ensure their images and the images of their descendants are not defamed. Might I add that this cultural conception of ‘*te mata mouku*’ is one strong motivating factor for me to complete my studies and to do well in whatever I do. This is because at the end of the day, the Vaitupu people who have gone to study or work would return to the island and the people would seek to know (more or less examine) whether or not they were successful.

In Tuvalu, food is mostly produced from a very limited number of edible plants that can be found on the islands such as coconut, *pulaka*, *taro*, breadfruit, banana and pandanus. Fish, crabs, birds, pork and local chickens are the main sources of protein for the people with the latter two only occasionally consumed. Presentation of food also carries certain cultural characteristics. For instance, presenting *fekai*²⁰ *pulaka* is deemed more prestigious than *fekai utanu*. While these traditional foods have the same form of ingredients and the way they are cooked, the fact that *pulaka* is culturally more important than *utanu* makes the former presentation more important than the latter. Even with the *fekai pulaka*, the distinction of the type of *pulaka* used

¹⁹ In Nanumea, it is called the *ahiga*, which means ‘to inspect’ or ‘to compete’ and which subsequently became the name used for the community hall (see Chambers and Chambers, 2001).

²⁰ It is a traditional food made of grated crop, mixed with flour until it is in a viscous form to which cooked toddy is added to sweeten and it is then baked or boiled. After being cooked, coconut milk is added with red toddy and it is mixed until the coconut milk is fully soaked.

may also label one type of *fekei pulaka* as better than the other. So when it comes to family and island feasting, *pulaka* is the main crop that is used for food, as it shows the family's wealth and the significance of the occasion. This however, is slowly fading out due to the change in taste toward foreign imported foods and particularly because of the reduction in productivity of *pulaka* due to salinity.

Interestingly, during the fieldwork two of the respondents when asked to name or choose a custom in their islands that is unique to them, came up with food related customs. They considered them as culturally important as they show each respective island's cultural identity that distinguishes them from other islands in Tuvalu. In Nanumea, a 31 year old female teacher Fesuiai Sepulona explained the Nanumean custom known as the *niu hihi* where special food gifts are prepared for the pregnant wife especially during her first pregnancy. Traditionally, the food gifts only comprise fish and coconut meat (endosperm). The phrase *niu hihi* refers to the coconut meat that is removed from the coconut shell (endocarp) and presented raw in a basket, together with fish, to the pregnant wife. This custom takes place when the pregnant wife is six months into her pregnancy. The *niu hihi* custom is intensive because families from both sides of the pregnant wife and the husband would alternately feed the pregnant wife on a daily basis until she gives birth. Chambers (1975) noted this unique Nanumea custom and added that during Sundays the best food would be included especially the *fekei*. She also mentioned that if a turtle is caught on the island the pregnant wife will always be served turtle meat as part of the *niu hihi* tradition. Although in recent years other food was being used to symbolise the *niu hihi* tradition, the importance of the *niu hihi* itself could not be replaced. In explaining this further, another respondent said that *niu* is used, as well as fish, because it is the staple food of the island. This tradition signifies the families' abilities to support the wives and children sustainably into the future (Iliala Lima, 65 year old man). In discussing this custom, the 60 year old high chief of Nanumea said to me with grave concern that 'this kind of culture will not be practised if we move to places where there is no coconut' (Eli Teuea).

In Vaitupu, a 32 year old male respondent, Liveti Taua, talked about the '*kai laku*' custom of Vaitupu as a unique one in Tuvalu. The *kai laku* is literally eating and throwing food. The *kai laku* is a tradition that takes place when the island

community goes on a picnic. Traditionally, the members would bring *lipi lipi*, which is made of baked *pulaka* cut into small pieces and pounded flat and mixed with coconut milk. To the people of Vaitupu, *kai laku* is a custom that signifies the wealth of, and abundance of food in, the island. Being food made from *pulaka*, it is unthinkable in other islands for such a custom to be adopted because of the difficulty of cultivating this root crop.

7.3.2.2 *Traditional leisure activities*

In terms of music and songs, Koch (2000, p.24) concluded in his introduction chapter of his book “Songs of Tuvalu” that ‘Tuvaluans are extremely fond of music...they very frequently indulge in singing and dancing’. As an insider, I could not add more to Koch’s comment. Singing and dancing are intrinsically knitted into Tuvalu customs and identity. They play a significant role in the social life of Tuvaluans (Samuelu, 1983). However, a substantial part of Tuvalu cultural dances and songs have become stagnant and are now barely practised. Some of these include *fakaseasea*, *fakanau*, *mako fakatagitagi*, *mako fakatapatapa* and *pututaga* (see Koch, 2000 and Samuelu, 1983). The influence of foreign music and dances has resulted in these local dances being pushed aside and they have become a peripheral custom. The only type of dance that survives to the present time is *fatele*, which is similar to a dance practised in Tokelau. Tuvalu takes pride in *fatele* as one of its true cultural identity traits. What then is *fatele*? It is a dance performed by a group of people. The majority of the group members sit in a circular form with a specially made wooden box in the middle surrounded by men. Niutao, however, does not use a wooden box, instead the men sitting in the middle form an open space in the centre, covered with a mat. The dancers stand in an arch formed around the sitting members in most islands except Funafuti and Nukulaelae where the dancers stand in front facing the people to whom the *fatele* is performed. With the exception of Niutao, the other seven islands use an empty tin as a drum performed by one drummer. The *fatele* begins with a lead singer from amongst the men sitting around the wooden box. Once he starts singing the first line of the song, the rest join in accordingly and the beating of the box begins, the drummer starts the tin drum and the rest of the sitting members of the group join by both singing and clapping their hands. In keeping with each *fatele* song’s rhythm each member

ensures that they make no mistake; the box beaters beat the box in a certain way to meet the rhythm as well as the clappers and drummer. The dancers dance in a certain way to synchronous gestures according to the beat of the *fatele*. Figure 7.3 is a photo that illustrates the *fatele*.



Figure 7.3: *Fatele* in Kioa Island.
Source: Author's own photo.

While *fatele* is still very strongly performed in Tuvalu, younger generations are becoming more immersed in other Pacific forms of dancing, especially the likes of Samoan, Tongan, Cook Island and Tahitian dances. Kioa people also perform *fatele* in all their island feasting and, interestingly, while they live in Fiji, they do not perform Fijian dances like *meke*. This, I witnessed during the fieldwork, because for all the days in which the island had feasting functions, there was no form of dance performed other than the *fatele*. It is my opinion therefore, that the preservation of *fatele* in Kioa is stronger because of the inherited feeling that they have to protect their culture to distinguish themselves from the surrounding communities. Asking how *fatele* culture is kept alive in Kioa, one 62 year old male respondent, Mr Lotomau Fiafia, said:

My grandson is up there [pointing to his house on the hill side] dancing *fatele* alone. That is what I have planted to them to keep and live with them. One of the beauties of us here is because we are surrounded by different and diverse cultures. So our being surrounded by a diversity of cultures it is imperative that our unique culture could be noticed. There is no island around here [pointing to Taveuni, Rabi and the main land of Vanua Levu] that performs

fatele or *fai fakaala* [referring to Tuvaluan feasting in the hall]. That is the beauty of being put in the middle of a diversity of cultures; it's a way of protecting it.

Traditional sports also have a significant influence on the social lifestyle of Tuvaluans. Historically, there were many types of local sports that have disappeared during the course of time. Kennedy (1931, p.110-123) noted 28 different local games played by the people of Vaitupu while Koch (1984, p.161-190) discussed at length some three dozen games, from children's to adult's games that were played by the people of Niutao, Nanumaga and Nukufetau. At the present time however, only one local game continues to be played fairly regularly to this day, or is more often seen played compared to the rest. This game is the *ano*. All of the islands in Tuvalu play the *ano* game although using different rules. The *ano* is a game between two teams of unequal and unlimited numbers standing in rows as in Figure 7.4. The *ano* is played using a locally made ball also called the *ano* which is served simultaneously by the striker of both teams to the opposite side and each team tries to prevent the ball from grounding until it reaches the catcher standing in the front row. The *ano* game is both risky because it can injure one's self, and entertaining as well, because if you drop the *ano* the team will make fun of you.

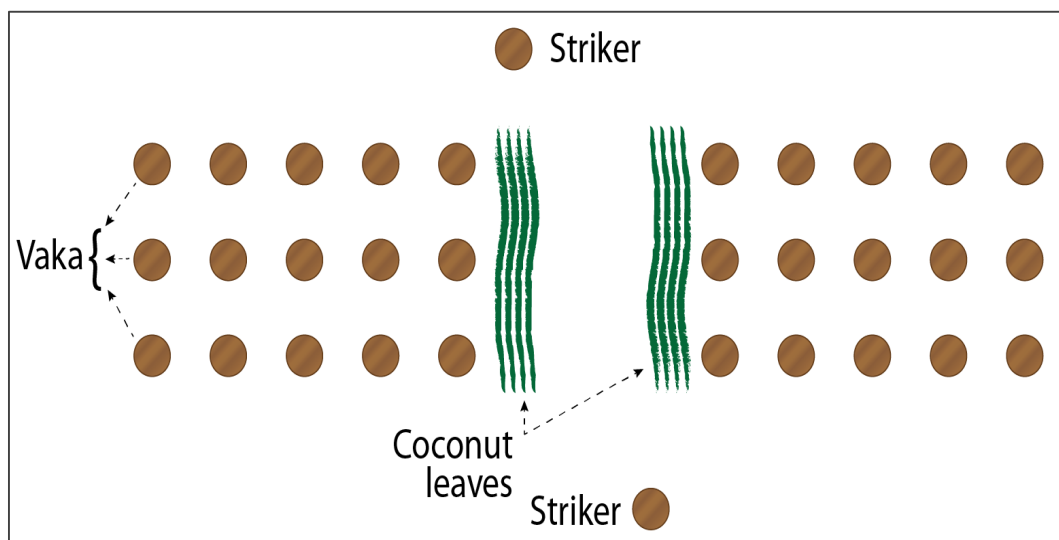


Figure 7.4: *Ano* formation.

Source: Adapted from Kennedy's 'Field notes of the culture of Vaitupu, Ellice Islands', 1931, p.123.

In all these leisure activities, especially the *ano* and *fatele*, one thing that is common is that they were all performed by groups of people. Indeed, almost all the

traditional games were performed in teams or groups of people, or in pairs or with a partner. Even the local dances such as the *fakanau* and *fakaseasea* are all performed by groups of people. What this indicates is the communal nature of Tuvaluan activities from work to sport and dancing. Samuelu (1983b) pointed out that the tradition of communal activities goes back to the custom of women singing and dancing together while men were busy in communal activities in the plantation or digging *pulaka* pits

7.3.3 *Taku gana ko toku iloga*

Understanding one's culture would not be complete if the language(s) of one's culture were not discussed. Language is a construction of certain identity for people and it gives meaning of belonging to a culture, or maintains identity within a group of people (Zou 2012). According to Hall (1997, p.1):

Language is the privileged medium in which we make sense of things, in which meaning is produced and exchanged. Meanings can only be shared through our common access to language. So language is central to meaning and culture and has always been regarded as the key repository of cultural values and meanings.

But language is more than just speaking and writing to communicate one's ideas, thoughts and feelings. It also includes body gestures, images, musical notes, or any thing that could at least represent one's ideas and thoughts. Rather than discussing the technical side of language, this part only covers aspects of language that shed light on Tuvaluan language as part of Tuvalu's cultural identity.

The Tuvalu language is one of the thirty members of the Polynesian language group, and the Polynesian language group is in turn one of the discrete Oceanic subgroup, which is one of the two main branches of the Austronesian linguistic family (Besnier 2000, p.xxi). This categorisation of the Tuvaluan language is often questioned and therefore is not a cast-in-iron conclusion. For instance, Pawley (1967, p.260) suggests that Tuvaluan language (placing specific emphasis on the Vaitupu and Nanumea dialects) falls under the Eastern Polynesian subgroup including the Samoan, and Eastern Futunan. Biggs and others (1981) group Tuvaluan language together with a number of languages outside the Polynesian triangle such as Sikaiana and Nukumanu in the Solomon Islands, and Nukuoro and

Kapingamarangi in the Federated States of Micronesia. Nonetheless, it is generally said that the Tuvaluan language is part of the Samoic Outlier subgroup, under the Proto-Ellicean subgroup as suggested by Besnier (2000) in Figure 7.5.

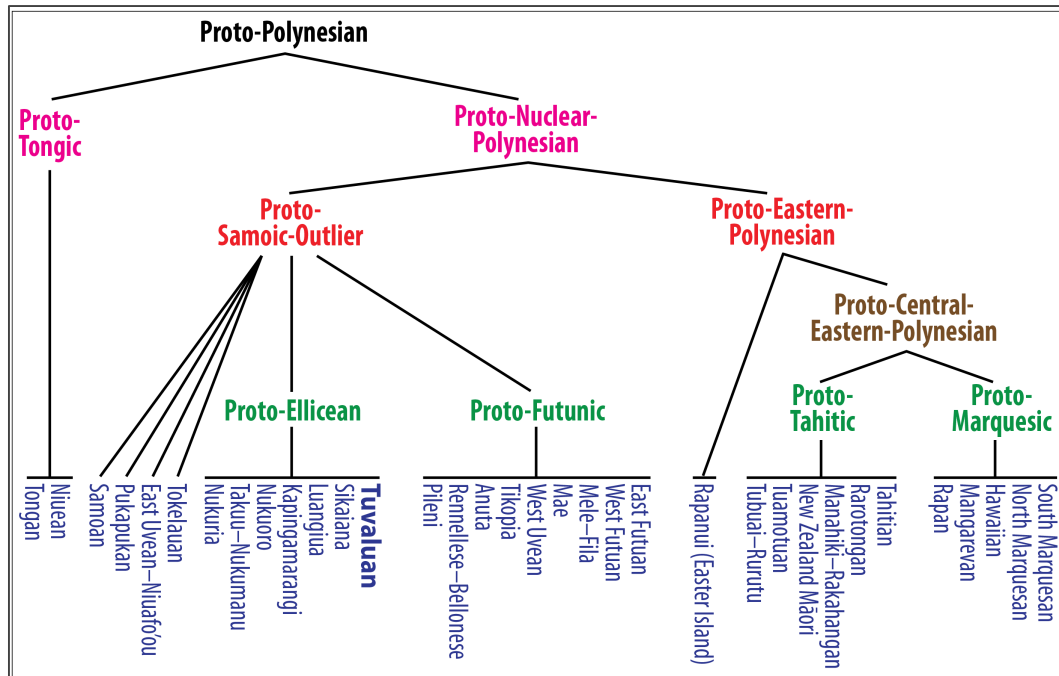


Figure 7.5: Genetic position of Tuvaluan language in the polynesian group. Source: Adapted from Besnier (2000, p.xxii) and cartographically enhanced by Max Oulton.

With the exception of Nui, the other eight islands (Niulakita included) of the group speak the Samoic-Outlier language. The people of Nui speak a modified Kiribati language. The eight islands can further be divided into two dialectal groupings. One group comprises the northern islands Nanumea, Nanumaga, Niutao and Niulakita. The other group is the remaining southern islands, which include Vaitupu, Nukufetau, Funafuti, and Nukulaelae. Besnier (2000) asserts that: '[i]n the [n]orthern subgroup, Nanumea and Nanumaga probably share more features with one another than with Niutao'. It is to be noted that the people of Niulakita are from Niutao and so they speak the Niutaoan dialect. By and large, and this is also noted by Besnier (2000, p.xxiii), the Vaitupu and Funafuti languages (particularly the former) are the most commonly used dialects in Tuvalu.

The phrase *taku gana ko toku iloga* literally means 'my language is my identity'. Cameron (1999, p.15) said: 'language is, without doubt, a fundamental component of our identity'. The Tuvaluan word for language is *gana*. When the people talk

about language or *gana*, they generally refer to the speaking and writing aspects of language. Because, if one communicates an idea or thought using one's hands or body the Tuvalu people would tend to say *tou tagata na e faipati loa ki gana a manu*, that is, 'that person is speaking animals' language'. In Tuvalu, speaking and talking in the native Tuvalu language, especially in a traditional setting whether in the family house or island community hall, is imperative. Not only does it show one's identity as a Tuvaluan, but it also reveals one's respect for that identity. On the contrary, if a Tuvaluan speaks or even mentions a word or two in a foreign language, especially English, during a traditional function, the people would immediately say *te fia palagi*, that is, he wants to be a white person or foreigner. It is a reaction to an unwelcome expression because one is not showing one's true identity by speaking the full Tuvaluan language. However, on occasional basis some old men would recite humorous English phrases just to add flavour to their speech.

Discussions with the people during the fieldwork reveal Tuvalu language as an integral part of Tuvalu culture. This sentimental manifestation is not only from interviewees in Tuvalu but also those in Fiji and New Zealand. They explicitly, and some implicitly, embodied language in their description of their culture. As simply put by Tie Maheu, a 69 year old man I interviewed in Nanumea, 'language is my culture and I want to maintain it'. In Kioa, Edwin Vavasa, a 52 year old male respondent, aligned himself with what Tie said although stressing Vaitupu: 'That is what I mean in terms of culture...that is why we continued to practice *fatele, kilikiti, ano* as well as *gana*, they are all Vaitupu culture'. In multicultural places like Fiji and New Zealand, language is critical to identifying people's origins. Travelling through Fiji and New Zealand many times, I had great difficulty in recognising Tuvaluans because they look similar to Samoans, Tongans and/or Rotumans. My interviewees in Suva, Auckland and Hamilton share the same predicament when they encounter Polynesians because of their appearance, but once they speak they would immediately notice that they were Tuvaluan or otherwise. Tuvaluans hold strong to the understanding that the first identifier of people's culture is language. Tuvaluans' own island of origin could be identified once they speak because each island has a very distinctive dialect. In Funafuti the capital of Tuvalu where more

than half of the population now resides, it is becoming difficult to determine one's island of origin by one's physical look but once one speaks people quickly notice where one comes from.

7.4 Toku iloga ka galo atu

Culture has never been static. It changes and continues to change. So to say that Tuvalu cultures discussed above are unchangeable is implausible. *Toku iloga ka galo atu* however is a cry of grave concern about Tuvalu's identity. It literally means my identity is disappearing. Identity is a 'self-concept that explains relationships among entities in a manner that asserts a sameness or equality' (Wodak and others 2009, p.11). While national identity as discussed in Chapter VI is crucial because it shows Tuvalu as a distinct state amongst the community of states, cultural identity is equally important because it shows the inner traits of Tuvalu's social identity. What transpired in the foregoing sections of this chapter were descriptions of Tuvalu's cultural identity selected from my worldview of the fundamental cultures of Tuvalu. The *toku iloga ka galo atu* is a cry of anxiety of the people of Tuvalu about their cultural identity – those very cultures – that may be lost if the worst scenario of Tuvalu becoming uninhabitable due to the impacts of climate change and sea level rise eventually happens.

Concerns about the potential loss of Tuvalu culture were widely felt in Tuvalu. I found during the fieldwork that almost all interview respondents shared the same trepidation. Expressing their views and telling their stories about their cultures and how they feel is too much to condense in a single section like this. The magnitude of compassions and emotions they shared during the fieldwork would require a separate thesis altogether. Notwithstanding that, the essence of their responses portrays their wish to keep and safeguard Tuvalu culture, irrespective of the consequences of climate change and sea level rise. Here are some of the responses by one interview respondent from each of the eight islands of Tuvalu:

It is important for us to continue to take Tuvalu as our identity so that Tuvalu can be known in the world. I cannot change my national identity because I want to maintain our culture. Even if we go elsewhere we should continue to practice our culture (Vanu Viliamu, 64 year old man from Nanumea)

My inner feeling is that we should maintain our culture, because our culture is important (Naina Penete, 64 year old widow from Nanumaga)

If I go somewhere, I will take my mats to weave in that new place because I want to go and live there with the customs and traditions that I grew up with (Sela Fagauta, 57 year old woman from Niutao)

If I go somewhere, I should take my culture with me because it is important to continue to practise it in other places (Nivaa S, 52 year old man from Nui)

Our culture must be maintained, so our children could know or remember Tuvalu (Manu Peniamina, 50 year old man from Vaitupu)

It is imperative to maintain our culture because it is our identity. If we work with other races they know us in our culture (Freda Katepu, 50 year old woman from Nukufetau)

Because we are Tuvaluans, I do not want to be like *palagi* (white people). I want to maintain Tuvalu customs and traditions even if I live in New Zealand (Lesia Penitala, 31 year old woman from Funafuti)

We must always carry our culture. If we follow other countries' cultures, we are copycats. So we must keep our culture (Kausele R. Moresi, 81 year old woman from Nukulaelae)

While the above excerpts do not necessarily represent the views of all of the people, the general perception as I observed was rightly reflected here. Apparently, the above excerpts indicate that people were already contemplating the possible loss of Tuvalu culture due to the impacts of climate change and sea level rise, hence the strong expression to keep and maintain Tuvalu cultures. Concerns about possible lost of culture were also noted by some Motufoua students in their essays as per two scripts given in Box: 7.1.

To begin with, the thoughts ~~and~~ of climate change and sea level rise. As a Tualan, the thoughts of climate change is really disturbing, as it confuses ~~the~~ key times ~~of~~ or schedules for farming, fishing and other techniques that we use in our every day ~~live~~ lives. Also the thought of sea level rising is a much more disturbing problem to discussed because for us Tualuans, islands are our homes and surrounded by sea and the thought of it that it will drowned in a matter of a few decades puts a needle straight through our hearts, that the home of our forefathers would be covered by the ocean. Thus these thoughts are the main thoughts that are present ~~on~~ my mind and eventually all the others.

And lastly, by facing these two problems in every years. Some of the Tualan citizen will be migrated to overseas country to stayed there because of these problems that the people facing on it, and also the populations of Tuvalu will be decreasing by the migrating ^{of people}. And also the loss of ~~both~~ our Cultures and values in our country because people stayed in overseas country and practice those cultures ~~which~~ which are not part of ~~their~~ their cultures.

Box 7.1: Essay scripts on cultural concern by two Motufoua students.
Source: Author's own fieldwork.

What they seemed to fear most was the extreme scenario of land becoming submerged and lost forever due to sea level rise. The land, as discussed in the previous chapters, is the foundation upon which all the above customs and traditions were rooted. If the land disappears or even if it still exists but becomes impossible for human habitation, that may mean the death of Tuvalu's true cultural identity. This is because the traditional social stratification would not function. The *kaiga-aliki* system would not be practised, because to exist and function the *aliki* should have ancestral land through which he could claim chieftainship. The *te-sina-o-fenua* and *pouloto* institutions would have little value because the *matai* and *mataniu* status that these individuals would have earned would no longer exist. *Matai* and *mataniu* were *tautua* institutions that linked directly to the *kaitasi* land, and to have no land would render these institutions meaningless. Other institutions such as *ituala*, and *malosiga*, would be less effective because the *taupulega* institutions would not have the same authority since they do not have territorial

jurisdiction on which they could exercise their full cultural powers, and to which these *tautua* institutions would have to provide support.

But it is not only the social structure and governing systems that would be crippled; traditional social lifestyle would also be greatly impaired. As people who have been living in close proximity for ages, the impacts of climate change and sea level rise may disperse Tuvalu's population around the globe leaving the custom of collectivism and reciprocity unworkable. The custom of *akai* or *tupe falani* would be difficult to practise because the neighbourhood in which the Tuvalu people may live could be a mixture of other cultures that may not accept this custom. Island communal systems and family togetherness would be less practised, and the individualistic forms of living seen in the western world may become the norm. During the fieldwork in Auckland, I noticed that island community social gatherings were extremely difficult to organise. The fact that people have jobs to attend to, and the widespread distribution of the population around the Auckland area, makes it hard for the head of the island community to organise and administer island affairs. During the commemoration of Vaitupu Day – *Te Aso Fiafia* – in November 2015, the Vaitupu community in Auckland also marked the completion of two long years of fundraising. The fundraising was part of the community's contribution to assist the people of Vaitupu in Tuvalu in hosting the Tuvalu Christian Church General Assembly in November 2016. When the names of the individual contributors were called as part of the tradition of '*te mata mouku*' discussed earlier, many Vaitupu people did not make the full contribution, and a number of others did not provide any contribution at all. It was apparent from this incident that the custom of communal support is slowly fading away because Tuvaluans are more self-centred and independent rather than inter-dependent

With respect to cultures relating to food and leisure activities, there is no question that these would be affected as well. Indeed, the Tuvalu delicacy *fekei pulaka* is already hardly seen on the table during main feasting because of seawater inundation causing severe salinity to *pulaka* pits. The change from subsistence farming and fishing to paid employment lifestyles has tremendously changed the attitude of people in terms of time and work ethic. While they still attend to household chores such as toddy cutting and sweeping the surrounds of the house,

the manner in which they do their work is very much time conscious, particularly the paid working population. In talking with interview respondents who have paid jobs, they said that there is no longer a 'take-it-easy' attitude towards morning chores because they need to rush to their workplace. Ironically, in the outer islands it seems that the employees were less productive in their jobs for two main reasons. First, they still have the island lifestyle of caring less for paid work because of the need to sneak out of the workplace either to go fishing for the family lunch or to fetch some coconut and *pulaka*. Secondly, if there is communal work or community feasting they would be barely seen in their workplace because they feel that their island obligation should continue to be respected. These relaxed attitudes to paid work happen only because employees consider that whatever the consequence of their poor work performance, they still have land to resort to for a living. As such, these work practices may change if one was going to leave the island, either as a result of climate change and sea level rise or for other reasons, because they would not have land as they now have in Tuvalu.

Language is not an exception. In fact, language is a vulnerable cultural feature particularly if it is a discrete language in a foreign land and very few people practise it. Even if there is a sizeable number of a particular ethnic group or nationality in a foreign land, the predominant language in that land could influence the young generation and would therefore cause that minority group's language to become obsolete. Unsurprisingly, from the eight respondents I interviewed in Auckland, three of them spoke mostly in English. They admitted that they could not fully express their views using the Tuvaluan language despite their strong assertions that they are Tuvaluans and Tuvalu is their only true cultural identity. In Fiji, the people of Kioa and those Tuvaluans living in Veisari speak a combination of Fijian and Tuvaluan languages. While it is understood that these Tuvaluans carry Tuvalu's identity in the respective places they live by speaking the Tuvaluan language, the fact that the predominant languages in those places have strongly influenced them indicates that Tuvalu's first cultural identifier is already fading. One 37 year old female respondent from Nanumaga, Ms Lanieta Faleasiu, powerfully expressed this concern:

I do not believe in the purity of my identity as Tuvaluan if I practise it outside Tuvalu. Our culture is best practised here in Tuvalu, the pure culture of Tuvalu. For example, our language, dialect is best practised here than anywhere else.

What has been discussed here represents the people's utterances of *toku iloga ka galo atu* – my cultural identity is disappearing! Apparently, there exists a strong anxiety in the people of Tuvalu about the cultures that they highly value and cherish in their lives. These cultures are all embedded in their ancestral lands, which had shaped Tuvalu cultural identity as a distinct society in the community of societies around the world. The Nanumea council of chiefs and members of its Kaupule eloquently stated this during the fieldwork meeting with them:

It is very important that our culture is maintained wherever we may be. Most importantly, if we were to relocate we must be placed in a place where our cultural land tenure system could still be practised. This is because our linkage to land is where and how our cultural way of life is being practised.

Ostensibly, this joint statement indicates grave concern of the people about the core cultural system that may be distorted, if not completely obsolete, when land tenure is disregarded in any future resolution of settlement. Essentially, it is land that is central to Tuvalu culture and cultural identity. In the same sense, land is key to national identity as discussed in Chapter V. Any decision to move the people somewhere must therefore take serious consideration of the land tenure system in the new home in order for Tuvaluans to practise their culture and therefore maintain their cultural identity.

7.5 Conclusion

In this chapter, I laid out first the relevant literature on culture and cultural identity, which basically shows that culture is not static, but it remains an integral part of people's lives. I then outlined substantial parts of Tuvalu culture, especially those that repeatedly emerged from the fieldwork as likely to become affected due to the increasing impacts of climate change and sea level rise. The *kaiga-aliki* and *te-sina-o-fenua* systems are the bedrocks of the traditional customary governing system in Tuvalu. It tells people about their history and how Tuvaluan's had been governed for many centuries. The *tautua* institutions existed because of certain cultural

processes and systems upon which they have been established and through which traditional communal life has flourished for ages. The various social ways of life of the people of Tuvalu reveal some distinctive cultural features that are part and parcel of Tuvalu's cultural identity. Tuvalu language remains as one fundamental identifier of Tuvalu culture, particularly in multicultural places like Fiji and New Zealand.

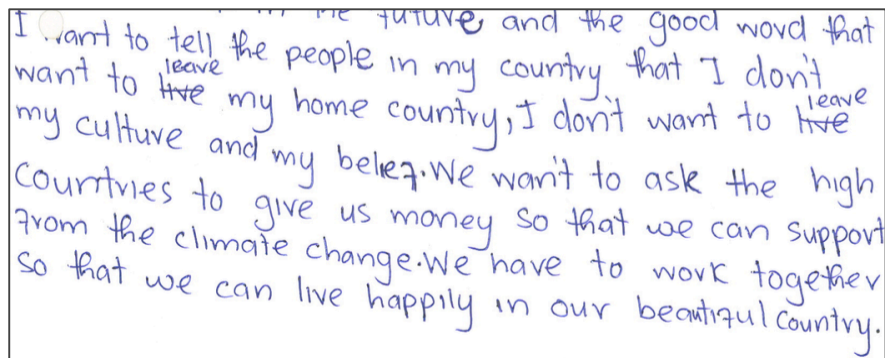
Looming concerns about the impacts of climate change and sea level rise are already making headway into endangering Tuvalu culture. For instance, the salinity of ground water causing adverse impacts on *palaka* and coconut crops is already affecting related cultural activities such as *fekei* in traditional feasting, and the *niu hihi* custom of Nanumea. Scientific findings of the increasing rise in sea level, and therefore postulating a scenario of coastal and atoll islands becoming uninhabitable in the future, could spell the end to some of these rich cultural heritages. Observing people as they express their grave concerns about this likely phenomenon during the fieldwork was disturbing. The majority of respondents said that they would live with their culture irrespective of the consequences of climate change and sea level rise. These were sentiments of the rootedness of the people to their land upon which they live and enjoy their cultures as their own identity. Tuvaluans highly value their culture and could not imagine living without it because as the title of the chapter says '*toku iloga ko aku tuu mo aku faifaiga*', that is, my culture is my identity. In essence, the impact of climate change and sea level rise would gradually consume some of these cultural features leaving the people of Tuvalu to be subsumed under some other societal cultures and its cultural identity may be greatly modified or even disappear in the course of time.

CHAPTER VIII

FLEEING OR STAYING HOME?

Migration is an expression of the human aspiration for dignity, safety and a better future. It is part of the social fabric, part of our very make-up as a human family

(Ban Ki-Moon, New York, 2013, High-Level Dialogue on International Migration and Development)

A photograph of a handwritten student essay excerpt in blue ink on lined paper. The text is written in a cursive, slightly slanted style. The words 'leave' and 'live' are crossed out with a horizontal line. The text reads: 'I want to tell the people in my country that I don't want to ~~leave~~ my home country, I don't want to ~~live~~ my culture and my belief. We want to ask the high countries to give us money so that we can support from the climate change. We have to work together so that we can live happily in our beautiful country.'

(Essay excerpt by a student from Vaipuna Primary School)

8.1 Introduction

Migration is not a new phenomenon. World human migration has been going on for millennia (Williamson 2006, p.23). In the Pacific, Hau'ofa (1993) asserted that migration is not new because Oceanians have been traversing the great Pacific Ocean for centuries and it is in their blood to be mobile – literally the ocean is in us. 'People migrate for complex reasons: to improve incomes; to join family members; to escape persecution; and to move themselves from environmental or other threats' (Black and others 2011c, p.447). The Intergovernmental Panel on Climate Change (IPCC) postulated that the gravest effects of climate change may be those on human migration as millions are displaced by shoreline erosion, coastal flooding and severe drought (IPCC 1990; 2014). The essay excerpt in the opening quote is a clear illustration of the grave concern of the young generation of Tuvaluans about fleeing the islands they love the most because of the impacts of climate change and sea level rise.

In this chapter I examine migration and relocation as potential consequences of climate change and sea level rise for societies living in low-lying atolls such as Tuvalu. I begin with a literature review of the history of migration, the definitional debates about climate change related migration and relocation, the theories behind migration, and the statistics of past and future migrations. I then discuss the case studies of Tuvaluan relocation experiences, and the various forms of migration Tuvaluans have been involved in. Lastly, I consider the concept of migration as an adaptation option to climate change and sea level rise, and relocation as an option of last resort. I conclude the chapter with a discussion of how Tuvaluans view climate change induced and forced migration and relocation.

8.2 Migration and relocation

The literature on migration and relocation offers interesting accounts of the various reasons people migrate or relocate from place to place. Migration has occurred throughout human history (Crumley 2012; Manning and Trimmer 2013). In the Pacific region, people have migrated for centuries ‘to trade and to marry, thereby expanding social networks for greater flows of wealth. They travelled to visit relatives in a wide variety of natural and cultural surroundings, to quench their thirst for adventure, and even to fight and dominate’ (Hau'ofa 1993, p.154)¹. Migration has increased in recent decades, in terms of numbers, directions and complexity both within borders and beyond (United Nations 2013, p.105). Now, with the increasing impacts caused by climate change and sea level rise in many places around the world, there is a general consensus that migration will proliferate (Black and others 2011c; McLeman 2005; Tacoli 2009)². This is no exception to the Pacific region (Burson 2010; Burson and Bedford 2013; Campbell 2014; Campbell and Bedford 2014)³. Migration of Tuvaluans within and beyond, prior to and during European contact gave fascinating stories of the courage and determination they had. The brief history of Tuvalu in Chapter II revealed that early settlers of the

¹ See Anderson and O'Connor (2008) and Pawley (2010) on how the Pacific region was settled and populated.

² Triangulate this information with the Group of Experts on Human Migration's findings presented to the UNFCCC in Bonn in May 2016 in the UNFCCC website: <http://newsroom.unfccc.int/unfccc-newsroom/human-mobility-and-the-paris-agreement/> (Accessed on 13 March 2017).

³ Also see Birk (2012); Kirch (2000); Nunn (2007) for details of migration within the Pacific as part of coping with environmental stressors.

islands were people from Samoa and Tonga who travelled from island to island thereby populating the entire the archipelago. The subsequent sections encapsulate the various migrations and relocations that took place in the modern history of Tuvalu.

8.2.1 Defining migration in the context of climate change

The growing interest of scholars in migration, as a major consequence of climate change, culminated in a number of names being coined for climate change related migration. But first, what is migration? The International Organization for Migration (IOM) website defines migration as:

A population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.

In the context of environment related migration and specifically climate change related migration, ‘terms such as environmental migration, climate change-induced migration, ecological or environmental refugees, climate change migrants and environmentally-induced forced migrants are found scattered throughout the literature’ (Dun and Gemenne 2008, p.10) making the debate on environment and climate change related migration drowned with definitions (Stavropoulou 2008, p.11). This divergence in definitions is due to the diversity of perceptions and the very nature of specific environmental occurrences, which cause migration. The IOM (2008, p.493), however, defines environmental migration in the following terms:

Environmental migrants are persons or groups of persons who, for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.

There is no single definition that has received the support of scholars in this area, but a great number of them have been inclined not to use climate refugee (Shamsuddoha 2015). This is because it does not fit under the purview of the United Nations definition of refugee. Biermann and Boas (2008) noted that the UNHCR and IOM do not subscribe to the use of “climate refugees” or “environment

refugees” because they do not have a legal basis under international refugee law. I use, throughout this thesis, the IOM definition for migration as a working definition unless otherwise specified.

With regards to relocation, a number of similar terms have been used with different definitions such as resettlement (Lieber 1977) and development-forced displacement and resettlement (de Sherbinin and others 2011). While they have similarities, the definition of relocation by Campbell (2010b, pp.58-59) given here is used throughout as the working definition unless otherwise specified:

Relocation is the permanent (or long-term) movement of a community (or a significant part of it) from one location to another, in which important characteristics of the original community, including its social structures, legal and political systems, cultural characteristics and worldviews, are retained; the community stays together at the destination in a social form that is similar to the community of origin.

It is to be noted that while migration and relocation have many things in common they are not the same and should not be used interchangeably. This is because migration refers to a deliberate activity undertaken by individuals and households (Agergaard 1999; Brettell and Hollifield 2000), whereas relocation represents movements of larger groups of people (Campbell 2010b; Lieber 1977).

In this connection, it is critically important to touch on the definition of “environmental refugee” or “climate change refugee”, as it has been an ongoing debate in the context of migration, and which is also relevant to this thesis. Although it was coined by Lester Brown in 1970 (Boano and others 2007), the most-quoted definition of an environment refugee was proposed by el-Hinnawi in 1985:

[environment refugees] are those who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life (Warner and others 2010, p.694).

The use of the word refugee to categorise this form of migration is not within the legal meaning of refugee in the 1951 Refugee Convention Article A(2), which states:

...owing to well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country, or who not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (United Nations High Commissioner for Refugees 1951).

Several elements of this refugee definition sparked the debate about its appropriateness when used in relation to the movement of people induced by climate change to migrate elsewhere. The two most critical elements which make this refugee definition unworkable for climate change include (i) the person must fear persecution (where persecution must only be on the grounds of race, nationality, religion, membership of a particular social group, and political opinion); and (ii) the fear must be well founded (Warner *et al* 2010). The former clearly rules out climate change, as it does not fall within the specified grounds of fear, and the latter is one that is difficult to establish given the complex nature of climate change, although Castle (2002) did not completely dismiss it as it can trigger migration in certain circumstances.

8.2.2 Theories behind migration

At the outset there is a general consensus in the literature that people move primarily because of necessity for survival and to improve their well being (see Crumley 2012, p.25; Rauhut 2010; Williamson 2006). Early theorists like Ravenstein (1885, p.198) in his *law of migration*, suggested that migration is the ‘mode in which the deficiency of hands in one part of the country is supplied from other parts where population is redundant’. Lee’s (1966) theory of migration on the other hand showed that there are two categories of factors that trigger people to move. First are the “push factors”, which include deteriorating economic, social, political, and health conditions at the origin. These factors are those that tend to induce or force people to leave their homes or places of domicile and to move to

other places. Second are the “pull factors”, which consist of attractive resources, cultural ties, and increased opportunities at the destination. These factors influence people to migrate because other places offer a better life for them⁴.

In the last two decades, environment and climate change have been theorised as potential drivers of migration (Black and others 2011b; Campbell 2014; Findlay 2011; McLeman 2005; Mortreux and Barnett 2009; Tacoli 2009). Warner (2010, p.402) says that: ‘empirical research indicates that environmental changes including climate change currently play a role in migration’. Meze-Hausken (2000) and McLeman and Smit (2006) even highlight climate change as a specific driver of migration, separate from the general environmental driver. However, Black and others (2011b) underscored the notion that migration influenced by environmental change and climate change cannot be separated from migration associated with the range of other drivers. In discussing the link between climate change and migration, Perch-Nielsen and others (2008, p.378) gave a conceptualised model (Figure 8.1) that reveals heterogeneous effects, indirect and direct, of climate change leading to migration.

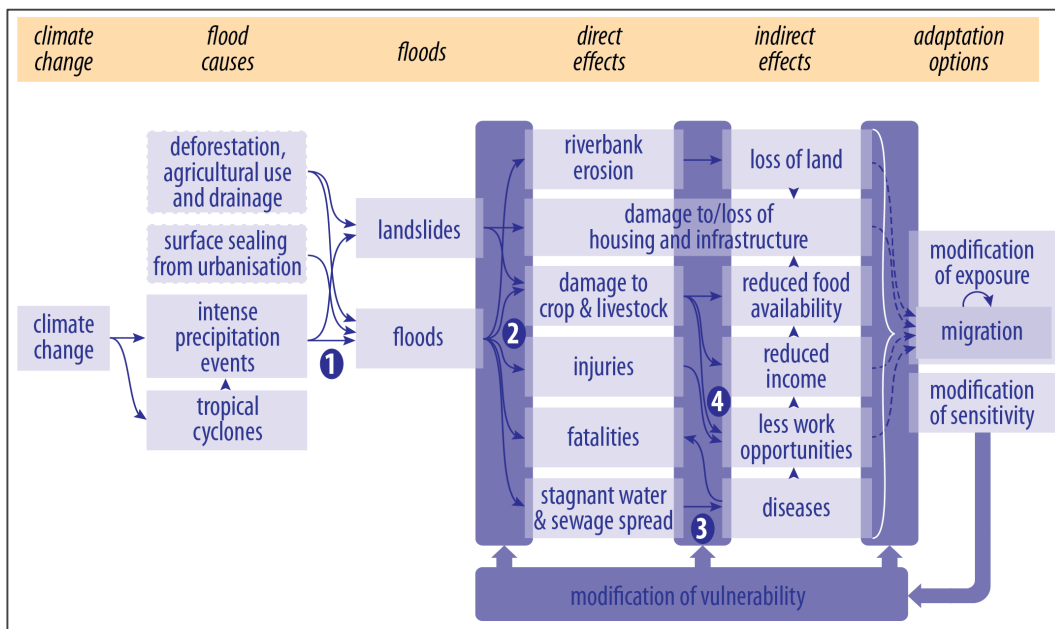


Figure 8.1: Conceptual model of the influence of climate change on migration.

Source: Adapted from Perch-Nielsen and others (2008, p.378). Used with permission.

⁴ See Portes (2010) and Castles (2010) for theories relating to the transformation implications to society from migration both internally and internationally.

Migration has also been theorised using various metaphors to explicitly contextualise this rather complex notion. In a general context, the latter part of the “roots and routes” metaphor portrays the mobility nature of people (Christensen and Jensen 2011; Gustafson 2001). It explains the fact that people do move from place to place to explore and discover. While roots and routes are not mutually exclusive, the latter gives little value to the place of origin and has no strong sense of attachment to a particular place compared to the former. With the extraordinary increases and improvements in the communication and transportation sectors, routes are becoming the norm of modern societies (Savage and others 2005). Leading British sociologist John Urry (2000) issued a manifesto centred on a new sociology of “flows” to replace a sociology of “territory”, arguing that belonging almost always involves diverse forms of mobility. Christensen and Jensen (2011, p.153) highlight that: ‘roots are not always meant to keep us in our place; they can be seen as opportunities to take root in several places, assume varying positions and establish belonging to different places that are a central part of multiple and transnational identities’.

Furthermore, Bonnemaïson’s (1994b) metaphor of “the tree and the canoe” depicted the latter as an illustration of the fluid nature of the people of Vanuatu, and this may be applied to the people of Tuvalu. According to Bonnemaïson (1985, p.43): ‘[t]he canoe metaphor gives an image of social space; this enclosed but mobile arena is a kind of wandering territory... The efforts of everyone ensure that the canoe moves forward and stays on course.’ The canoe demonstrates that people do move from time to time. In reviewing this metaphor Jolly (1996, p.916) noted the conception of the sea by Bonnemaïson as part of the road in which the canoe moves, which echoes Epeli Hau’ofa’s proclamation of the ocean connecting islands in the Pacific. The metaphor suggested that people do have a place to identify with, but also they are not all static, as they also move.

8.2.3 *The coconut fruit*

In Chapter V, I introduced my coconut theory to analogically explore the nature of the people using coconuts – “the coconut people”. I then metaphorically explained the connectedness of the people of Tuvalu to their land using a similar metaphor in

way the roots of the coconut are embedded in the land – “the coconut root”. In this section, I discuss the mobile nature of Tuvaluans and the Pacific people at large by hypothetically using the floating and dispersing nature of the fruit of the coconut – “the coconut fruit”. Coconuts are found on most Pacific islands particularly those within the tropical zone. Unlike most other plants, the coconut is dispersed and germinated not by birds and wind because of its size and weight, but by the action of the ocean and by human activities.

The coconut fruit is made up of a shell covered with a thick husk that protects the embryo. As shown in Figure 8.2, the coconut can float for long distances and for many days without being damaged when it is washed up on land by waves, and once exposed to the sunlight it will quickly germinate and become established (Harries 1978; Harries and Clement 2014). Harries (1978, p.268) referred to Edmondson’s description of the buoyancy of the coconut as not only a result of the thick husk and the shell but also because of the liquid, which partially fills it and is absorbed as the fruit matures making it float high in the water.



Figure 8.2: Buoyant nature of a floating coconut fruit in the sea.
Source: Courtesy of Apinelu Tili.

The history of how the islands in the Pacific were settled and populated is analogous to that of the coconut’s dissemination across the Pacific Ocean. The configuration of the Pacific Ocean, which is dotted with islands scattered across its enormous expanse of water – “the sea of islands” according to Hau’ofa (1993) – which was

occupied well before the dawn of the European exploration era, is a testament to the fluidity of movement of the Pacific people. Zooming down to the archipelago of Tuvalu, the scattered nature of the islands and how they were settled equally attested to the mobile nature of Tuvaluans. The subsequent sections of this chapter which discuss Tuvalu migration from place to place further speak about the mobility of Tuvaluans like the floating fruit of the coconut.

The coconut fruit is an important floating kit in Tuvalu. It is common for fishermen fishing offshore to take unhusked coconuts both as food and drink, as well as standby floating gear. As a floating kit, people in the old days used coconuts to cross the lagoons or passages from islet to islet as shown in Figure 8.3 of a Tuvaluan man in Funafuti crossing a passage between the islets.



Figure 8.3: Coconut fruits used as floating apparatus in Funafuti.
Source: Courtesy of Apinelu Tili.

Similar to the theoretical propositions of both the “roots and routes” and “the tree and the canoe”, “the coconut root and fruit” is being coined to portray the nature of Pacific Island people, particularly atoll islanders such as Tuvaluans. The roots and routes theory is a general proposition of people’s nature to take roots in a place and then to move on. The tree and the canoe theory on the other hand, is specifically based on the dual nature of the Vanuatu people as dictated by their history and culture. The coconut root and fruit is a theoretical proposition that illustrates atoll islanders’ cultural ties to their land (the coconut root) and at the same time it tells

of their nature of exploring the ocean (the coconut fruit). As people living in very small islands with considerable scarcity of resources, atoll islanders place high value on their land. The history of Tuvalu tells of early island settlers fighting to defend their island from marauders. It also shows how chiefs ruled the people because they owned and controlled the land. Land commands power and status even within the family setting, hence the land tenure system that is found in Tuvalu and other atoll countries as discussed in Chapter V & VII. By the same token, the scarcities of land on which they lived and shared naturally compelled atoll islanders to move beyond their horizons, instilling in them the importance of mobility.

The remainder of this chapter discusses Tuvaluans' mobility like the floating coconut fruit in the Pacific Ocean. In the final chapter, I weave together my coconut root and fruit metaphor and project it in light of the impacts of climate change and sea level rise. I then highlight the vulnerability of atoll islanders, whose roots may easily be detached from their land by the impacts of climate change and sea level rise, like the coconut whose roots do not penetrate deep into the soil and thus can be uprooted easily by coastal erosion as shown in Figure 8.4.



Figure 8.4: Row of coconuts about to topple due to coastal erosion in Nui.
Source: Author's own photo.

8.2.4 Some relevant statistics of migration

Around the world the number of migrants has increased exponentially since the last decade, and in 2013 alone there were 232 million international migrants (UNDESA 2013). Between 1990 and 2013 the number of international migrants worldwide rose by over 77 million or about 50 per cent and much of this growth occurred between 2000 and 2010 (UNDESA 2013). The United Nations Population Fund (UNFPA) reported that in 2015, there were 244 million migrants worldwide, representing 3.3 per cent of the world's population (UNFPA 2016)⁵.

In the context of climate change, Myers' (1997) numerical estimate of 200 million migrants by 2050 has been widely cited in the literature⁶. Nicholls' (2004) estimated figure of 50-200 million to migrate by 2080, and Christian Aid's (2007)⁷ prediction of 1 billion environmental migrants by 2050, are also in circulation. In the Pacific region, Campbell (2010a, p.38) estimated that 'there could be between 665,000 and 1,750,000 climate migrants in the Pacific region by mid-twenty-first century when the total population is projected to reach 18 million'. Although these figures are estimates, 'and that there is a vast disagreement, which defies easy calculation' (Baldwin 2013, p.1484), there is no doubt that large migration flows over the course of this century are plausible (Biermann and Boas 2010), and simultaneously indisputable as a future-conditional phenomenon (Baldwin 2013).

8.3 Tuvalu relocation: Within and beyond

Tuvalu has had relocation experiences in the past, both within and beyond. Within Tuvalu there were two community relocations that occurred around the late nineteenth and mid twentieth centuries. Both of these community relocations were the movement of people to Niulakita Island from Vaitupu and Niutao. I wish to also note that there were two relocations within the islands of Nanumea and Funafuti that took place during World War II. The entire populations were moved to Lakena

⁵ See Professor Angela McCarthy's, the new Director of the Centre for Global Migration, comments about global migration as being quite stable percentagewise (New Zealand Herald 16/05/17 at http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11856517, accessed on 18 May 2017).

⁶ His estimate was cited in the influential 2006 Stern Review and Asian Development Bank (ADB) policy papers.

⁷ Christian Aid is the British official relief and development agency of 41 British and Irish Churches which support communities in poverty and disaster related situations.

and Funafala islets respectively by the US military as safety measures. However, I decided not to discuss them in detail here as they are not particularly relevant for the purposes of this argument.

8.3.1 Within borders relocation: The case of Niulakita

Two different processes drove the relocation of people to Niulakita from Vaitupu, and later from Niutao. The case of Vaitupu people was trade oriented in an effort to further the island's copra business whereas the case of the Niutao people was based on environmental stressors. Niulakita is the southernmost and smallest island of Tuvalu. The first foreign sighting of Niulakita was on 29 August 1595⁸. There is no clear account of how Niulakita was first settled by the people of Tuvalu although there were claims based on semi-legendary stories from all islands except Nanumea of canoe voyaging that went astray and people landed in Niulakita (Hughes, 1992). What is more certain was that in the 1880s the people of Vaitupu started to occupy the island by dispatching copra workers to work and live there (Hughes 1992; Roberts 1958)⁹. In 1884, the Vaitupu people, under duress, sold Niulakita to Mr H.M. Ruge for £300¹⁰. Although the Vaitupu people sold Niulakita, Mr Ruge and subsequent owners of the island, which operated copra businesses continued to employ the Vaitupu people to work in Niulakita¹¹. The Vaitupu people therefore lived in Niulakita as copra cutters for more than 60 years.

⁸ Spanish navigator Alvaro de Mendana discovered Niulakita, which he named La Solitaria (Munro 1982).

⁹ The ownership of Niulakita by the people of Vaitupu was unclear but perhaps their occupation of the island under this copra scheme for many decades, if not much earlier, may have been the reason under the common law principle of adverse possession.

¹⁰ The sale of Niulakita was part of clearing a business debt, owed by the people of Vaitupu to the Vaitupu Company, when the company was liquidated and sold to Mr. H.M. Ruge by Mr William before he died (Hughes 1992).

¹¹ Mr H.J. Ruge and Company sold Niulakita to Mr H.J. Moors, an American citizen based in Apia on 15 April 1889 for \$1,000; Mr Moors sold it again to the Samoa Shipping and Trading Company of Sydney, New South Wales for £1,500 on 27 January 1914; on 30 November 1926 the Samoa Shipping and Trading Company sold it to Burns Philp (South Sea) Company Ltd for £1,200; and on 16 May 1944 Burns Philp sold it to the Western Pacific High Commissioner for £1,000 (Hughes 1992).

The occupation of Niulakita by the people of Niutao was a direct result of a report by the GEIC that Niutao was overpopulated and land was insufficient¹² (Hughes 1992). Initially, the relocation was planned for families with inadequate lands, whom Mr Cartland called “land-hungry families”, to be relocated either to Fiji, Samoa, Tonga, or even the Line Islands in the Gilbert Islands, now part of Kiribati. Tonga was eventually proposed to these families but was turned down because it was too cold for them. The Line Islands were too remote although there was a sense of acceptance to settle in Christmas Island (Hughes, 1992). After all possible options were explored, Niulakita was proposed and became the most attractive option to the people of Niutao obviously because of proximity and because it is also part of Tuvalu¹³.

Fortunately, this preference for Niulakita came at the time when the colonial government was in the process of resolving the ownership of the island. As a coincidence, the people of Niutao were relocated to Niulakita. However, instead of relocating these land-hungry families as originally planned, it was decided to send a working party to Niulakita to cut copra (Bedford 1967). Since then the people of Niutao have been living in Niulakita initially on short-term bases and as copra cutters. But now, according to one 54 year old male respondent named Feipuali¹⁴, the dispatching of people there is more on an ad hoc and long-term basis and only takes place if a person returned to Niutao and someone or a family is sent to replace them. During the fieldwork, I found out that most of the families in Niulakita have been living there for more than 10 to 20 years, and they seemed to be living there on a permanent basis. It is to be noted that the ownership of Niulakita to this day is vested under the government as crown land.

¹² Niutao was one of the islands in Tuvalu identified in the report by the Chief Lands Commissioner Mr B.C. Cartland to the GEIC Resident Commissioner that people were suffering social and economic hardship and needed to be relocated. In fact the report found that eight families, comprising 20 adults and 12 children, wished to emigrate on account of lack of sufficient land (Hughes 1992, Bedford, 1967, p.57).

¹³ The people of Vaitupu claimed that Mr Penitala Teo, who was a Niutao man serving as a senior officer in the GEIC administration at the time, was instrumental in getting the people of Niutao to be relocated to Niulakita.

¹⁴ He is the longest relocatee living in Niulakita at the time of the fieldwork.

8.3.2 *Beyond borders: The case of Kioans*

The acquisition of Kioa and the relocation of the people of Vaitupu was a rather fortuitous undertaking. It all began from a suggestion by Donald Gilbert Kennedy¹⁵ in 1946 while travelling from Tarawa to Suva via Vaitupu. Kioa was bought on 15 June 1946 through an auction sale for A£3,000 from cash donations¹⁶ of Vaitupu workers who worked for the US military during World War II (see Koch 1978; White 1965). The relocation of Vaitupians was rather tough because of poor arrangements. Selection of people to pioneer the relocation was made difficult because of fears caused by rumors about snakes in Kioa. After several attempts to select the migrants failed, the chiefs and elders of the island decided to use the traditional method of the *fola te pakau* (lit. laying of the mat)¹⁷. In doing so, 33 members volunteered to go to Kioa and this was restricted to adults only and no children.

The journey of the first group of relocatees, as narrated to me in 2014 during an interview with Nauna and Siapo, was compounded with excitement and uneventful activities. I unfold here a brief account of the interview with them, with reference where necessary to Neli Lifuka's story by Koch (1978), to reveal some of the challenges of relocation as a result of improper planning. And, I do so with great admiration for the ability of these two old women (87 and 92 years respectively) to recall and reminisce quite vividly what transpired during their ordeal, which is quite unusual for Tuvaluans at their age. They sadly passed away in 2015 and 2016 respectively. The ship called *Avaou* arrived in Vaitupu to pick up the relocatees on Sunday 19 October 1947 in the afternoon. It was supposed to be a short call just to

¹⁵ Mr Kennedy lived and worked in Vaitupu as head teacher of a secondary school named Elisefou School in the 1930s and thus had gained the respect and trust of the Vaitupu people.

¹⁶ This fund donation was intended for the construction of either a school or health clinic for the island but the people agreed to use it to purchase Kioa. There were further funds sought from 106 *matai* amounting to A£742, that is A£7 per *mataniu*, to ensure that the fund was sufficient for the auction sale. With the assistance of the GEIC Resident Commissioner Mr H.E. Maude in the auction bidding process, who was accompanied by Tofiga Foua of Vaitupu and Mr Kennedy, the island of Kioa was successfully won and bought by the people of Vaitupu for £3,000 on 15 June 1946 (Koch 1978, p.89).

¹⁷ The *fola te pakau* is a special tradition where community members would show their loyalty and patriotism for the island by volunteering to do whatever is required by the island in the name of Vaitupu. A special meeting of the community would be held and a mat would then be laid in the middle of the *falekaupule* seeking able-bodied members of the community to step in and sit on the mat to show their unequivocal willingness to volunteer.

pick up the relocatees but the ship did not leave until almost sunset. In Neli's account, the captain of the ship only allowed four hours for the people to board (Koch 1978, p.51). The delay was caused by chaos fuelled by the short notice of the ship's arrival and non-volunteered people who wanted to go at the last minute, particularly the wives and children of the married men who signed to be relocated alone. This resulted in a number of people having to return ashore taking with them the luggage of the relocatees, leaving some relocatees without anything but what they were wearing. In fact, as the ship started to set sail, a number of canoes were still paddling to bring the last lots of relocatees, and unfortunately the only canoe that contained the relocatees' food rations capsized resulting in there being no substantive foodstuffs for the relocatees' trip. According to Neli, he was on that canoe but when he boarded the ship started to sail without the food ration being loaded. So, he had to jump back ending in the canoe being hit by the ship propeller and capsizing, and finally leaving him behind as well (Koch 1978, p.51). The ship's late departure was also caused by the fact that the leader of the group came late, because he was busy trying to negotiate for a pastor to join the group¹⁸.

Siapo and her husband were actually among the voluntary relocatees but Nauna was not. Against her husband's wish, Siapo determined to join the relocatees not because of any future benefit she envisioned, but just because she could not let her 70 years old father who was the leader of the relocatee group go without her. Nauna reluctantly jumped onboard at the last minute. She said that while the people were all busy seeing off their families leaving, her father took her to the house and told her she had to go because Malaefou, who was one of the volunteered relocatees, had approached him to take her as his wife. This was a moment of shock but she could not say much because she respected her father dearly, so she packed and left for Kioa. She was 20 years old then. The ship docked at Funafuti for a day before it continued to Kioa¹⁹.

¹⁸ The pastor finally joined but the organisers of the trip disliked him because he was one of the two Vaitupu workers who did not contribute to the fund that was used to purchase Kioa.

¹⁹ At Funafuti, members of the group were finalised because some of the wives of the volunteered men and their children stowed away from Vaitupu in an effort to accompany their husbands all the way to Kioa. This finally brought the number of the first group to 34, which included 26 men, six married women, one single woman, and one girl. These figures are slightly different from that recorded by White (1965 6), which is 27 men, seven female adults and one female child.

At about 2pm on Sunday 26 October 1947 they arrived and set foot on the island of Kioa²⁰. On arrival the island was uninhabited but there were two old huts covered with trees at the place they landed called Salia²¹. The first night they all slept on the beach and for one long month, they had to walk to the other side of the island to a place called Naba every late afternoon to sleep there because there was one big house owned by a European man who had left few years earlier (see Map in Figure 4.14). The village and local houses were built and ready after about one month. They ate and drank from whatever fruit and root crops they could find and water from the streams. Both Nauna and Siapo said that it was a very painful and unpleasant experience, but they were happy to see through the transition of the first relocation. Nauna finally married Malaefou three months later in January 1948. Seven more groups of relocatees followed suit from 1948 to 1962 but in varying numbers as given in Table: 8.1.

Table 8.1: Number of relocated groups and individuals from Vaitupu to Kioa

Group Nos.	Date	Nos. of Men	Nos. of Women	Nos. of Children	Total
1	October 1947	26	7	1	34
2	April 1948	19	15	14	48
3	April 1951	6	8	16	30
4	September 1951	3	2	5	10
5	1954	14	14	15	43
6	August 1956	6	7	20	33
7	April 1959	2	2	4	6
8	September 1962	4	3	2	9

Source: Extracted from White (1965) except the first group is based on the figures from the interview with Nauna and Siapo.

²⁰ Nauna's recollection was that the ship arrived in Kioa at 11am instead of 2pm. I put the latter time because that was Siapo's recollection, which is the same as that recorded in Neli's story (Koch 1978) and White (1965).

²¹ Nauna said that as the ship negotiated the channel for anchorage, several men, out of excitement and enthusiasm, jumped into the sea and swam ashore ahead of the boat just to make history as the first Vaitupu man to land in Kioa. She learned that Malakai Siose was the first man to set foot in Kioa, and he was also the only person among these relocatees who had never returned for a visit to Vaitupu until he died.

8.3.3 *Diaspora in Fiji: The case of Veisari*

The population of Tuvaluans living in Veisari village constitutes a small fraction of the total Tuvalu diaspora residing in Fiji. I discuss Tuvaluans' diaspora in Veisari village under the heading relocation, although it does not strictly fall under the working definition of relocation I employed here, because these people are now staying permanently there. As illustrated in Figure 8.5, Veisari village is situated in the western outskirts of Suva, about eight kilometres from Suva central. Veisari village is about 1.5 square kilometres in size and lies alongside the Veisari River that zigzags from the interior mountains of Viti Levu past the Queens Road to the ocean. The village of Veisari is home to a number of ethnic groups, particularly Tuvaluans, native Fijians and Indo-Fijians, and a small number of I-Kiribati. The number of Tuvaluans living in Veisari village is uncertain, but there are about 20 family houses located in about 10 different privately owned plots. There are three family houses built on Crown Land, perhaps under lease arrangements. Most Tuvalu people living in Veisari at the time of the fieldwork were either born there or had been living there since their childhood.

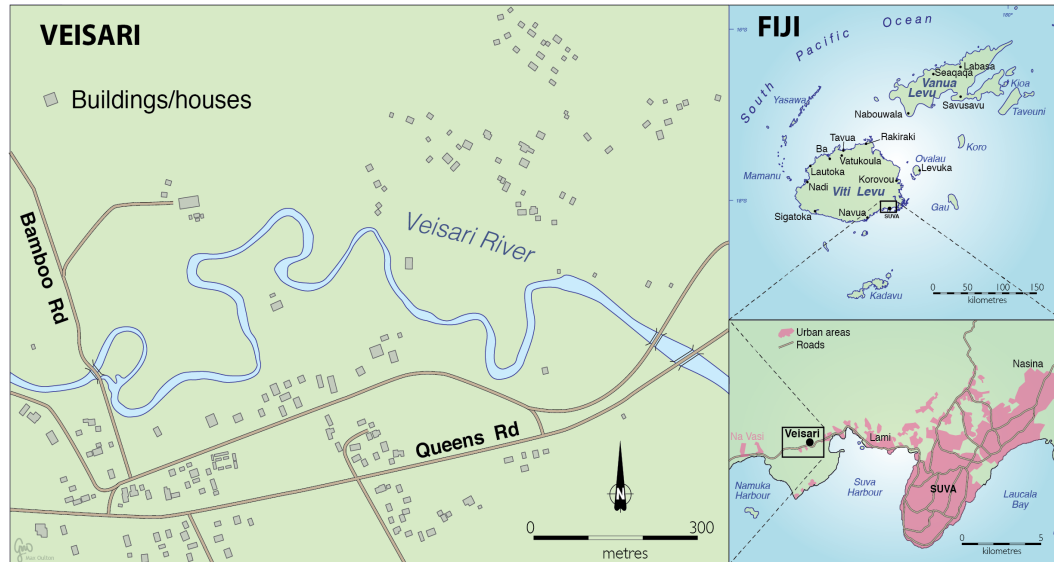


Figure 8.5: Map of Veisari village in Suva, Fiji.

Source: Author's own with the assistance of FASS cartographer Max Oulton.

Tuvaluans in Veisari came to Fiji in the mid 1900s when their ancestor seafarers bought freehold lands in that part of Viti Levu. The stories of the four interview respondents revealed that they came to Fiji at different times and for different

purposes. One of the respondents said that he migrated to Fiji in 1960 at the age of six because his seafarer uncle who bought a plot of land in Veisari adopted him. Another respondent said that he was born in Veisari a year after his parents migrated from Tuvalu in 1943. He said that his grandfather, who was a seafarer, bought a piece of land in Veisari and brought his parents to look after the land. The other two respondents migrated to Fiji because their parents/grandparents took them there and they later married Tuvaluan men who hailed from Veisari.

Although it is a small community, Tuvaluans in Veisari continue to practise Tuvalu customs; they speak Tuvaluan, cook and eat Tuvaluan foods, and so forth. During Tuvalu's Independence Day celebration in Fiji, the Tuvalu community in Veisari always compete with other members of the Tuvaluan diaspora in Suva in sports and *fatele* activities. This reveals the existence of the spirit of unity among this small Tuvalu community to uphold Tuvalu as their identity. I discuss this further later in this chapter.

8.4 Tuvalu migration: Internally and internationally

In the preceding section I discussed Tuvalu's relocation experiences, and in this section I focus on Tuvalu's migration. The pre-contact history of Tuvalu reveals that Tuvaluans, like other Pacific Islanders, were keen explorers who enjoyed less restrictive migration from place to place around the vast expanse of the Pacific Ocean, before the imaginary colonial boundaries were introduced by Europeans (Hau'ofa, 1989). The sea was never a barrier to them, and indeed it was a highway, to far off lands (Faaniu 1983). Internal migration in Tuvalu since the islands were settled has fundamentally shaped the community configuration today. People traversed the archipelago for various reasons resulting in inter-island marriage and chose to take root in the island of their choice. Overseas migration of Tuvaluans in the early years of its post-contact period was generally numerically small and circular in nature. Since independence, and particularly in the last decade or two, migration within and beyond Tuvalu borders has increased exponentially as a result of improved transportation and communication services, as well as the emergence of new avenues of opportunity.

8.4.1 Tuvalu internal migration

The stories of how Tuvalu was settled and populated, as discussed in Chapter II, were historical accounts of the migrations that took place within Tuvalu for many centuries. The early settlers travelled from island to island to obtain land and for adventure. Some were accidentally washed ashore in their journey to the unknown. Others were compelled to migrate as a result of traditional banishment and ended up on another island. During the whaling era people travelled within the archipelago on whaling ships to visit relatives and to find new homes (Munro, 1982). There was no clear pattern of the flow of migration in those years. However, when Funafuti became a sub-headquarters of the GEIC, and Vaitupu the host of the only secondary school for the group, migration to these two islands slightly increased. The movement of people internally was restricted due to the poor transportation services within the islands in which boats merely visited the islands once in two or three months.

When Tuvalu gained independence, Funafuti underwent rapid development and gradually attracted an influx of outer island people to the capital. Most of these people migrated in search of employment opportunities as the government and public enterprises based in Funafuti constitute about 75 per cent of the paid jobs in Tuvalu. The fact that the main hospital is in Funafuti coupled with the implementation of new health policies, which required compulsory treatment of certain diseases to be carried out in Funafuti, also contributed to the increase in the migration rate to the capital. Internal migration after independence was enhanced by the gradual improvement in the transportation services. The short-lived domestic air service in the early 1980s saw a noticeable increase and diversity in movement of people within the country. This migration pattern and the magnitude of movement increased further when the domestic shipping services were improved

by the arrival of three donated inter-island vessels²². The 2002 and 2012 Censuses testify to the pattern of migration of the people to Funafuti²³.

8.4.2 *Tuvalu international migration*

Tuvalu international migration is discussed in two broad categories; circular and permanent migration. I acknowledge however that there is another category that I prefer to label as temporary migration²⁴ but I intend not to discuss in detail because its nature is less relevant for my purpose. This category comprises Tuvaluans who migrate for education and medical purposes, particularly to Fiji, and it is growing at an increasing rate.

Circular migration in Tuvalu is discussed under three headings; mining, seafaring and seasonal or agricultural schemes. But first, what is circular migration? The International Organisation for Migration (IOM) (2016) describes it as the fluid movement of people between areas, usually for the purpose of employment. It is increasingly recognised that circular migration is one of the few means for resources to flow from core areas to peripheral areas (Hugo 2013). In Tuvalu, circular migration played a vital part in the country's development history. From its early years of colonisation to the present time, Tuvalu has enormously benefited from the remittances and material goods generated by its people who circulated overseas to work (Taomia 2006a; 2006b).

²² Beside M.V. Nivaga I, which was the only asset Tuvalu got from the British government during separation and independence, other vessels include M.V. Nivaga II by the British Government in 1988, and the M.V. Manu Folau and M.V. Nivaga III by the Government of Japan in 2001 and 2015 respectively.

²³ For instance, in 2002, there were 4,492 people resident in Funafuti and 5,069 in the outer islands. However, in 2012 the balance tilted with Funafuti hosting 6,152 (57.1 per cent) and the outer islands 4,630 (42.9 per cent) people. All of the outer islands each share less than 6 per cent of the 49.2 per cent, with the exception of Vaitupu which has 14.5 per cent (Central Statistics Division of the Government of Tuvalu 2013a).

²⁴ See Dustmann (1999) and Karayalcin (1994) for detailed discussions on the nature of temporary migration.

8.4.2.1 Mining migrants - Banaba & Nauru Phosphate Workers

Tuvaluans participated in the phosphate mining industry in Banaba and Nauru from the very beginning in the early 1900s²⁵. Recruitment of Tuvaluan workers in Banaba went through four distinct stages²⁶ according to Shlomowitz and Munro (1992, p.110). Until its closure in 1979, there were about 200 Tuvalu workers, not including their families, working in Banaba for most part of the phosphate-mining period (Faaniu, 1983, p.123). At this juncture, I wish to pencil in that my parents were Tuvaluan circular migrants in Banaba where one of my elder siblings and I were born.

Phosphate mining in Nauru began shortly after Banaba in 1905 (Gowdy and McDaniel 1999). Initially, there were very few Tuvaluan workers in the early stages of Nauru mining²⁷. By 1953, when the post-war reconstruction had been completed, the number of Tuvaluan workers and I-Kiribati increased substantially (Willmott 2007)²⁸. Towards the end of the last millennium, phosphate deposits in Nauru were depleted to the point that mining was not viable, wage rates fell to their lowest levels and were intermittently paid due to cash flow problems the mining company was facing. In 2004, the government of Tuvalu sent its own vessel to pick up the remaining Tuvaluans in Nauru after several requests from the Tuvaluan workers for repatriation were declined by the Nauru Phosphate Corporation.

²⁵ Faaniu (1983, p.122) noted that in 1900, when the Sydney-based Pacific Islands Company began to mobilise the machinery and labour for the phosphate mining in Banaba, it recruited 35 workers from Tuvalu.

²⁶ First, recruitment was regular and smooth for the first 15 years since mining began, although recruitment from Nukufetau, Funafuti and Nukulaelae was restricted. Second, recruitment was rather intermittent from 1916 to 1926 due partly to the poor wages and working conditions, and the fact that copra earnings in Tuvalu became more favourable. The third stage saw no recruitment at all of Tuvaluan workers from 1927 until 1936, following the repatriation of the entire Tuvalu work force in 1926 when they participated in a strike. The fourth stage was from 1936 until the mining operation in Banaba was closed in 1979, during which recruitment was smooth less the stand-down period during World War II.

²⁷ In fact, the number of Tuvaluan and I-Kiribati workers was never more than 50 from the beginning and during the interwar period, as they were reserved for the Banaba mining and copra cultivation in Fanning and Washington Islands (Shlomowitz and Munro 1992).

²⁸ Unlike their Chinese counterparts, Tuvaluan and I-Kiribati workers were allowed to bring their wives and two children under 12 years old, with contract arrangements of initially one year, which could be renewed for another three years (Viviani 1970, p.128). Also, despite the standard period of three years contract, many of the Tuvaluan workers ended up working in Nauru for much longer periods, ranging from 10 to more than 40 years.

The century-long history of Tuvalu circular migrants in Banaba and Nauru phosphate mining played an important part in the development history of Tuvalu. Although there is no verified information on the level of remittances contributed from this category of circular migrants, there is no doubt that households, communities, and the economy at large greatly benefited in one way or another. The remittances had helped households with their financial requirements such as children's school fees and basic store necessities; communities in projects like church buildings and community water cisterns; and the economy in reducing pressure on unemployment. One of the most significant benefits from the mining migrants relates to the material goods they sent home²⁹.

Seafaring migrants

Tuvalu's seafaring enterprise began well before the establishment of the GEIC maritime school in Kiribati in 1968, and Tuvalu's own maritime school in Amatuku, Funafuti in 1979. During the whaling era in the late 1800s and the beginning of the 1900s, young Tuvaluan men were occasionally engaged by whaling ships (Munro 1990, p.31), such as the case of Telava of Nukufetau reported by Faaniu (1983, p.122). Indeed in 1911, about 35 per cent of Nanumean men were employed on various European ships (Shlomowitz and Munro 1992). During the colonial era, a number of Tuvaluans had opportunities to work as sailors on colonial government vessels as well as other merchant ships servicing the colony, where they also provided cash income for their families. My uncle Paitela, whom I discussed in Chapter IV, and other old men of his age in Vaitupu used to talk about their seafaring experiences and how they became sources of cash income for their families. As alluded to earlier, some of these sailors had been able to save enough to buy freehold land in Veisari, Fiji.

²⁹ In those old good days, I remembered, when a ship from Banaba and Nauru came to Vaitupu; it was like a very big day for the people. The whole island would gather at the harbour and help unload the cargo and take the crates of household goods to the families' houses. It was always the case that migrant workers would send one or more crate(s) of foodstuffs, household materials, bicycles, fishing gear, tools, etc. for their families in Tuvalu. One of the things most anticipated by the people at home when a ship from Banaba and Nauru came was corned beef. Once someone called out that the ship was approaching the island, people would all shout out *momona tou tinae i pulumakau ma po nei* (lit. our belly will enjoy corned beef tonight).

When young Tuvaluan men began formal maritime training to become qualified able-bodied seafarers in international merchant ships, families started to send their young male members who had dropped out of school to pursue seafaring careers. This saw a significant increase in the number of this category of circular migrants to 1,000 registered graduates in 2004, with around 514 working on 79 vessels in 2000 and 350 in 2004 (Asian Development Bank 2004). The number fluctuates from year to year but since 2012 the number has drastically dropped to just over 100, and in December 2016 it was only around 80 (TOSU 2016)³⁰. The drop was due mainly to the global financial crisis that rendered a number of shipping companies that employed Tuvaluan seafarers bankrupt and led to their being shut down.

Remittances from seafarers contribute significantly to the economic and social development of Tuvalu. About 80 per cent of their income is normally sent to their families in Tuvalu, and the other 20 per cent would be consumed by them or on material goods like TV screens, radios, electrical appliances and so forth which they would eventually bring back home. ADB (2004) reported that remittances from Tuvalu seafarers accounted for about A\$4.7m in 2000 and A\$3.4m in 2003, and contributed to about 50-60 per cent of family income of people in the outer islands. The remittances were commonly used for household consumption, financing house construction, school fees, and other social obligations.

Seasonal or agricultural migrants (RSE & SWP)

Seasonal or agricultural migration began during the colonial epoch with coconut plantation employment in Fanning and Washington Islands (Shlomowitz and Munro, 1992, p.104). The lack of verified data with respect to the number of migrants involved and economic benefits derived from their employment should not belittle the impact that this circular migration category had in the early days of Tuvalu's development.³¹ In the early stage of independence, Tuvalu began to send

³⁰ TOSU stands for Tuvalu Overseas Seamen's Union. I obtained this information from the TOSU Secretary Mr Tusaga Iosefa on 12 December 2016 during the follow up fieldwork.

³¹ Shlomowitz and Munro (1992, p.105) cited a colonial officer's report dated 20 April 1920 which says that 'some 400 men [from Gilbert and Ellice Islands] worked [on coconut plantations] either at Fanning and Washington Islands, at local trading depots...'.
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its workers to work in the horticulture sector in New Zealand. This Tuvalu Work Permit Scheme (TWPS)³² was short-lived from 1986 to mid 1990s³³.

More recently, in 2007 the New Zealand government introduced its Recognised Seasonal Employer (RSE) scheme³⁴, which was followed by Australia in 2012 with its Seasonal Worker Programme (SWP). The New Zealand scheme is, according to Ramasamy and others (2008), a novel initiative endeavouring to achieve a triple win. This new employment avenue fuelled great interest as it came at the time when the unemployment rate in Tuvalu had jumped to a new height as a result of returned migrants from Nauru and the downturn in the seafaring employment industry. Although Tuvalu is eager to send as many as it could from its 1000 plus registered workers, the number of recruits in the subsequent years has never exceeded the initial recruitment as seen in Table: 8.2. This is partly because of the fact that RSE is an employer-led as opposed to a quota-based scheme (Bedford et al 2010) thus leaving Tuvalu and other sending countries at the mercy of the New Zealand employers.

³² The TWPS came about in 1984 during the Pacific Forum Leaders Meeting hosted in Tuvalu, when the Tuvalu Prime Minister raised the issue with the New Zealand Prime Minister, to consider work permits for Tuvaluans like those that Fijians, Samoans and Tongans had enjoyed since the 1970s (Levick and Bedford 1988 cited in Bedford 2010 *et al* p. 426).

³³ See Bedford and others (2010) and Simati (2009) for details of this TWPS.

³⁴ The RSE scheme is ‘a work policy designed to provide benefits to employers in New Zealand’s horticulture and viticulture industries, workers from Pacific countries that have limited opportunities for wage-earning employment in their countries, and the communities that the workers leave temporarily for work in New Zealand’ (Bedford and others 2010, p.421).

Table 8.2: RSE workers from nine sending countries in the Pacific region.

	Vanuatu	Tonga	Samoa	Kiribati	S/Islands	Tuvalu	PNG	Nauru	Fiji
2007/08	1698	805	647	69	238	99	-	-	-
2008/09	2342	1355	1228	38	311	49	-	-	-
2009/10	2137	1142	1021	48	256	54	-	-	-
2010/11	2352	1411	1219	149	252	51	-	-	-
2011/12	2412	1398	1162	142	407	88	6	-	-
2012/13	2829	1573	1137	138	423	56	31	-	-
2013/14	3070	1538	1169	127	491	71	58	-	-
2014/15	3435	1750	1238	136	511	70	96	20	30
2015/ March16	3030	1529	1427	142	532	64	61	20	83
TOTAL	23305	12501	10248	989	3421	602	255	40	113

Source: Lafaele Lupo, Relationship Manager, RSE: SPP; Settlement, Protection & Attraction Division; Immigration NZ; Ministry of Business, Innovation & Employment.

As an outgrowth of the RSE, the Australian SWP scheme started off in 2008 as a pilot scheme³⁵ and in 2012 it became a full-fledged one³⁶. Most of the arrangements, as well as the conditions of employment, are the same as the RSE except that the SWP extended from the horticulture and viticulture sectors to the accommodation and aquaculture sectors as well as cotton and cane growers (Brickenstein, 2015). Today, Tuvalu has managed to send fewer than 30 workers to Australia because of difficulties in securing places with employers.

Together, the RSE and SWP schemes have now become the main sources of income for households in the outer islands. Remittances from seasonal workers have exceeded the level of remittances from seafarers. The fact that the wages of seasonal workers are far higher than seafarers coupled with the reduced number of seafarers makes these seasonal worker schemes key to the sustainability of life in Tuvalu in

³⁵ The pilot scheme was called the Pacific Seasonal Worker Pilot Scheme (PSWPS) in which only three countries participated; Papua New Guinea, Vanuatu and Kiribati (Hay and Howes 2012).

³⁶ The scheme became known as the Seasonal Worker Programme (SWP) and was open to most Pacific Island Countries (PICs). As of June 2016, participating countries include Timor-Leste, Kiribati, Papua New Guinea, Nauru, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu (cited from the Department of Employment of the Government of Australia website <https://www.employment.gov.au/seasonal-worker-programme>).

light of the impacts of climate change and sea level rise on traditional sources of food.

Permanent migration on the other hand, is simply the long-term movement away from a place of origin (Barnett and Webber 2009). It should also be noted that permanent migration in this sense is not the same as relocation, because although they bear the same result, permanent migration is an individual or household movement whereas relocation, as defined earlier, is an organised movement of a large group of people. The Pacific Access Category (PAC) is perhaps the only formal permanent migration scheme that has recently generated strong interest among Tuvaluans. Introduced in 2002, the PAC is a special migration scheme by the New Zealand government that allows annual quotas for permanent residence visas for people from Fiji (250), Kiribati (75), Tonga (250) and Tuvalu (75).

As detailed in Table 8.3, in the first few years of its operation the PAC attracted little interest in Tuvalu. However, recently there has been a considerable increase. Within the 15 years since its inception, 744 Tuvaluans had gained permanent residency to live in New Zealand under the PAC. This is a very significant figure because it represents about seven per cent of the total population of Tuvalu as of 2012. While PAC is an important avenue, and beneficial for people who desire to leave Tuvalu, its impact on Tuvalu's economy in terms of remittances is minimal. I turn to this issue in more detail later in this chapter.

Table 8.3: Summary of Tuvalu PAC 2002 – 2016.

Year	Registered for the PAC		Selected by Ballot		Applied for PR		Obtained PR	
	Principal	Members	Principal	Members	Principal	Members	Principal	Members
2002	37	95	30	79	21	46	3	9
2003	34	93	27	75	7	22	10	19
2004	21	64	21	64	12	39	11	27
2005	147	412	35	84	25	56	12	22
2006	197	600	31	91	38	106	29	76
2007	181	596	26	91	26	99	24	79
2008	175	523	32	102	27	89	22	73
2009	182	460	45	112	33	82	20	56
2010	202	557	43	120	31	93	25	77
2011	115	358	26	89	17	40	23	67
2012	220	604	35	88	43	117	33	83
2013	316	876	28	82	27	84	25	77
2014	266	709	32	86	29	77	26	79
2015	335	888	38	102				
2016	382	997						
Total	2810	7832	449	1265	336	950	263	744

Source: Author's own based on data provided by Eva Williams, Relationship Manager, SPA Division, NZ Immigration Service on 8 June 2016 (Personal communication).

8.5 Migration as an adaptation option for climate change

It is well established in the literature that climate change and sea level rise, and environmental changes as a whole, can result in migration and relocation of people (Barrett 2012; Black and others 2011a; Black and others 2011d; Campbell 2014; Dun and Gemenne 2008; Meze-Hausken 2000). There is also a growing body of literature supporting migration as a climate change adaptation measure (Barnett and Webber 2009; Binci 2012; Black and others 2011c; Doria and others 2009; Fankhauser and others 1999; McLeman and Smit 2006). In this part, I focus

specifically on the concept of migration and relocation as a form of adaptation to the impacts of climate change. I begin by generally examining the scholarly arguments about the linkage between migration/relocation and climate change, and then discuss in detail (i) migration as a “resilience measure” enabling adaptation through remittances, and (ii) migration/relocation as an “avoidance measure” of not exposing people to the onset consequences of climate change. I discuss these in conjunction with relevant findings of my fieldwork.

8.5.1 Linkages between migration/relocation and climate change

The history of humanity testifies to the notion that there has always been a connection between human migration and settlement, and climate variability (Dolukhanov 1997; Fagan 2004). People move from place to place to survive the consequences of altered environments within which they live due to the changes brought about by climate. The relationship between climate change and migration, however, is ‘complex and unpredictable’ (Tacoli 2009, p.516) and there is considerable ambiguity exists (Campbell 2014, p.9). The complexity and ambiguity stem from the fact that climate change impacts are difficult to distinguish from other environmental impacts. In most cases, climate change impacts tend to be skewed by the broader environment consequences or vice versa.

To this end, it is imperative to highlight a few key points to avoid further ambiguity. First, migration and relocation as noted earlier are not the same – and I use them here to denote two different phenomena – because the former is an individual or household undertaking and the latter is an organised group movement of people, from one place to another. Second, it is important to note that there is a distinction between forced and induced climate change migration. “Forced” climate change migration ‘refers to those who have lost the land, livelihood, and/or food security of their homeland to such an extent that it is no longer habitable’, and “induced” climate change migration ‘connotes those whose homeland has experienced effects of climate change that are partial or not severe (at least not yet) and who thus may have a choice between staying and leaving...at the point of origin and the generation of remittances at the destination that can help offset climate-change losses at the origin’ (Campbell 2014, p.11).

The consequences of climate change, or environmental degradation for that matter, are principally an increase in the push factors of migration (Hugo 2012). Black and others (2011d) suggest that while environmental changes will exacerbate the already complex pattern of human mobility, migration offers both opportunities and challenges. Some of the impacts of climate change as push factors for migration include droughts that may cause lack of water and crop failure, seawater intrusion causing salinity of ground water, acidification of sea causing depletion in marine bio-diversity, sea level rise causing coastal erosion, and the list goes on. Campbell (2014) highlighted this point in terms of three security issues; land security, livelihood security, and habitat security, and offered a matrix of the effects of climate change on community security in the Pacific as given in Figure 8.6.

Main Effects	Implications
Sea-level Rise: <ul style="list-style-type: none"> • inundation • coastal erosion • storm surge exacerbated 	<i>Land security</i> in coastal and atoll locations may be severely reduced and there may be impacts on <i>livelihood security</i> through loss of agricultural land and salinization of soils, plants, and water supplies.
Water Resources: <ul style="list-style-type: none"> • rainfall uncertainty • increased frequency and magnitude of droughts • reduced quantity and quality of water resources • salinization 	<i>Livelihood security</i> may be affected by decreased agricultural productivity and <i>habitat security</i> may be adversely affected by water borne diseases.
Coral Reefs: <ul style="list-style-type: none"> • reef degradation as a result of increased sea surface temperatures and increased ocean acidity 	<i>Livelihood security</i> may be compromised by reductions in fisheries and other marine resources dependent on healthy coral environments. <i>Land security</i> may be reduced by increased exposure to high waves and storm surges.
Agriculture: <ul style="list-style-type: none"> • adverse effects from a variety of processes including temperature rise, reduced water availability, salinization, and exposure to tropical cyclones (wind, rain, and wave damage) 	Reduced agricultural productivity would impinge on <i>livelihood security</i> and, where extremely severe, may render some locations uninhabitable (<i>habitat security</i>).
Human Health: <ul style="list-style-type: none"> • changing disease vectors such as malaria and dengue • increased incidence of water-borne disease • increased incidence of heat-related diseases 	Effects on human health are likely to reduce the <i>habitat security</i> of island settlement locations and, where severe, may render some locations uninhabitable.

Figure 8.6: Effects of climate change and implications on community security. Source: Campbell (2014, p.5).

As discussed in detail later, the fieldwork indicated that the linkage between climate change and migration in Tuvalu is weak, because other pull factors such as work opportunities and educational ambition bear a higher immediate significance in the migration decisions of people. This is true for international migration and migration from outer islands to the capital in Tuvalu. Within each island however, there is a noticeable amount of relocation (inland) resulting from impacts of climate change though it is very limited. In Niutao for instance, one respondent said that they used to live very close to the coast, but the effect of coastal erosion and wave overtopping during high tides made them move inland. This is also seen in other islands such as Vaitupu. I noticed during the fieldwork that people who used to live along the coast when I was young have all moved inland. They said that recent wave surges washed away their belongings and some houses were inundated, so they could not take a second chance but to relocate inland to somewhere safer. It is to be noted that islands in Tuvalu are very narrow so inland relocation is not very far at all.

8.5.2 Migration as an adaptation strategy

Examining the concept of migration, as a means of adaptation to the impacts of climate change, needs to begin with a quick reflection on what adaptation is about. In Chapter III, I defined and explained in detail adaptation and its various elements. What is relevant and important here is the aspect of adaptation relating to the adjustment process to moderate harm from the actual or potential impacts that climate change may bring to vulnerable communities. At this point, it is imperative to introduce the concepts of vulnerability and resilience as they have not been discussed elsewhere in this thesis, but are both essential to understanding adaptation. These are complex concepts in their own rights and there is a significant body of literature about them (Cannon and Müller-Mahn 2010; Chambers 2006; Fisichelli and others 2016; Fussel 2007; Fussel and Klein 2006; Wisner and others 2004; Wolf and others 2013). Chambers (2006, p.33) propounds that vulnerability has ‘two sides; an external side of risks, shocks, and stress to which an individual or household is subject; and an internal side which is defencelessness, meaning a lack of means to cope without damaging loss.’ For the purpose of this thesis, I adopt the definition of vulnerability used by Wisner and others (2004, p.11) which is: ‘the characteristics of a person or group and their situation that influence their capacity

to anticipate, cope with, resist and recover from the impact of a natural hazard’ and for resilience I use Adger’s (2000, p.361) definition which is: ‘the ability of communities to withstand external shocks.’

Adaptation in the context of climate change is defined by IPCC as a process involving the adjustment of people and the natural system to actual and expected climate and its effects. It is the manner in which communities adjust to or respond to avoid an undesirable impact that may put them in a worse situation than they were before (Burson 2010; Doria and others 2009; Simonet and Fatoric 2016). With this in mind, how would migration assist communities to adapt to climate change? I now turn to the two streams of discussion on how migration can be an adaptation option.

8.5.2.1 Migration as a resilience measure

On one side of the divide, migration has been well documented as a means of supporting families and communities in the place of origin. Financially, the remittances from the migrants are an integral part of the balance of payments for small economies (Brown and others 2014; Connell and Conway 2000). Taomia (2006b) noted that remittances play an important part in the development of Tuvalu. The preceding sections on the social and economic impacts of remittances on the lives of Tuvaluans speak volumes and could not be further emphasised. In the context of climate change in Tuvalu, remittances from migration have certainly strengthened the resilience of the people and their capacity to sustain life in terms of their purchasing power of imported food because of the impacts already experienced on local produce such as *pulaka*.

Furthermore, migration helps bring new knowledge and understanding to the place of origin, particularly for vulnerable countries to the impacts of climate change and sea level rise as noted by Barnett and Chamberlain (2010, p.55):

Returning migrants can enhance the capacity of their communities of origin to adapt to climate change by bringing an understanding of the world and the climate change risks and responses, consolidating social networks, transmitting goods and services and transferring new skills...migration can also reduce per capita demands on goods

and services from ecosystems in sending regions, which in places such as Funafuti is essential for enabling ecosystems to adapt.

While this is true, my fieldwork findings indicate that not all forms of migration offer the same levels of remittances that benefit vulnerable communities. Circular migration is indeed a major and more consistent remittance driver than permanent migration. Due to the very nature of circular migration, such as the RSE and SWP schemes and seafaring, where workers return to the place of origin after the completion of their employment, it is not surprising that most of their wages are remitted back home. In fact, this is the only noticeable form of remittance in Tuvalu. Contrastingly, interviews with respondents in Tuvalu said that they hardly receive money from their families who have permanently migrated to New Zealand and Australia or other places. In verifying this point in a separate focus group meeting with island leaders/chiefs and *Kaupule* members of Nui and Vaitupu, they consensually agreed that people migrating under the PAC do not send money on a regular basis. They said that once these people left Tuvalu for good, they just turned their backs on their families, unless their families asked them to help for a family funeral or wedding.

In an effort to hear what the migrants say about this, my findings confirm that it is indeed the case. The overwhelming majority of permanent migrant respondents in New Zealand said that they do not send money on a regular basis at all to their families in Tuvalu. They only send money if their relatives in Tuvalu request it from them. In most cases, when they receive requests they send remittances, but on some occasions they did not. What came out clearly from the interviews was that these permanent migrants were also struggling to survive. They said that they could not send money on a regular basis because they have rent to pay, have bills to settle and need to pay for other basic necessities of life. In her research on the effect of PAC migration on development in Tuvalu, Simati (2009, p.89) noted that ‘remittances were not continuously flowing – for instance, on a monthly basis – but mainly occurred when there were requests from the families in Tuvalu or when there was a family *fakalavelave* [lit. commitment] such as a wedding’. Figure 8.7 is a bar

graph showing her findings on the nature of remittance flows from Tuvalu PAC migrants³⁷.

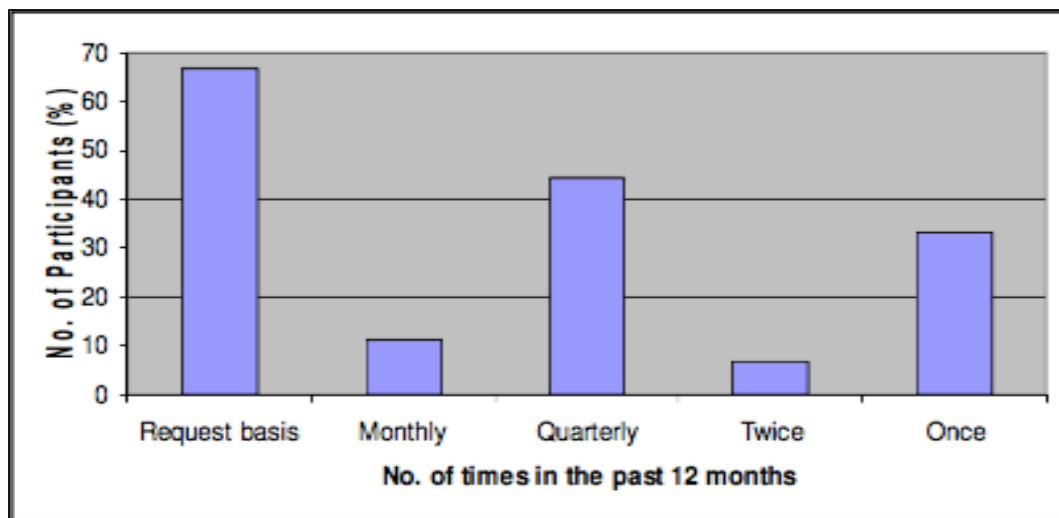


Figure 8.7: Number of times migrants sent remittance for 12 months in 2009.
Source: The effect of migration on development in Tuvalu: A case study of PAC migrants and their families by Simati (2009) p.89.

8.5.2.2 Migration as an avoidance measure

On other side of the divide, this concept of migration as an adaptation option means that, for affected communities not to be worse off as a result of the slow onset impacts of climate change, they have to move away from where they live. Burson (2010, p.16) highlights that if communities adopt migration as a possible coping strategy for climate change, then that opens a debate about whether or not migration is characterised as solely a failure of adaptation. This view underscores the extreme scenario when communities' habitual homes are deteriorating to the extent that no other adjustment to avoid further losses is possible and that resilience is exhausted, therefore migration is the only way to avoid the impact. In a different but related view, (Bardsley and Hugo 2010) assert that the use of migration in this situation is a precautionary measure to such climate change impacts as sea level rises, especially when the perception of the risk increases.

³⁷ Her husband, lead author of a paper titled "Do remittances decay?: Evidence from Tuvalu migrants in New Zealand" (Simati and Gibson 2001) also raised this point but concluded that remittances appear to rise if migrants stayed longer in New Zealand.

These two views (i) resilience and (ii) avoidance were acknowledged by Fankhauser and others (1999, p.69) when they said that the former is reactive adaptation and the latter is anticipatory adaptation. However, Shamsuddoha (2015, p.9) had this to say:

Fleeing from climate hotspots is not an ‘adaptation strategy’, it is an attempt of ‘survival’ of the people who have been forced or pushed away by the climatic stimuli in the context of ‘adaptation failure’. Such people’s attempt cannot be considered as an ‘adaptation strategy’ unless they are not supported by a ‘global adaptation goal’ and ‘adaptation framework’ that accommodates both internal and cross-border migration.

8.6 Tuvaluans’ take of migration due to climate change

At the outset, the vast majority of Tuvaluans do not subscribe to the notion of migration as a way of adapting to the impacts of climate change and sea level rise. Even those few Tuvaluans, who consider undertaking cross-border movement, do not take climate change as a lone driving factor. My fieldwork findings correlate to a large extent with the findings of scholars who undertook similar research in Tuvalu in the past (Corlew 2012; Farbotko and others 2016; Marino and Lazrus 2015; Mortreux and Barnett 2009; Shen and Gemenne 2011). In this subsection I reveal in detail the perceptions of Tuvaluans in Tuvalu, as well as the views of Tuvaluans living outside Tuvalu, with respect to the issue of migration in response to the impacts, or anticipated impacts, of climate change and sea level rise. I, however, begin the section with an overview of Tuvalu migration policy.

8.6.1 Tuvalu migration policy

Tuvalu recognises the importance of migration for the social and economic development of the country. As noted earlier, the history of Tuvalu’s migration pre-independence and post-independence has always been an integral part of the country’s development policy. The establishment of the Tuvalu Maritime Training Institute (TMTI) to train and prepare young Tuvaluan men (and now women) as seafarers, and the increased focus on education in general, clearly demonstrates Tuvalu’s strong interest in preparing its people for working opportunities within and beyond the country. The introduction of circular migration schemes such as the

RSE and SWP, and permanent migration schemes like the PAC within the last ten years has culminated in the formulation of a new migration policy in 2015, called the Tuvalu National Labour Migration Policy (TNLMP). The long-term vision of the TNLMP is:

To provide Tuvaluan citizens with increased opportunities to circulate and migrate for decent work opportunities abroad. Without promoting large-scale migration, it is part of government policy for temporary labour migration, as well as long-term residence overseas, to become realistic options for increasing numbers of people who wish to migrate with dignity to pursue opportunities in other countries.

The TNLMP contains five specific goals and objectives, which have been formulated on the basis of the broader government national strategy for sustainable development known as *Te Kakee II*, and other sectoral policies including the national strategic action plan for climate change known as *Te Kaniva*³⁸. The TNLMP is geared mainly to circular migration or work related migration, although it also acknowledges permanent migration if individuals choose to do so.

By and large, the government's official position on migration due to the impacts of climate change and sea level rise has not been as obvious as that of its former colonial partner Kiribati, which places great importance on migration³⁹. Tuvalu however, appears to remain loath to move elsewhere and thus always stands firm about remaining "on the island". From the very early stage of its participation in climate change talks, Tuvalu leaders have always advocated the people of Tuvalu's desire to remain in their islands as in former Prime Minister Toripi Lauti's (1997) statement during the Kyoto COP in 1997 which said: 'there is nowhere else on earth that can substitute for our God-given homeland in Tuvalu. The option of relocation

³⁸ *Te Kaniva*'s vision, as discussed in detail in Section 3.8, is 'to protect Tuvalu's status as a nation and its cultural identity and to build its capacity to ensure a safe, resilient and prosperous future'. Its vision and the seven thematic goals do not have any migration aspect to show Tuvalu's stance with respect to migration in light of the impacts of climate change. The absence of migration in the *Te Kaniva* was not an oversight. In fact, it was an issue that the people did not give strong policy consideration to during the nation-wide consultation that took place in the *Te Kaniva*'s formulation process.

³⁹ Kiribati, at least during President Anote Tong's government, placed migration as one of its priorities to combat the impact of climate change and has put in place a policy of 'migration with dignity' (McNamara 2015). He put his words into action by purchasing 6,000 hectares of land in Vanua Levu, Fiji in 2013 as part of his plan for migration with dignity (Korauaba 2015).

as mooted by some countries therefore is utterly insensitive and irresponsible'. Speaking at the opening of the Signing Ceremony of the Paris Agreement in New York in April 2016, Tuvalu Prime Minister Mr Enele Sosene Sopoaga highlighted the plight of displaced people due to climate change and called for a UN General Assembly resolution to establish a system of legal protection for such people. In making this call, Mr Sogoaga however unambiguously stated '...the concern about displaced people is not an indication that the people of Tuvalu want to migrate. This is certainly not the case. We want to stay' (Sopoaga 2016).

8.6.2 The voice from within Tuvalu

Discussing migration in the context of climate change evoked little enthusiasm among Tuvaluans living in Tuvalu. Findings of the fieldwork overwhelmingly show that the majority of people prefer to remain in the country. Both the semi-structured interview and the household survey questionnaire (HSQ) provided parallel outcomes. Of the 78 general interview respondents only 12 mentioned migration as an option. Contrastingly, 66 said that they did not want to migrate. Similarly, of the 150 households involved in the HSQ, 110 ticked the option to remain in Tuvalu and 40 opted to move elsewhere.

In trying to understand the people's reasons for their decisions, both the interview and HSQ methods contained questions asking the respondents to indicate their motives. While the HSQ gave four choices of reasons to migrate or not to migrate, the interview was formulated in a way to allow the interview respondents to freely discuss the reasons for their choice. In analysing the interview results, there were multiple and interrelated reasons which were then grouped accordingly. As shown in Table 8.4, of the 12 who chose to migrate eight of them said that fear of climate change and sea level rise was the main motive. Two were a combination of fear of climate change and sea level rise as well as an ambition to get education for their children. One preferred to migrate because of fear of climate change and sea level rise plus a desire to look for work opportunities. The other one was just for the sake of moving to a new place.

Table 8.4 and Table 8.5 show the reasons in favour and those not in favours of migration respectively.

Table 8.4: Motives in favour of migration.

Grounds for choosing migration	Total
1. Concerns about climate change (CC) & sea level rise (SLR)	8
2. Concerns about CC & SLR plus Education Ambitions	2
3. Concerns about CC & SLR plus Work ambitions	1
4. Other (Personal desire to migrate)	1
Grand Total =	12

Source: Author's own research findings.

As for those who said no to migration, there were five broad grounds on which their decisions were based. These include i) love to live in the home island, ii) feel secure in Tuvalu, iii) prefer traditional island lifestyle, iv) take care of family heritage, and v) others. There are also those that have multiple reasons for not wanting to migrate, which were a combination of these five main grounds. As shown in Table 8.5, the traditional lifestyle of Tuvalu tops the list with 15 people followed by those who have varying reasons (e.g. fear of cold weather, environment, language barrier, etc.) with 14 people and seven for those who just love to live in their home island. In terms of combination of the four main grounds, those who preferred traditional island lifestyle and felt secure at home were the highest with 13 people followed by nine for those who chose traditional island lifestyle and love to live in the island. It is clear from these interview results that lifestyle is the main motivating factor in these peoples' decision to choose not to migrate.

Table 8.5: Motives not in favour of migration.

Grounds for not choosing migration	Total
1. Prefer traditional island lifestyle	15
2. Others (e.g. weather, environment, language barrier, etc.)	14
3. Prefer traditional island lifestyle & feel secured at home	13
4. Prefer traditional island lifestyle & love to live in home island	9
5. Love to live in home island	7
6. Take care of family heritage	3
7. Feel secured at home	2
8. Feel secured at home & take care of family heritage	2
9. Love to live in home island & feel secured at home	1
Grand Total =	66

Source: Author's own research findings.

In contextualising the HSQ results against these interview findings a similar outcome was found. Reproduced below are the three questions and choices of answers relating to migration used in the questionnaire.

- (i) Do you plan to remain here or move to another place?
 - a) Remain b) Move

- (ii) If your answer is to move, what makes you think of moving?
 - a) Work opportunity c) Concern about CC/SLR
 - b) Education d) Others (*please mention*)

- (iii) If your answer is to remain, what makes you think of remaining here?
 - a) Like traditional lifestyle on the island c) Take care of family heritage
 - b) Feel secure and safe d) Others (*please mention*)

For the 40 households that ticked to move, 17 of them circled concern about climate change and sea level rise, 13 for work opportunity, five for education and four for others and one circled both work opportunity and education ambition. The pie chart in Figure 8.8 gives in percentage form these different reasons to migrate.

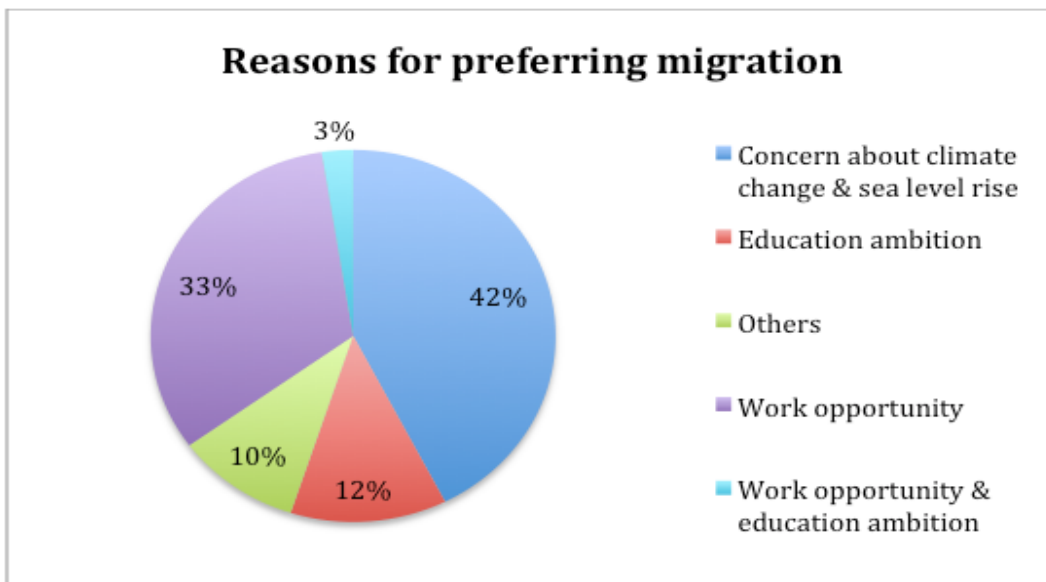


Figure 8.8: HQS findings regarding households that ticked migration.
Source: Author’s own research findings.

With respect to the 110 households who chose not to migrate, 41 chose the feel secure and safe at home, 17 for liking traditional lifestyle on the island and 14 for taking care of family heritage, and two for others. However, there were eight who

indicated that they both like traditional lifestyle and feel secure and safe at home, and another seven were for both traditional lifestyle and take care of family heritage. However, 21 respondents did not tick any reason for their choice not to migrate.

Figure 8.9 therefore shows that 46 per cent decided to remain in the island because they feel more secure and safe than moving elsewhere. This is followed by 24 per cent for preference of living the traditional lifestyle on the islands and 19 per cent for reason relating to taking care of family heritage. The others were a combination of the given reasons. However, it must be noted that those who ticked combinations of the given reasons mostly ticked lifestyle with either feel secure at home or take care of family heritage. Thus, lifestyle is highly valued by the household like the results found in the interview.

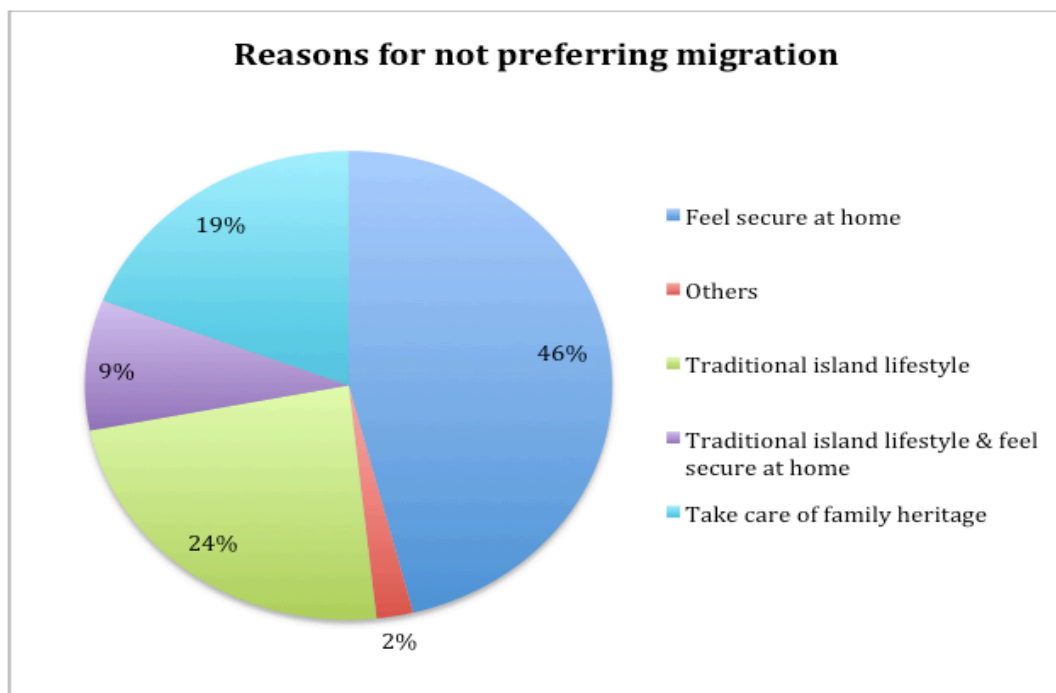


Figure 8.9: HQS results regarding households that ticked “no migration”.
Source: Author’s own research findings.

The essay writing rendered a similar outcome in terms of the numbers of those who made mention of migrating and staying. Although the questions did not ask a specific question of whether or not they want to migrate, the majority of the students clearly indicated their desire to stay more than migrating. Indeed, only 13 out of 91 primary school pupils specifically wrote about wanting to migrate because of sea level rise.

8.6.2.1 *Discussing the motives*

Interview respondents' responses about their motives were striking. Those in favour of migration on the grounds of fear of the impacts of climate change and sea level rise were convinced that what they see happening is far beyond Tuvaluans' capacity to cope. Most of them are more specifically concerned about sea level rise than other impacts of climate change. In expressing his view on this issue a 63 year old married man from Nanumaga living in Funafuti said: 'if I am given a choice to migrate, I will. This is because of sea level rise. If sea level continues to rise, we cannot do anything' (Mataio Liai). A 37 year old married female respondent from Vaitupu also shared a similar sentiment when she said:

If we think of the sea level rise, as we heard it on the news, Tuvalu is going to disappear. So it is better to go somewhere far and safe so that you can prepare a good place for your family to live (Tepope Siaupele)

Similarly, one of the 13 primary students who stressed migration as a future scenario for Tuvalu expressed his view as per the script in Box 8.1.

Ate luasefulu tausaga kaati a Tino Tuvalu ka talitali
ki nisi fenua lasi atu. A te tai kafanakenake eiloa
ate one ka puke nete galu o kave ki te kanomoana,
lakau foki kdae tutu pili ki tai i te tafataf
ka siga kilalo

(English Translation)

In the next twenty years, perhaps Tuvalu people will start moving to other bigger countries. The sea level is gradually increasing and sand is being taken away by waves to the deep ocean, trees along the beach will fall down.

Box 8.1: Essay script expressing migration by Webley Primary student.
Source: Author's own fieldwork.

Furthermore, those who expressed fear of climate change and another factor such as work opportunity and/or education for children appear to place the former as a secondary reason for migration. Given below is what transpired in an interview I had with a 41 year old married male respondent in Niutao:

Me: What do you think of the issue of going somewhere? Do you want to go somewhere, and if so, where and why?

Toakai Pakatu: Thank you for the question. That is our plan with my wife and our children that we will leave the island, Niutao, to go to another place [pause] because of education and other services that other countries have.

Me: So you want to go somewhere because of opportunities but not about concerns of climate change and sea level rise?

Toakai Pakatu: All of us we have that thing in mind that we do not know what is going to happen. As I mentioned earlier about food, there is no option of people living in Niutao because the *pulaka* is dying [referring to salinity of ground water due to climate change impacts]...that is also why my wife and I were planning to go.

The respondents who said no to migration demonstrate strong affiliation with certain characteristics of life in Tuvalu. The majority who preferred to live in the traditional island lifestyle gave reasons that varied from food preferences and dietary issues to total freedom of going anywhere one likes to visit on the atoll and communal activities. A 55 year old male respondent from Nukulaelae said: 'life in Tuvalu is simple, especially in Nukulaelae, there is no concern about money because you can eat coconut, fish, *pulaka*, breadfruit, banana...so living here in Tuvalu is good because I eat Tuvaluan food' (Galu Moeava). Another 56 year old male respondent from Nukulaelae expressed preference to live the island lifestyle as follows:

Tuvalu lifestyle is different from all the other countries, in Tuvalu you can go bathing in the sea with a fishing rod and then come back eat your fish and a piece of coconut. But in those other countries, if you do not work, you die. Life in Tuvalu is simple (Niu Ioane).

On freedom of movement as an island lifestyle, a 51 year old female respondent in Funafuti said:

I think it is better to stay here [Tuvalu] because if you want to go to another house or see your family you just walk there. If you go to other countries, the roof above your head and you are underneath sitting still, if you go there, is money, if you go there, is money (Tepola Raobu).

Expression of the simplicity of lifestyle these respondents uphold, also goes to matters discussed in the preceding chapter such as *falepili* and *tupe falani* under the Tuvaluan reciprocity concept. One can rest assured that if one needs something one can get it easily from one's neighbourhood. This cultural connection of people which gives them an easy lifestyle is what Niko Besnier referred to as 'an economy of affect' (cited in Chambers and Chambers 2001, p.135).

Security of life in Tuvalu has a strong bearing on people's decisions not to migrate. They consider Tuvalu as safer and more secure than other countries. This perception is rooted in the understanding that other countries are not immune to problems, particularly to climate change. Some were worried about problems such as gun fighting and environmental disasters like earthquakes and landslides that are not happening in Tuvalu. In clarifying her choice not to migrate, a 54 year old female respondent, Malia Amupelosa of Funafuti, said: 'here is good and safe, there is nothing you feel insecure with. In other places, we hear that people go with guns to other people'. One male respondent from Nukufetau, who was a seafarer and also worked in the mining in Nauru, expressed this view in a more general sense: 'I personally do not want to migrate. I have travelled to other places but they are not as nice as Tuvalu. Tuvalu is nice because of your freedom to go around as it is safe' (Kanino Ielemia). This security perception supersedes people's fears about the impacts of climate change and sea level rise that they themselves experience. In fact, some respondents express a general view that if climate change is affecting the entire world then there is no point of migrating. Another security issue relates to land. To Tuvaluans, if they live in Tuvalu they feel more secure because they have their own land on which they cultivate and eat food to be able to survive. As discussed in Chapter V, land or *fenua* is part of these people's lives. In this regard, they said that migrating to another country one really needs to get a job to get money to be able to live. But in Tuvalu, if you do not have money you still survive because of your land as clearly expressed by a 76 year old male respondent from Funafuti:

I don't want to go. I have lived in New Zealand, it's too cold for me..., another thing, if you live in those countries you need a lot of money to be able to survive. But here in Tuvalu, you can live without money because you can just live in your own land (Semeli Manase).

Moreover, there were those who simply said that they do not want to migrate because they love to live on the island. Fundamentally, for these people the island itself is all they want. This is the sense of rootedness to the land discussed earlier – coconut people’s roots to their *fenua*. This view is associated more with people who have been living in the islands most of their lives. Two female respondents from Vaitupu said this to me: ‘I cannot really leave Vaitupu...[sigh! showing deep sense of rootedness]. I just don’t want to live in another island’ (Vaepa Teuso, 51 year old woman). ‘I do not really want to live in another country because I was born here in Tuvalu. As I responded earlier, I deeply and dearly hold strong to Tuvalu because that is my heritage from God’ (Pitaasi Faimalaga, 38 year old woman). However, there are those who have travelled elsewhere or spent a substantial part of their lives in other places but still want to live in Tuvalu just because of the *fenua*. A 64 year old male respondent from Nanumea, who has worked as a seafarer for many years, said:

I do not want to migrate. I want to live here because I grew up here and I do not know [sigh], I just want to live here. During my seafaring time, I saw many nice places, but if I am on holiday, I just want to come straight here (Vanu Viliamu).

Lastly, there exists a motive relating to the sense of cultural responsibility to take care of family heritage, linked to sustaining traditional customs on the island. Embedded with the traditions of the household and the island system as a whole – *tautua* institutions’ responsibilities discussed in Chapter VII – with which they grew up, these people felt that they have a responsibility as guardians and custodians of the land. Land or *fenua*, as discussed in Chapter V, entails traditional obligations to look after and maintain, as it is their identities. Tapuli Paitela, a 49 year old male respondent from Vaitupu said: ‘I cannot leave Vaitupu because of the cultural responsibilities that I feel I have to live by’. In a more specific view, this is what a 52 year old male respondent from Nui said during the interview:

Me: What do you think of leaving Tuvalu to go and live in another country? Do you want to go or not?

Nivaa: If there is something happen...[pause]

Me: So you want to leave?

Nivaa: No, I do not want to leave.

- Me: Why?
- Nivaa: I do not want to go because only myself [pause] and my wife.
- Me: What do you mean only yourself?
- Nivaa: [Sigh!] Oh! because I have to look after our family heritage. My sister and I are the only ones left in our family on the island. The other thing is that there is nobody else in our family to carry out our family's traditional responsibilities and contributions to the island.

It is to be noted that for those who fall under the category of 'other' motive, they generally said that the weather in Tuvalu is more favourable to them. They do not want to move to place where the weather is too cold. Others plainly said that they were too old to move while some made mention of the distance as a discouraging factor to move elsewhere.

8.6.3 Views of returned migrants

Interestingly, returned migrants shared most of these views. As noted in the earlier chapters, I took time to interview Tuvaluan migrants who have returned home after having migrated or having been relocated from their homes. These include four returned migrants from Niulakita to Niutao and five from Kioa to Tuvalu. The aim was to examine the motives behind their decisions to return in order to place them in the context of the views of those who intend not to migrate.

The four returned migrants from Niulakita to Niutao shared similar views about life in Niulakita compared to Niutao. They said that in Niulakita, life is good in terms of local foods. Nevertheless, these returned migrants placed more value on family heritage in Niutao than the abundant supply of land produce and sources of protein in Niulakita. In explaining the reason for returning to Niutao, two male respondents said: 'the reason I decided to return to Niutao is because there is no one to take care of our family land' (Kapui Soaloo, 55 year old man). 'The reason I came back because there is nobody looking after our land. Also, there is no-one taking care of our mother because I am the only male child, that is why I returned' (Tia Tupou, 54 year old man). Their rootedness to their land was the main reason they returned.

Moreover, returned migrants from Kioa shared mixed views about returning to Tuvalu. Lifestyle, weather and work opportunities appear to be the main reasons for their decisions to return. Two of the migrants/relocatees returned to Tuvalu in

search of work, one returned because the weather in Kioa was too cold for her, one because her daughter has returned to Tuvalu, and the other one was due to her own desire to return to Vaitupu because it is *te koga ne fati iei tena laupua* – her place of origin. In discussing their views, lifestyle emerged as a crucial factor. To them the similarity of lifestyles in Kioa and Vaitupu makes them feel no difference when leaving Kioa because they still practice *fatele*, *ano* and other traditional cultural activities that they learned from Kioa in Tuvalu. In other words, if lifestyles in Tuvalu were totally different from Kioa, they would have not returned to Tuvalu because they want to live in a place where their Tuvalu lifestyle is also practised.

Apparently, the two returned migrants who were born and bred in Kioa appear to draw stronger ties with Kioa lifestyle than Vaitupu lifestyle despite the similarity in most aspects. Contrastingly, the other three who were born and spent their childhood years in Vaitupu seem to place equal affiliation to lifestyle in Kioa and Vaitupu, although one specifically said: ‘when I was in Kioa, I always think and long to come back to Vaitupu because of island activities and traditional customs, although Kioa is good in all things’ (Nauna Malaefou, 87 year old woman). Interestingly, when asked which island they would prefer to be identified with, all said without reservation that Vaitupu is their true identity⁴⁰.

8.6.4 *The voice from afar*

At the outset, Tuvaluans living overseas generally perceive migration as an option for Tuvaluans living in Tuvalu in light of the impacts of climate change and sea level rise. In trying to understand why they felt this way, the majority of the respondents⁴¹ informed me that the primary issue is safety of living in Tuvalu. Their

⁴⁰ In the early years of relocation to Kioa, a handful of relocatees returned to Vaitupu, some with initial intentions to bring their families and others to cure their disease (elephantiasis) but never made it back to Kioa (White 1965). Views shared by people in Kioa suggest that these returned relocatees to Vaitupu did not like the tough life in Kioa and also missed the lifestyle they grew up with before being relocated.

⁴¹ In Fiji, five of the six respondents lived there because their grandparents and parents decided to migrate, and one was on his own choice after being married to a Fijian from Rotuma. In New Zealand, of the 12 respondents two migrated under the PAC scheme, three through their parents, two migrated first to Niue and then to New Zealand, three through the skilled-labour migration category, one as a Tokelau citizen and one as an over-stayer. Many of them have migrated and lived in Fiji and New Zealand for more than ten years.

love and compassion about the safety of their families, friends and loved ones in Tuvalu is quite understandable. It is a perception based on humanitarian grounds. Ironically, they acknowledged that migrating away from Tuvalu does not bring with it the beauty of the life in Tuvalu. There are certain features of the place of origin that continue to linger and live in them. This feeling became clear when I asked how they compare life in their origins and destinations. Paradoxically, while all of these respondents talk highly of their destinations as being more developed than Tuvalu and that they do not regret living there, the majority of them still rated Tuvalu as a much better place in which to live. In Fiji, five of the six respondents still prefer the life in Tuvalu because of family ties and peacefulness. Similarly, in New Zealand nine of the 12 respondents asserted that Tuvalu is a better place, with family ties being the highest consideration followed by land security. While family ties are highly valued their importance may diminish over time if members of one's family start joining them.

Talking from their own experiences these migrant respondents assert that Tuvalu is more peaceful and safer to live. This is because there is hardly any house theft, fighting or people attacking others, let alone killing and other problems that are seen in bigger countries such as Fiji and New Zealand. This is what a 42 year old married male respondent living in Hamilton said:

I used to tell my friends at work [referring to *pakeha*] that in Tuvalu I can lie down anywhere I go when I am tired. I can even sleep on the runway the whole night, and when I wake up the next day there is nothing happened to me and even all my possessions are still with me. But here [referring to New Zealand] one cannot do that because it is scary and dangerous (Molu Tavita).

In terms of land security, these respondents are not saying that land in Tuvalu is safe to live on through the impacts of climate change and sea level rise because obviously they know that Tuvalu's land elevation is low and it is infertile. What they mean by land security is more to do with owning a piece of land. These respondents state that in Fiji and New Zealand life is tough because they do not own land as they do in Tuvalu. With the absence of the land owning life that they have in Tuvalu, one has to work day and night to be able to survive to buy food and pay rent. Again, it is the *fenua* that these Tuvaluans feel so attached to because their

fenua had always provided for their subsistence. A 45 year old male respondent living in Auckland said this:

Life here, we get a lot of money today, and tomorrow we used them all. But in Tuvalu we get small money but we still survive safely because we have our own land. That is the difference. Life here is very tough, price of goods continues to rise. So we feel a very hard life here. Thus, life is easy and nice in Tuvalu, and also there is more freedom and liberty in Tuvalu (Armstrong Tekie).

One fundamental point that emerged from all the respondents was their love for the *fenua* or atolls in Tuvalu. Observing how emotionally they expressed their views of not wanting to see Tuvalu disappear as generally discussed by the media was quite remarkable. They said that they could not imagine Tuvalu disappearing because if it does, then they cannot claim to be people from Tuvalu. When asked how they wish to be identified given that they have decided to migrate away from Tuvalu and some have changed citizenship, all of the respondents in both New Zealand and Fiji, unequivocally avowed that Tuvalu was their true identity. This finding reveals that even the migrants have a strong sense of attachment to their place of origin. They are obviously coconut people, although now growing elsewhere, they still reminisce and hold true, without doubt, to their original place. They are coconut fruits that have floated and established elsewhere but they believe their roots still belong in Tuvalu.

8.7 How Tuvaluans view relocation in light of climate change

I now turn to relocation as a separate matter from migration, to illuminate the people of Tuvalu's experiences and how they feel. By and large, Tuvaluans consider relocation as the last and final option. In this section I discuss how the people of Tuvalu view relocation in light of the uncertainty about the future of Tuvalu due to climate change. I begin by taking stock of the experiences of the Niulakita and Kioa relocatees and then I discuss the dissenting and supporting views of the people in Tuvalu about relocation.

8.7.1 Experience of Niulakita and Kioa relocatees

As discussed earlier in this chapter, relocation to Niulakita and Kioa had different natures and purposes. The spatial and temporal dimensions of the relocations were

also dissimilar; in the case of Niulakita it was never intended for the people to relocate permanently, whereas the Kioa relocation was on a long term and permanent basis. In discussing with them their experiences and how they feel about being relocated, I learned at the outset that there is a slight difference in perspective between those who were relocated from their place of origins and those who were born and bred in their new destinations. Similarly, there is also a difference between relocation within borders and across borders.

In Niulakita, I managed to interview seven of the 51 members of the community living on the island at the time of the fieldwork. Of these seven, five were relocated from Niutao as adults, one when she was very young (three years old at the time of relocation), and the other one was born and bred in Niulakita. They have lived in Niulakita for many years with the longest period being 29 years and the shortest seven years. The Niulakita relocation transition was rather smooth according to the respondents. Beside education being the only drawback, these relocatees attested to the fact that their relocation was of great benefit to them. Of course this may not be the same for the first relocatees from Niutao in 1947, but I do not want to speculate on it. Furthermore, it was apparent from the fieldwork that Niulakita relocatees did not experience any major cultural shock, and this was expected because it was an internal relocation. They were relocated to a location already occupied by the same ethnic group. Interestingly however, for the adults who moved to Niulakita there still exists a very strong tie to their place of origin, Niutao. In fact, when asked how they view Niulakita and Niutao in terms of identity, the majority of them aligned with the latter. In contrast, the two respondents who grew up in Niulakita identified themselves with Niulakita.

In discussing their experience of being moved to and living in Niulakita, they all said that they have no regrets. Indeed, they revealed that life in Niulakita is good in most aspects of traditional Tuvaluan lifestyle. This assertion relates to the life they experience in Niulakita compared to the life in their place of origin, Niutao. The plentifulness of food and the peaceful environment were the two main features that make Niulakita a better place to them than Niutao. The oldest and longest person living in Niulakita at the time of the fieldwork said:

Life here is very good. It is good in terms of the basic necessities of life. If I compare with my life in Niutao, I think here in Niulakita is far better. Here in Niulakita there are plenty of local food and it is peaceful since there are very few people living here (Feipuali Telua, 54 year old man)

The respondent who was born and bred in Niulakita had the opportunity to live in Niutao for three years when she got married. However, she said that she and her husband returned to Niulakita because ‘life is easy in terms of food and peacefulness’ (Talita Feipuali, 27 year old woman).

Kioans’ experience of relocation is different⁴². First and foremost is the fact that their relocation was beyond national borders. More contrastingly, was the very fact that they were relocated from a flat reef island to a rugged and cliff etched high island with steep hillsides plunging into the sea (White 1965). As noted earlier, Kioa’s relocation was not well planned, particularly for the first group. There was no government involvement in the planning and implementation except for the arrangement of the ship to transfer the groups to Kioa. The poor relocation arrangements resulted in the first three or so groups, particularly the inaugural group, facing great challenges as narrated earlier by Siapo and Nauna. With no proper place to live and food to eat, the early relocatees worked tirelessly to clear the thick bush and build local houses and start planting coconuts and root crops. Life was extremely tough and they missed the easy life in Vaitupu (Koch 1978). An 83 year old male respondent who was part of the third group of relocatees, Lemuelu Nukai, also attested to the extreme difficulty they faced when they arrived in Kioa. While they were good farmers and fishermen in Vaitupu, the environmental conditions of Kioa dictated totally different farming and fishing techniques. White (1965, p.8) noted this when he said that: ‘Kioans met with no success in employing Vaitupu bonito fishing techniques in Fiji with the canoes they brought from Vaitupu. Even planting taro the way they did in Vaitupu was not applicable in Kioa because of the different type of soil’.

In the course of almost seven decades, the people of Kioa now have learnt how to live and survive on the island. In discussing how they feel about being relocated,

⁴² For a different but related relocation experience, see the case of the Banaba people who were relocated to Rabi in 1945, an island near to Kioa (Edwards 2013; McAdam 2016; Teaiwa 2014).

these respondents generally felt blessed, because they knew that in Fiji there are more opportunities in most aspects of life than in Tuvalu. It was a dream come true, because they were told of how their parents and grandparents had struggled in the first place for them to be able to live a good life. What impressed me during the fieldwork was that the true Vaitupuan dialect that I knew at my young age is better preserved in Kioa than in Vaitupu. I suppose the lack of similar Tuvaluan dialects in Kioa could be the reason the Vaitupuan dialect has been well maintained.

However, this does not render immunity of the Vaitupuan language in Kioa. In fact, the influence of the Fijian language is slowly encroaching into the lives of the younger people. This also applies to Vaitupu customs and traditions. Most if not all Vaitupuan cultural activities are practised in Kioa from the chiefly and *matai* systems to local entertainment and sports. There seems to be little, if no, cultural shock experienced by the Kioan relocatees and this perhaps, was due to the fact that Kioa was uninhabited when the relocation took place. Nonetheless, the mere fact that Fijian villages surround Kioa may make the Vaitupu cultures susceptible to Fiji cultural influences. One obvious Fiji custom that is strongly practised in Kioa, and now is becoming a tradition in Tuvalu, is the yaqona (*kava* or grog) drinking custom. This form of relocation is closely equated to what Silverman (1977) termed as a “satellite” relocation model. It is a type of relocation where a significant part of the social configuration of the place of origin is reflected in the new destination.

Observing and learning about the experiences shared by relocatees both in Niulakita and Kioa gave me an impression that relocation is not an easy policy issue. It is indeed a phenomenon compounded with complex and multifaceted challenges. Some of these challenges may be solved if better planning and implementation of basic infrastructure, services and so forth are provided to avoid problems that were experienced by early relocatees in Niulakita and Kioa. However, when it comes to land to which most of the core cultural values of Tuvalu are embedded, the issue is extremely difficult, if not impossible to address. The land tenure issues in Niulakita and Kioa are a living testimony to this problem. For almost seventy years since the relocation to these two places took place, the issue of land tenure has been a problem. The relocatees felt that they do not have the same land security that they enjoyed in Niutao and Vaitupu where they owned land. In the case of Niulakita, the

ownership of the island is unresolved and as mentioned earlier, it is state owned land under the administration of the Niutao *Kaupule*. This arrangement gave the Niulakita relocatees usufruct rights only but not full ownership. Similarly, in Kioa the ownership right to the island is vested in the 110 *matai* living in Vaitupu.⁴³ The representatives of the *matai* living in Kioa only have the right to use the land, but any major development on the island has to be approved from Vaitupu.

In this respect, there is a sense of insecurity and unhappiness that these relocatees appeared to conceal. Living in a place for so many years naturally makes one develop a sense of authority and ownership of the place. This appears to be the situation in Niulakita and Kioa. Such dissatisfaction, if not resolved may fuel public disorder in the future. One of the respondents in Niulakita made mention of a dream that he has for Niulakita to become independent from Niutao and to have its own Member of Parliament in the future. In Kioa, I know of several attempts in the past where Kioan envoys visited Vaitupu to seek and obtain the right to manage the island, but did not receive the approval of the 110 *matai*. Land tenure therefore, is an important relocation issue to be addressed at the very beginning of any attempt to relocate people.

8.7.2 Perceptions of the general public

There is an overwhelming perception downplaying relocation amongst Tuvaluans. Relocation is generally perceived by Tuvaluans as a failure to adapt to the impacts of climate change. In this respect, they see relocation as the trump card to play, *only* if all possibilities to stay have been fully explored and completely exhausted. McNamara and Gibson (2009) stressed this point when they said that relocation is often the option of last resort because it is costly – financially, psychologically, and socially. But why is it that Tuvaluans do not prefer relocation? What makes them so bluntly insist to remain in the islands even though they themselves have seen and experienced some impacts of climate change and sea level rise? In answering these questions, it is imperative to draw on some of the views shared by the majority of the interview respondents. But before doing so, it is only fair to examine the views

⁴³ See Koch (1978, p.89) for a detailed explanation of the legal history of Kioa.

of the minority who consider relocation as an option, and which I wish to begin with.

The few respondents who uphold relocation as an option to be taken were quite sure that Tuvalu would be submerged. They took for granted media discourse, coupled with what they have seen happening; that it is highly likely that the islands will disappear. In explaining the reason why he prefers to leave Tuvalu, a 65 year old male respondent in Nui, Ala Lolesi, said: 'I want to move to somewhere safe. I can see that the sea level is rising every time and our island is small and low. Who knows, we may be drowned any time'. A 57 year old woman in Niutao shared the same sentiments; she wants to leave Tuvalu: '...because of sea level rise, I really want to go somewhere that I can save my life' (Sela Fagauta). In a focus group meeting with chiefs and members of the Nanumea *Kaupule*, they consensually disagreed with relocation, but one *Kaupule* member, on a personal capacity, interjected: 'I think if scientists' prediction is true, then I think I would go [sigh] so I could survive...I do not want to prematurely die of stubbornness just because of my heart for my island sinking and to be drowned together with it'.

Moreover, the minority of students who wrote about relocating as their preference seemed to share the same concern that the islands will soon disappear, as given in two essay scripts in Box 8.2.

* I taku kiloga ki tausaga kinei ka mai. Ka isi ne fakalavelave ka oto ki luga i te tou atufenua. ka pokoha ate tafatafai, i taku fakatou me ka fakamasei neia ate tau atufenua. < muamua o fakamasei neia ate hukole, ka oti ko fakamasei neia a lakau. Teta la e tau mo tatou o fai ki fenua lasi, ke mai o fesoasoani o o puke ate tatou, ona me ko lasi a tatou ne fakamasei ne latou.

(English Translation)

My view in the coming years there will be problems to our country. The coast will be impacted and I think it will cause damage to our country. It will first damage the land and then the trees. So we must ask big countries to come and help us and take us because they caused damage to us.

Teta la e tau mo tatou o fakatagi atu ki fenua lasi kise fesoasoani ona me ko latou ne fakatupu e tau mo latou o fesoasoani o tutu mai mai se fenua tai lasi mo Tuvalu. Me seiloa mai mua nei ite 20-30 tausaga ka galo ifo a Tuvalu ki lalo.

(English Translation)

Therefore we must ask big countries to help us because they caused the problem to sea level rise. So they must come to our aid and give us a large island for Tuvalu. We do not know in the next 20-30 years Tuvalu will become submerged.

Box 8.2: Essays preferring relocation by Webley students.

Source: Author's own fieldwork.

In contrast, the majority of respondents do not want to relocate from Tuvalu because of a number of considerations. First, there are those who were uncertain about the extent of the impacts that climate change and sea level rise would bring to the islands in Tuvalu. They do not want to be relocated and only to be told later that the islands still exist. One Nanumea *Kaupule* member expressed unwillingness to relocate in the following way:

One option for us to remain here even if the island is about to submerge is to ask big countries like England and USA to send big ships to save us but to anchor here by the island to observe and see the island is disappearing then and only then they could take us somewhere. If the island re-emerges then we go back to our island.

Adding to that view, another Nanumea *Kaupule* oddly said: ‘I prefer to build a tall beacon and climb up to observe the island disappearing and to die if the beacon submerges as well’. Such comments may sound dramatic, but the message that these people communicate carries a very deep sense of unwillingness to leave their *fenua*.

Moreover, there are those who were deeply influenced by their faith that Tuvalu will not be submerged – a topic I discuss in the next chapter. Some were too strongly rooted to the land in which they have lived for the most part of their lives and in which they hold strong to the belief that it is their God-given place to live. One of the very few respondents who had not travelled overseas said:

I do not support the idea to relocate. I have a personal conviction that someone created this world and whatever changes are currently happening are part and parcel of his plan. I therefore hold true that Tuvalu will never be submerged’ (Tapuli Paitela, 49 year old man from Vaitupu).

Others do not prefer relocation because of concern about the possible loss of Tuvalu’s cultural identity. Lanieta Falesiu, a 37 year old female respondent, explained this point well when she said: ‘relocation is not preferable because I believe the purity of our culture and our identity could not be truly recognised outside our island’. The staunchest respondents gave very blunt responses, objecting to the idea of relocation completely. A 55 year old female respondent in Niutao said: ‘I am determined to die here in my island’ (Peleti Taukiei). Another 57 year old male respondent from Niutao, who has had walking disability since birth said ‘I will not go anywhere. I want to die here because relocating to another place will not prevent me from dying. We all die!’ (Kapule Lopati). Farbotko and others (2016, p.537) highlight this point when they said: ‘some Tuvaluans say they would rather die or drown with their islands than move elsewhere in response to the effects of climate change’.

Such concern is predominant in the majority of students who participated in the essay writing. A substantial number of students gave very touching stories showing their strong connectedness to their islands such as the two scripts given in Box 8.3.

aka fakate'a. liloa na au mee'utino i Tuvalu ese
 fia olo o migrate ki nisi fenua aka me e fia
 nofo loa i olotoufenua. Tuvalu is a beautiful is
 I want to stay here in Tuvalu.
 - cultures / tradition / values
 - I love my beautiful Island.

(English Translation)

[...] I know the people of Tuvalu do not want to migrate to other countries because they want to stay in their islands. Tuvalu is a beautiful island. I want to stay here in Tuvalu, culture/tradition/values, I love my beautiful island.

-takis tala e fai peni Au e se fia faho ki fenua mauga me
 tau au o nofo i Tuvalu e lei au ma ~~ma~~ mate i konei me e tenei
 toko fenua me e tenei te fenua ne fanau ei au me ese tau au o
 list

(English Translation)

My story goes like this. I do not want to go to high islands because I must stay in Tuvalu. It is better for me to die here because this is my island, this is the island I was born and I must not [go].

Box 8.3: Essay scripts regarding preference to stay.
Source: Author's own fieldwork.

8.7.3 Destination preference for relocation

While the general perception was not in favour of relocation, there exists an “eleventh-hour” notion of when time is up. Most of the dissenting respondents to relocation, with the exception of the most staunch, said that when life is at the tipping point of death, then for obvious reasons relocation is the only step to take. In view of this “eleventh-hour” scenario, I questioned the respondents as to which destination they would prefer, and on what grounds would they determine their relocation destination. Of the 78 respondents, 25 preferred New Zealand, 22 favoured Australia, Fiji came third with 17 and the remainder had no particular preference⁴⁴. Some respondents said that they would go with whatever the government decides. The pie chart in Figure 8.10 gives a clearer representation in percentage form of the respondents’ preference of places for relocation. It is to be

⁴⁴ Also confer with the United Nations University (UNU) report summary 2015 on how does climate change affect migration in the Pacific for its finding about Tuvalu’s take of migration at the UNFCCC website: https://unfccc.int/files/science/workstreams/research/application/pdf/part2_unu-ehs_oakes_vandergeest_poster.pdf accessed on 13 March 2017.

noted that some respondents mentioned two or three of the countries but the analysis was based on the first place they mentioned if not clearly singled out.

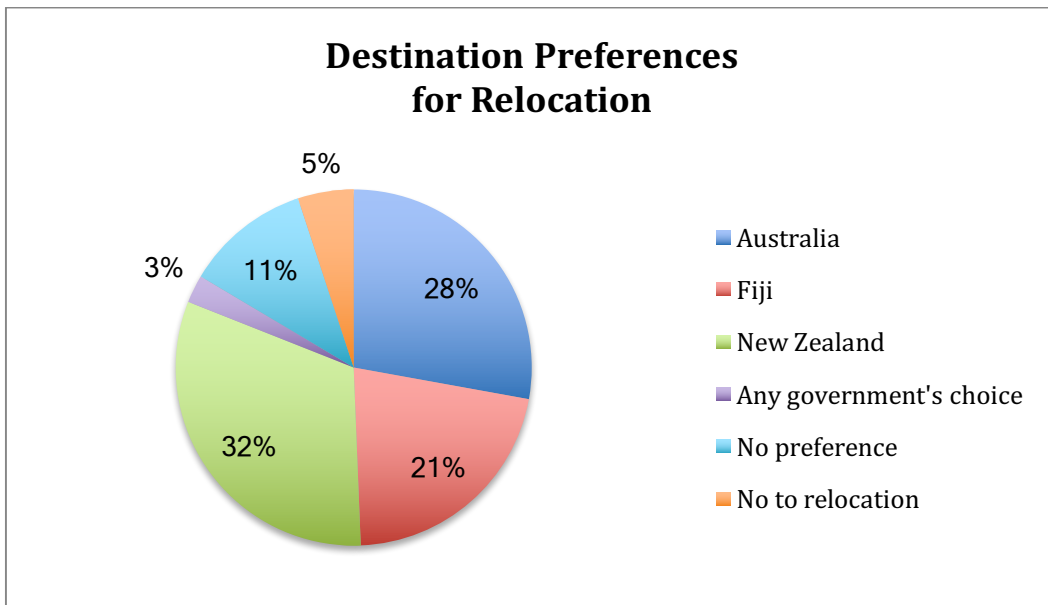


Figure 8.10: Preferred destination if relocation eventuates.
Source: Author's own research findings.

There are several grounds upon which these choices of destinations were based, which are provided in the matrix in Table 8.6. The biggest group were those without any particular reason for their choice. These twenty respondents' answers seemed to me as having nothing to do with their lack of reason. It was because they were not contemplating relocation. Second in the list was a preference relating to larger and higher land with other associated economic and social factors such as good education and work opportunities, which is 19 in total. In explaining her choice of destination, a 34 year old married woman Iutofi Taaue said: 'I prefer New Zealand, or even Australia because they are big and work opportunities are many. If we are to be relocated, at least these places have work opportunities where we could get earning for living'. Seu Talapai, a 66 year old male respondent shared the same view: 'Australia is a good place, because I have been there and work opportunities are plentiful'.

Table 8.6: Matrix of preferences if relocation eventuates.

Physical Geography Preferences	Human Geography Preferences	Other Preferences
1. Close by or not too far from home island or country	1. Place where same people live (families and friends)	1. Sufficient employment opportunity
2. High land but a place close to the sea	2. Culture is similar and easy to practice	2. Good education system
3. Large piece of land or island where each of the eight islands can have their own plot	3. Pacific lifestyle where there is (e.g. coconut, yaqona, and fish)	3. Good health service
4. Tropical weather (warm and not too cold)	4. Safe and secure environment	

Source: Author's own research findings.

Family ties and friends, and weather considerations are two other important factors. Seelu Namoto, a 69 year old male respondent from Vaitupu attested to the former choice when he said: 'I prefer New Zealand, because there are many Tuvalu people living there as well as other Pacific islanders'. Likewise, a 31 year old married female respondent from Funafuti said: 'my mind said New Zealand because recently a lot of our Tuvaluan families are migrating there' (Lesia Penitala). Of those who attached great importance to the weather, they wanted a place that is warm like Tuvalu. One 81 year old female respondent from Nukulaelae said: 'I think the best place for us to relocate to is Fiji, because it has the same climate as Tuvalu' (Kausele R. Moresi). Two respondents preferred Australia because of the fact that: 'Tuvalu uses the Australian currency' (Freda Katepu, 50 year old woman & Afele Eti, 24 years old man).

Proximity to homeland was another consideration, which stretched to include weather, culture and lifestyle. These respondents were basically making reference to Fiji, which is Tuvalu's neighbouring country to the south. Interestingly, these respondents' preference of proximity was not only a matter of cost, but also of their sense of attachment to Tuvalu. These people feel that if they were relocated too far

from Tuvalu, then it would make them feel greatly nostalgic for their islands. Also, they feel that staying close to Tuvalu would make them feel more at home. They do not want to lose connection to their homeland by relocating too far from it, with some contemplating returning if Tuvalu was to re-emerge. The following interview with Fauvaka Keniseli, the 63 year old head of the island of Nui, reveals what proximity to homeland means to them:

Me: If you are to be relocated because of sea level rise and the islands are disappearing, which place would you prefer to relocate to, New Zealand, Fiji, Australia, or any other country?

Fauvaka: I, in my own view, [sigh] of course I heard that those countries are all good but I am more concerned about closeness. I think Fiji is good as I do not want to be away from Tuvalu for too long; I could just go there and come back here.

Me: But what if Tuvalu actually disappears?

Fauvaka: Oh, you mean if Tuvalu disappears, then I think [pause and sigh]

Me: So you still prefer Fiji?

Fauvaka: Yes, Fiji!

Me: Why?

Fauvaka: Because in my mind, who knows if Tuvalu appears again [leaning backward and laugh loudly]. Then I can come back because I love my island, my country.

Many of these views obviously portray the people's desire to be relocated to somewhere similar to Tuvalu. They want a place where the weather is not cold, but warm and breezy, close to the sea or surrounded by sea like Tuvalu where they could practise their traditional art of fishing, where there is a lagoon to bathe with ease as they do in Tuvalu, and where the land is similar to Tuvalu so they could continue to plant coconuts and other traditional crops. Apparently, all these descriptions of the destination they wish to relocate depict a place like an island, but probably with higher ground. One of the most fundamental issues I observed in the way the respondents expressed their wish was the land tenure. As repeatedly alluded to in the other chapters, land tenure is key to the way of life of Tuvaluans. When asked of what he would prefer to have in the new destination, a 62 year old

man, Kaitu Nokisi, said: ‘our culture must be maintained such as how our land system works, and the *matai* system because those are our main systems we have with us now’. Therefore, it is of utmost importance that consideration of destination should not lose sight of land tenure and other core customs as it dictates the core values of Tuvaluan culture. I return to this point in a more detail in the second last chapter.

8.8 Conclusion

In this chapter I have outlined and discussed the history, theories and practical examples of migration and relocation in the context of climate change and sea level rise, placing emphasis on Tuvalu. It was clear from the discussion that migration is not a new phenomenon, but has always been part of human history. Tuvalu’s migration experiences give practical examples of the fluid nature of the people analogous to a coconut fruit that floats and establishes itself wherever it is washed up. Historical information of relocations to Niulakita and Kioa provides useful information for policy consideration.

However, when discussing migration in response to the impacts of climate change and sea level rise it was clear that the majority of Tuvaluans do not subscribe to it. The Government of Tuvalu’s stance and statement on migration clearly reveals that migration due to the threat posed by climate change does not warrant great significance as a government policy agenda. In terms of relocation, while the people do not want relocation, they do acknowledge that if worse came to the worst, then relocation is the only option of last resort. However, if it is time to relocate, they prefer a destination similar to Tuvalu in most, if not all, aspects and land tenure should be seriously considered, as it is the foundation of Tuvaluan cultures.

CHAPTER IX

THE FADING RAINBOW AND THE ARK

The traditional interpretation and understanding of Noah's narrative is that God unilaterally made the covenant, sealed by a rainbow he placed in the sky. This is the main obstacle for us, Tuvalu Christians. And that is why we tend to say that there is nothing happening [referring to the impacts of climate change]. This problem of interpretation of Noah's narrative must be viewed in a more modern context.

(Maina Talia, 2014, EKT 30 year old male respondent)

9.1 Introduction

After Noah and his family were saved in and by the Ark from the global deluge that destroyed everything on Earth, God said to Noah: ‘I will establish my covenant with you; neither shall all flesh be cut off any more by the waters of a flood; neither shall there any more be a flood to destroy the earth. I do set the bow in the cloud, and it shall be for a token of a covenant between me and the earth’ (Genesis 9: 11 & 13). Christian fundamentalists believe that God’s covenant with Noah is an everlasting promise. Tuvaluans, 95 per cent of whom are Christians, literally take the words of God in the Bible as genuinely true. So strong is their faith that they continue to see the rainbow as a reminder of God’s promise that there will be no more floods. However, the increasing reality of climate change and sea level rise in Tuvalu in recent years is causing the rainbow to start fading in the minds of some Tuvaluan Christians. The discourse discussed in the earlier chapters about the rising sea levels and the possible disappearance of atoll states such as Tuvalu prompted the important question of “what type of ark should be constructed to save Tuvalu and its people”?

In this chapter, I examine how religious beliefs influence people's ways of understanding, and making informed decisions, about climate change and sea level rise. I begin with an overview of the history of the traditional religion of the people of Tuvalu, and the dawn of Christianity in the islands. I then review the relevant theology of climate change and sea level rise in the literature to inform the discussion in the subsequent sections of the chapter. Furthermore, I discuss the

worldviews of the people of Tuvalu as they relate to climate change and sea level rise in light of their religious beliefs. In doing so, I look particularly at the issue of Tuvalu as a God-given land, and God's covenant symbolised by the rainbow. In the second last section, I reveal the controversy that exists within the Tuvalu Christian Church (lit. Ekalesia Kelisiano Tuvalu (EKT)) about climate change and sea level rise and discuss the two types of faiths – *fakatuanaki sagasaga* and *fakatuanaki galue* – that lie in the centre of Tuvalu Christians' conceptions of these phenomena. I conclude the chapter by reconstructing the Ark of Noah in the Tuvalu context as options to save the people and the islands.

9.2 Background of religions in Tuvalu

Religion has been and still is a core fundamental part of the social development of Tuvalu. Since the archipelago was first settled, Tuvaluans' social life evolved around religious practices resulting in some becoming part of their cultural norms. The history of the religious life of Tuvaluans from the pre-contact period to the modern day reveals very strong ties between the people and their gods or God. As a predominantly Christian nation since the late nineteenth century, biblical teachings have been the centrepiece of Tuvalu and its people's social upbringing. In this section, I examine relevant aspects of the socio-history of the evolution of religion in Tuvalu in order to understand and appreciate the way the people of Tuvalu think about climate change and sea level rise.

9.2.1 Old religion in Tuvalu

The story of the old religions in Tuvalu is similar to other countries in the Pacific region, especially in Polynesian.¹ Tuvaluans in the pre-contact period had their own religious beliefs (Lusama 2004, p.31). They believed and worshipped different deities. The following two accounts quoted in Kofe (1983, pp.30-31) reveal the gods of Tuvaluan ancestors:

They [Tuvaluans] worshipped the spirits of their ancestors; mostly those who originally peopled the islands, but some of the later generations have been deified in some of the islands. They have shrines in some places where they offer their devotions, and where

¹ For detailed information about religion in the Pacific see Rapaport (2013).

the gods come to hear their prayers and accept their offerings. (Rev. S.J. Whitmee, 1870).

They [Tuvaluans] worshipped shooting stars and rainbows, but the principal objects of adoration are the skull and jawbones of the dead. (Dr. W.W. Gill, 1885).

While these two accounts contain many interesting issues, I found the second quote serves as a stepping-stone to some of the discussions to follow. Dr Gill's account of the people of Nanumaga worshipping shooting stars and rainbows, in particular, raises a number of questions such as (i) why did they worship cosmological objects such as the rainbow?; (ii) was there anything important in the rainbow to them?; (iii) did they already know about the rainbow in the story of Noah and the flood before the arrival of Christianity? It is not my purpose to speculate on the possible answers to these questions but to comment that the rainbow has historical importance in the religious life of Tuvaluans from the very beginning.

Furthermore, Kennedy's (1931, pp.147-149) account of a supplication prayer, used in Vaitupu is a story of its own (see Box 9.1). The supplication contains a hidden story of the religious faith of the people. It tells of the importance of the people's god in sustaining life in times of need. Although there are a number of academics and scholars (especially Tuvaluans) (Fusi 2005; Kofe 1976; 1983; Talia 2009) who have made reference to this recorded supplication prayer, no significant analytical view has been given to it except a very brief comment by Talia (2005, p.63). Given its relevance to understanding the role of religions in the life of Tuvaluans in the past, especially in times of trouble, I discuss below my own interpretation. This may be a small contribution to the untold story of the old religion practised by Tuvaluan ancestors.

<p><u>Vaka-atua:</u> <i>"Koe mai a luga na, Ono mai ki tou kau afua, Avaka te mouku o uta, Ke vau ki a luga, Mo fai ou totoga, Ki te malamaga nei, Kae mana mai la koe mai a lunga?"</i></p>	<p><u>Priest:</u> "O thou who dwellest high Look down on all your people Bring up the vegetation on shore That it may come up To be your gift To this congregation, And dost thou look down on us with favours from above?"</p>
<p><u>Fakapotopotoga:</u> "Mana!"</p>	<p><u>Congregation:</u> "Favour!"</p>
<p><u>Vaka-atua:</u> <i>"Kae tuli mai ne koe mai a lunga Tafola tu, Mo fai ou totonga Ki te malamanga nei, Kae mana mai la koe mai a lunga?"</i></p>	<p><u>Priest:</u> "And chase down from above A school of whales As your gift To this congregation. And dost thou look down on us with favour from above?"</p>
<p><u>Fakapotopotoga:</u> "Mana!"</p>	<p><u>Congregation:</u> "Favour!"</p>
<p><u>Vaka-atua:</u> <i>"Ave ake se ulu fonu Se kapakau isave, Se moana tu Mo fai ou totonga Kite malamanga nei. Kae mana mai la koe mai a lunga?"</i></p>	<p><u>Priest:</u> "Bring up a crowd of turtle A shoal of flying-fish, A shoal of bonito, As your gift To this congregation. And dost thou look down on us with favour from above?"</p>
<p><u>Fakapotopotoga:</u> "Mana!"</p>	<p><u>Congregation:</u> "Favour!"</p>
<p><u>Vaka-atua:</u> <i>"Tuli mai ne koe mai tafa sulu Tafola tu, Mo fai ou totonga ki te malamaga nei, Kae mana mai la koe mai a lunga?"</i></p>	<p><u>Priest:</u> "Chase hither from the south-east A school of whales As your gift To this congregation. And dost thou look down on us with favour from above?"</p>
<p><u>Fakapotopotoga:</u> "Mana!"</p>	<p><u>Congregation:</u> "Favour!"</p>

Box 9.1: A pre-Christian prayer of supplication used in Vaitupu.

Source: Reproduced with minor format modifications from "The field notes on the culture of Vaitupu, Ellice Islands" by D.G. Kennedy, 1931, pages 147-149.

At the outset, the manner in which the supplication was performed is characteristic of the current setting of most religions. The *vaka-atua* who performed the supplication is not different from modern priests and pastors conducting Christian church services. The *fakapotopotoga*, which was a group of worshippers, is what we now call the church congregation. Although not clearly described by Kennedy, the supplication appears to be some sort of ritual where the congregation would bow and raise their heads and hands seeking blessings from above. This is

analogous to some religious form of worship or acknowledging God such as that practised by Catholics, Muslims, and Protestants.

More importantly, the supplication made reference to a god who dwelt in heaven. It starts with the priest acknowledging first the presence of their god above and asking a favour to look down on all the people. And, in all four verses the priest's repeated utterance of "you from high" or "you from above" shows that their god was not from this world but somewhere in the space above. Indeed the use of "thou look down on us" in all the verses coupled with the use of "chase down from above" and "thou dwellest high" signalled the existence of their deity in the sky. In today's religious beliefs, especially Christianity, people believe in a god that lives in heaven; the space outside their material world. This, therefore, leads us to think whether this was the same god that Christians today believe in?

Furthermore, the interval interjections by the congregation of the word *mana* are comparable to today's use of the word "amen" by Christians in their prayers. While "amen" varies in contextual use, it generally serves as an expression of agreement, confirmation, or approval of what has been said (Encyclopaedia Britannica 2006)². Although Kennedy's translation of *mana* as a favour in this context may be correct, it does not fully capture the essence of *mana* in the Tuvaluan context. In Tuvalu, *mana* means power or supernatural power (Jackson 2001). Talia (2005, p.63) acknowledges this translation paucity and states that *mana* has the sense of power, authority or efficacy. In fact, the part of the *mana* uttered by the *vaka-atua* was actually used in the context of giving acknowledgement of the power and authority of their god.

Essentially, the supplication contains a reference to the *vaka-atua* seeking gods' blessing for the land and sea. 'Bring up the vegetation on shore' was a call for help in a time when the islands were in shortage of produce. It shows that vegetation, particularly coconuts, was dying out probably as a result of a severe climatic event such as drought. Similarly, the part of 'bring up a crowd of turtle, a shoal of fly-

² It is to be noted that giving affirmation or approval of something said is also common in Tuvalu during speeches in community gatherings. If someone delivers a speech in the *falekaupule* and makes mention of something that people like or approve, an old man or two would interject with the word '*aauee*' and/or '*toonu*'.

fish, a shoal of bonito' was a plea for assistance because the islands were running short of seafood supplies. Turtle in Tuvalu is an important reptile. Whenever a turtle is caught, its head would be given to the island chief to honour his status on the island. On some occasions, men would explore the archipelago from as far as Nanumaga to Niulakita just to search for turtles (Hughes 1992, p.30). Flying fish and bonito are migratory fish stocks and are of great importance to sustaining life in Tuvalu. The shortage of them, as implied from this supplication, may have also been caused by some climatic events, such as the El Niño that we know these days. By implication, the plea through this supplication tells of the suffering of the people, possibly from some climatic events. It also shows the reliance of the people on a supernatural being somewhere above that has *mana* to rescue them in time of difficulties.

Lastly, the reference to a school of whales in the supplication bears an important connotation. In Tuvalu, as well as in most islands in the Pacific, whales and dolphins are traditional protectors of people at sea according to legends and myths (Cressey 1998). Fishermen and explorers in the old days believed in the mythical relationship between these sea creatures and people. So, whenever they faced problems at sea they always hoped for whales and dolphins to come to their aid³. The call to chase down from above and from southeast a school of whales was a call for rescue. It reflects the dire need of the people for their god that dwelt in heaven to protect them from any imminent trouble from the sea.

The supplication, therefore, tells that religious belief of the people in their gods' supernatural power was very strong. In fact, it reveals the complete reliance of the people on their gods to help them in times of trouble, perhaps such as climatic catastrophe affecting their lands or their ocean.

³ The significance of the whale can also be seen in the polished whale-tooth necklace known as "*lei*". It is the highest prized necklace together with the "pakasoa" in Tuvalu, particularly in Vaitupu (Kennedy, 1931 286). The latter, however, is now used as the traditional crown given only to the paramount chief. This cultural privilege has also been extended to the Governor General of Tuvalu.

9.2.2 *Christianity*

Christianity arrived in Tuvalu in a rather peculiar manner. Elekana, a Christian deacon from Manihiki in the Cook Islands, was arguably the first person to formally introduce Christianity in Tuvalu in 1861. Drifting with his castaway companions for about eight weeks while travelling from Manihiki to Rakahaga, Elekana and his companions finally made landfall on the island of Nukulaelae (Goldsmith and Munro 2002). Using part of a Bible he safely kept during their ordeal, Elekana preached the word of God to the people and even tore pages from the Bible and distributed them among the people. After two months, Elekana left Nukulaelae and went to study at Malua Theological College in Samoa, and promised the people of Nukulaelae that he would return (Munro 1982). It was not until 1865 that Christianity reached all parts of the archipelago when the London Missionary Society (LMS) based in Samoa sent Mr.A.W.Murray with Elekana and other Samoan pastors to carry out missionary work in Tuvalu (Kofe 1976).

The conversion of Tuvaluans to Christianity culminated through a combination of resistance and submission from the people. The northern islands of Nanumea, Nanumaga and Niutao resisted in the first place because they held strong to their traditional deities. The southern part of Tuvalu, Nukulaelae, Funafuti, Nukufetau and Vaitupu, gave few difficulties to the first missionaries because traders and earlier explorers, as noted by Murray, may have already preached the gospel there (Kofe 1976). In his analysis of the historical accounts of Tuvaluans' conversion recorded by other scholars, Goldsmith (1989, p.122) pointed out that: 'the mutual intelligibility of Samoan and Tuvaluan served to further the interests of the LMS...and quickened the process'. By 1890, the whole group had converted to Christianity (Kofe 1976, p. 54).

Groomed by the missionaries and with intertwined Christian principles and Samoan cultures, Tuvaluans entrenched in themselves many biblical stories. Christian teachings became part of their intellectual and social being. Since the early years of Christianity to this day, Sunday schools teach children as young as three years old the classic Bible stories. I remember my young days when my parents always took me to Sunday school and afterwards recited the stories from the Bible. The story of

Noah and the flood is one among other biblical stories in the Old Testament that was usually taught in Sunday school. Children were always fascinated by Noah's story. I must admit that since the time I was first taught the story of Noah in Vaitupu, I have not forgotten it until this day. The story was instilled in my brain since then and remains crystal clear. I have no doubt that most Tuvaluans, even those who have converted to other religions, still remember Noah and the flood from their Sunday school days.

9.3 The theology of climate change and sea level rise

As the climate change phenomenon unfolded in the scientific and political spheres in the last three decades, religious scholars began to take heed of its significance resulting in a considerable amount of literature being published on the theology of climate change and sea level rise (Barnett 2015; Clingerman 2016; d'Aubert 1993; Echlin 2008; Goddard 2015; Northcott and Scott 2014; Wolf 2010). Theology is an important tool because it determines how we view climate change from a religious standpoint. A classical definition of theology given by St. Anselm, which is more relevant in this context, is 'faith seeking understanding' (Badham 1996, p.101)⁴.

Generally, there is in all religions, a worldview that humanity is a single community where members are related to one another. Humanity and all creation share a common destiny (Wolf, 2010, p.133). Most theologians' arguments on climate change and sea level rise were built on, and augmented around, this general religious perspective. They see climate change as a broader issue than scientists and politicians suggest because it touches the roots of ethical, moral and spiritual obligations and responsibilities. In spite of this, theologians themselves are facing the challenge of 'portraying both the theological reflection and the concept of climate change because they are complex, evolving and interdependent modes of thinking' (Clingerman 2016, p.75). The diversity in religious teachings and philosophies also adds to the problem faced by theologians. Nevertheless, the collection of essays entitled *Systematic Theology and Climate Change*, edited by

⁴ In contemporary discourse, theology is defined as 'talk about God' (Welker 2015, p.161).

Northcott and Scott (2014), is symbolic of an ecumenical approach to the issue of climate change.

9.3.1 *Earth as God's creation*

Central to the theological debate on climate change was the issue of God's creation. The very first verse of the Bible starts with an intriguing sentence: '[i]n the beginning God created the heaven and the earth' (Genesis 1:1)⁵. The Bible begins by telling of the divine power of God as the creator of the earth and all things within it, as well as all things in heaven. It signals, in the very beginning, the inferiority of humanity and the superiority of God. God's creation of the earth, however, is in direct contradiction to the scientific theory of evolution. It is not my intention to discuss the whole theory of evolution, but suffice to say that the scientific explanation of the earth's evolution is that it began with natural processes that took place billions of years ago originating from what is called the "big bang". In short, it is not something that happened overnight as in the creation theory. This convolution of science and theology is, according to Deane-Drummond (2014), too often elided in discussions about climate change.

Amongst the most-cited theological works about Earth as God's creation were those written by eco-theologian Anne Primavesi. She has written three books entitled *Sacred Gaia* (2000), *Gaia's Gift* (2003) and *Gaia and Climate Change* (2009), all of which concern Gaia and her creation, and modern scientific discourse about the environment and ecological changes. Gaia is a Greek word for Earth, which has a mythical importance as a personified goddess.⁶ Following Lovelock's theory of Gaia, which says that the 'organic and inorganic components of Earth form a seamless continuum – a single, self-regulating, living system' (Ogle 2004, p.1), Primavesi sees creation as not only something of the past but which continues to be

⁵ The story of the creation is also found in other books of the Bible (e.g. Nehemiah 9:6, Psalms 89:11, Acts 17:24, Hebrews 1:10). Even in other religions' holy books, reference is also made to God's creation. For instance, in the Quran, there are 37 main verses referring to God's creation (El-Najjar 2007).

⁶ See Oxford Dictionaries: <http://www.oxforddictionaries.com/search/english>. Gaia is said to be the first being that sprang from Chaos and thereafter gave birth to all other gods and goddesses, according to the Theogony of Hesiod (ref. Online Dictionary of Greek and Roman biography and mythology by William Smith, Ed <http://www.perseus.tufts.edu/hopper/text?doc>).

felt in the present as a vehicle for the name and image of God. ‘Instead of seeing an imperial God who is transcendent, omniscient, and “nonlocatable”, she argues that Christians should see how God emerges from earthly knowledge and is firmly situated there’ (Clingerman, 2016, p.72).

There are two points of view on God’s creation that are of significance to consider in this context. At one end of the spectrum, there is a view that if God created the Earth then He also takes care of it. As the Creator of all things, God in His own way and time knows when to solve any defect to His creation. Calvinists’ principal teaching about the prominence of God as creator of the world bears a strong association with this view. That is, God manifests Himself in His creation. As Van Der Kooi (2016, p.49) puts it: ‘[c]reation itself, the cosmological order, is one impressive way by which God, in his majesty, adapts himself to the measure of human beings’. What underpins this view are the omnipotence of God and the meagreness of human understanding, as given in the book of Job 38 and echoed in other biblical scriptures such as Psalms (Clifford, 2010). Looking through this lens, Clifford (2010, pp.177-178) asserted that an approach to climate change through a theology based on this Old Testament understanding of creation has to reflect this divine authority of God.

On the other end of the spectrum, there is a view about the role of human stewardship in God’s creation. Stemming from the biblical story of the creation when ‘the Lord God took the man [Adam], and put him in the Garden of Eden to work it and keep⁷ it’ (Genesis 2:15), theologians see that humankind was charged by God with the responsibility to take good care of His creation. In other words, this is the theological explanation as to why religious faith, particularly Christianity, should endeavour to address the issue of climate change because of humankind’s biblical duty to keep and preserve God’s creation.

⁷ The word ‘keep’ was translated from the Hebrew word “shamar”, which means ‘guard’ or ‘to watch and preserve’. So the use of the phrase ‘keep it’ does not only mean to keep it neat and tidy but more importantly to ‘preserve’ or ‘look after’ it (Refer Bible Hub website for details: <http://biblehub.com/hebrew/8104.htm>).

9.3.2 Climate change is a sign of the “End of time”

The catastrophic nature of climate change has triggered theologians and scholars in general to question whether this is the “end of time”. In Revelation, the last book of the Bible, the “end of time” was revealed to John through prophetic visions. While there are different schools of thought⁸ about the true meaning of John’s visions in Revelation, the Futurist School propounds that disasters (natural or anthropogenic) are occurrences or signs that the end of the world is near (Beaumont 2009; Lehner 2014). The “end of time” is interchangeably used in religious dialectic discourse with “apocalypse”, “Armageddon” or “Day of Judgment”. Christian literalists proclaim that climate change is symbolic of the impending end of the world. According to them, the melting glaciers and floods are but vivid images of disasters the Bible referred to, to be preceding the Day of Judgment (Wolf 2009). Northcott (2013) also noted the slow catastrophic nature of climate change as parallel with the Christian apocalypse (cited in Clingerman 2016, p.72). These references to the impacts of climate change are not only found in Revelation, but also in the books of Job, Ezekiel, Psalms and Habakkuk in the Old Testament. For instance, in Job 38: 22-23 and Ezekiel 38:19 there were references to snow melting and earthquakes reserved for the time of distress.

Interestingly, theologians extend the discussion of the climate change phenomenon back to the very beginning of creation when “man” committed the first sin – the “fall of man” or “original sin” (Barnett 2015; Crisp 2015). While there are different interpretations of the biblical story of the original sin among members of the Christian world, there is a general perception that the transgression of Adam and Eve by eating the forbidden tree of knowledge of good and evil compelled God to curse humanity and the earth (Genesis 3). In theological discourse, this historical event was the beginning of all sorts of problems that humanity has faced from the very beginning of history. The green and fertile land of the Garden of Eden became chaotic and transformed into sterile and impotent land. The perfect weather conditions that brought about the Garden of Eden were, ever since, changed to

⁸ Other schools of thought include (i) Preterist – which asserts that most of the revelations revealed to John have been fulfilled in 70A.D.; (ii) Historicism & Idealism – generally view that things in Revelation have been fulfilled throughout history in linear or recurring fashion (Beaumont 2010).

storms, floods, droughts and all other climatic disasters. According to Ferguson (2013, p.34): ‘climate is no longer a local matter, its change seems like evidence of human crime, and crime on the order of original sin’.

As a result of this original sin, it has been further theologised that climate change was therefore an expected phenomenon. It is the end of time that Christian traditionalists believe in. Indeed, many believers of the end of time proclaim that life in this world has been preordained with an expiry date. No matter what we venture to accomplish in the climate change movement it would be ultimately futile. More so, some “end of time” followers blatantly state that ‘environmental destruction is to be welcomed – even hastened – as a sign of the coming apocalypse’ (Barker and Bearce 2013, p.269). Further, climate change related disasters, as part of the apocalypse that precedes the Second Coming of Christ will give, as argued by Martin Jay (1994), hope for redemption and hope for the new dawn (cited from Swyngedouw 2010, p.218). This Christian conception of redemption, as part and parcel of the end of time theology, which is strong in evangelicals, has generated enthusiasm and therefore results in less keenness to save the planet from climate change impacts (Swyngedouw 2013). In their assessment of this conception in the USA, Barker and Bearce (2013) noted that the belief in the Second Coming increases the probability of disagreeing with government action to curb global warming.

9.4 Tuvaluans’ biblical beliefs about climate change and sea level rise

Climate change and sea level rise have, for the first time, tested and challenged the traditional beliefs of Tuvaluans in the strength of the words of God in the Bible. Most Tuvaluans traditionally believed that God created the world and purposely placed people where they are to own and take care of their allocated spaces. The majority of Tuvalu Christians also believed that all God’s promises written in the Bible should never be questioned and disavowed. So strong were these beliefs that Tuvaluans have lived so comfortably in their low-lying and infertile islands for centuries without fear of climatic events. Yet, with the intensity of some of the droughts and cyclones in the last two decades coupled with the intense discussions and media rhetoric of climate change impacts, Tuvaluans’ religious intellectual

domain is coming under threat. This section reveals Tuvaluans' perceptions of their islands as a God-given land, and God's covenant to Noah. The analysis given here is based on the interviews I had with the general participants as opposed to the religious participants; the latter are covered in a later section of this chapter. I did not ask any specific question on these issues but the repeated occurrence and persistent manner in which the general respondents expressed their views persuaded me to address the topic.

9.4.1 Tuvalu as a God-given land

By and large, there is a strong view among Tuvaluans that the islands were given to them by God as their everlasting heritage. As a nation "civilized" by Christian principles, and upon which most undertakings at all levels - family, island and national settings at large – are operated, Tuvaluans hold true allegiance to the view that Tuvalu is their God-given land. The supreme law of Tuvalu, the Tuvalu Constitution 1986, indeed reflects this in its preamble.⁹

As a Christian nation, there is a general biblical conception of land ownership as something bestowed upon the people by God. Like the Promised Land of Canaan that God promised and gave to Abraham and his descendants (Genesis 12), Tuvaluans equally attest to that belief that the islands of Tuvalu were given to their ancestors and thereafter to their descendants to own and on which to live. Most responses relating to land as God-given came about when participants expressed their views about migration. These are some excerpts from the interviews:

I do not want to go. If I look at going and leave the islands that God gave us that is not right. God gave us this place [islands of Tuvalu] for us to live here (Ailesi Apelaamo, 79 year old man).

We are a Christian nation. We have a religious belief that God put us here (Semeli Manase, 76 year old man).

I do not want to migrate because I have a land [referring to Tuvalu] given to me by God (Niu Ioane, 56 year old man).

⁹ This is a short excerpt of the preamble "The people of Tuvalu, acknowledging God as the Almighty and Everlasting Lord and giver of all good things, humbly place themselves under His good providence and seek His blessing upon themselves and their lives;...[t]he people of Tuvalu desire to constitute themselves as an independent State based on Christian principles...;...[d]o hereby proclaim the establishment of a free and democratic sovereign nation...".

In 1998, when I came back after I completed my seafaring contract, I stayed for a short while in New Zealand. I purposely stayed there to learn life there. I then found out that life there was tough. So, when I came back home [Nanumea] I decided to stay. In fact, I also looked at God's plan of putting us here because if that was God's plan then God has a plan for us if the sea level continues to rise (Tupou Numela, 49 year old man).

I think the best option for us to continue to live here is to pray to God for help, because He was the one who put us to live here (Panapa Isaia, 69 year old man).

Land is important because it was given to us by God to live on, and therefore it is very important to me to take good care of our land (Finiki Siaosi, 53 year old man).

Expressions of land as a God-given heritage noted above, clearly illustrate that there exists a great sense of desire to continue to live in Tuvalu among the people. They have strong faith that God could not and would not forsake them by allowing the impact of climate change and the encroaching sea level to take them out of their God-given land. In addition, the people felt that they should not give up the land God gave them and go somewhere else. This is because they have religious obligations and responsibilities to look after their islands, even in the face of the impacts of climate change and sea level rise that they themselves were experiencing in the last two decades. Some strong religious believers in Tuvalu see the land as something that they should protect even if it means death to them. A 56 year old man in Niu said: 'I personally think that if God gave this place for us to live, even if the sea level is raising, I will continue to stay here' (Lepana Filipino). Galu Moeava, a 55 year old man from Nukulaelae, shared a similar but stronger sentiment:

We have religious belief that everything in this world was made by God. If it was God's wish for us to be like this, we cannot do anything but to pray for his help. I feel that if either we stay or migrate death will befall on us. We all die. So, if it was God's will for Tuvalu to be submerged then so be it. I will stay put.

These religious ideologies that Tuvalu is a God-given land and thus God would not leave them to die in the wake of climate change and sea level rise are common amongst Tuvaluans, particularly strong churchgoers. This is particularly strong in the outer islands. I recall the nationwide consultation during the formulation of *Te Kaniva* in 2011, when people in the outer islands vocally commented about God's

plan to put them in their islands. This ideological belief of land given to them by God tends to downplay climate change discourse particularly the discussions relating to migration and relocation.

9.4.2 God's promise to Noah is unequivocal

The story of Noah is embedded in the minds of Tuvaluans from their childhood and is still strong to this day among the strong churchgoers. The discourse about the impacts of climate change, particularly sea level rise, regularly brought to the fore the story of Noah. Often people refer to God's promise that he would not cause any global deluge to destroy humanity and all living creatures (Genesis 9). Every time the rainbow appears in the sky, the first thing the people of Tuvalu remember was the story of Noah and God's covenant. The rainbow itself is a retelling verse of this biblical story. It is a reminder. Indeed, the rainbow is a sign of relief, hope and prosperity to Tuvaluans.

In this connection, it is imperative to briefly examine what is a 'rainbow' in order to shed more light on our understanding as the discussion unfolds. In science, a rainbow is a meteorological phenomenon caused by sunlight that passes through raindrops and can only be seen when the sun is behind one's back. As the sunlight enters the water drop, the different colours encompassed in the sunlight get bent in slightly different directions (scientifically called 'refraction') and as it comes out the light produces different colours visible to the naked eyes (Beck 2004). As a wonderful natural phenomenon admired for its beauty and mystical manifestation, the rainbow has been a subject of mythology throughout history. It has been part of religious and cultural rituals of many societies around the world since ancient times (see Hajdu 2015). The pre-Christian history of religion in Tuvalu given earlier is a testament. In Tokelau, d'Aubert (1993) noted that the people there also have strong religious belief in the rainbow as God's promise. There are many myths and legends of how the rainbow was made (2010; 1997)¹⁰.

The Bible's version of the rainbow is a mythical story too. In most versions of the Old Testament, the word 'bow' was used instead of the rainbow. It came from the

¹⁰ See the Scottish and American myths of the rainbow in Gash (2010) and Schosser (1997).

translation of the Hebrew word “Qeshet” or “Keshet”, the rainbow, which also meant war bow (as in ‘bow and arrow’)¹¹. When God caused the flood to exterminate the earth due to humanity’s sinful life, he did so by using his bow. When he placed his bow in the clouds afterward, the bow was upside down or pointing in the upward direction. This symbolised that God would never use his war bow again to threaten the world; a sign of God’s enduring love and care (Woods 2016). In the words of Dr. Eli Lizorkin-Eyzenberg (2013), the rainbow is an eternal sign of God’s forgiveness and his covenantal mercy, which is in permanent display in the museum of the sky¹². Following this line of argument, I consider that the place in which the bow was placed – the sky – connotes the fullness and inclusiveness of the covenant. Why didn’t God place his bow somewhere else, say on top of Mt. Ararat where Noah’s ark finally rested? As a covenant to humanity and all living things, the sky is the perfect place for all, including God himself, to see and remember this everlasting promise.

Many Tuvaluans’ understanding of the Bible is limited. They interpret the meanings of the Bible scriptures on their face value. Noah’s narrative is no exception. All that happened to Noah and his family, and what God said to Noah, is literally believed by most Christians in Tuvalu. Talia (2009, p.70) asserts that ‘Tuvaluan’s reading of the Bible, particularly the Noah narrative, is shaped and informed ideologically by the prevailing social, political and economic dilemma that surrounds them’. For the Christian literalists in Tuvalu, the rainbow is a symbol of God’s promise that should not be questioned. It is a seal of a perpetual contract made between God and humanity that needs to be accepted and respected in faith. The excerpt below from an interview with a 76 year old woman of Nukufetau reflects this ideological understanding of the contractual relationship between humanity and God:

I think we should stay here. I personally have no alternative but I have only one hope, and that is God. In the meantime, I am not looking around for assistance because there is a promise God had with Noah that there are no more things like these [referring to the global deluge]. Lastly, I want to say this. Even though there are talks

¹¹ Refer to Jewish Studies Blog for detailed translation: <http://jewishstudies.eteacherbiblical.com>

¹² Also given in a YouTube clip of the eTeacherBiblical Online Language Academy: <https://www.youtube.com/watch?v=g152y-x2rU>.

about these things happening, but I, myself, living in faith, the Bible is key to our life, particularly Noah and God (Nuese Apinelu).

Nuese's reference to faith is an intriguing statement. Often Tuvaluans resort to faith when they encounter difficulties. They take faith as their ultimate hope in times of need. However, faith is a shaky concept that is already in question by pastors in the EKT church, a topic that I am turning to in the next section.

9.5 The fading rainbow in Tuvalu

As global and regional efforts on climate change and sea level rise cascade at an unprecedented pace into the religious domain of Tuvalu, Tuvalu Christians' views of the rainbow are beginning to change. What was once a strong sign of hope in times of trouble, the rainbow is now starting to fade in the minds of the people. The harsh reality of climate change impacts and recent rising sea level incidents have woken up Tuvalu Christians to think outside the box. This section discusses how Christian leaders, particularly the EKT pastors, view climate change and sea level rise.

9.5.1 Controversy within the Ekalesia Kelisiano Tuvalu (EKT)

The growing involvement of the EKT in climate change related meetings and conferences within and outside Tuvalu is creating a rift in the theological interpretation of Noah's narrative within itself, among the pastors in particular. Their personal experience of climatic events in the recent past and the surrounding political and social debates about climate change also influence their traditional perspectives on the content of the Bible. Traditionally, pastors preach Christianity in the literal sense of the words in the Bible, or the hidden meanings they were taught in the classrooms. To them, every word in the Bible is absolute and should not be misinterpreted, especially those narratives such as Noah and the flood where there is no ambiguity as to the way the story was told. They teach the stories as they are in the Bible and only add emphasis where they think fit. This is the absolutism interpretation which Talia (2009, p.77) noted as '[a perspective] which functions as a power to control others by leaving no space for other interpretation'.

The EKT is the largest Christian denomination in Tuvalu comprising 85.7 per cent of the population (Central Statistics Division of the Government of Tuvalu 2013a,

pp.25-26). EKT is administered by its Head Office in Funafuti but driven by designated pastors in different congregations in the capital and in the outer islands. Pastors have special status in Tuvalu. People respect them even if they dislike them. They possess great influential power. People look up to them as men of God who have the *mana* (lit. spiritual power) to bless or curse. This traditional mindset among Tuvaluans goes back to the early days of missionisation. When the Samoan pastors preached Christianity they instilled in the minds of the people that they were God's representatives (Crawford 1977, p.238) and therefore things must be done according to what they desire. This attitude is clearly described by Brady (1975, p.122) as follows:

The Ellice people were led by the knowledgeable Samoans to “discover” Jehova [sic] in the context of a hierarchy dominated by a paramount chief. “God the Father” was posited as an older and more powerful ancestor than any the Islanders had known or believed in before, and this hope of influence was predicated to a large extent on an omnipresent kinship bond to all known segments of the existing population. His precise relationship to individuals was incalculable, but the Samoan pastors clarified matters somewhat by insisting that the path to salvation and divine favors ran directly through them and the church orthodoxies (quoted in Munro 1982, p.106).

Pastors' roles in advocating the veracity of climate change and sea level rise are crucial. Using their special status as men of God could well bring the message to the people more effectively than the government and other non-government organizations (NGOs). If the EKT was to help inform its congregations about climate change, its pastors, as spiritual leaders of the majority of Tuvaluans, would have to unite in what they preach about climate change and sea level rise. The interpretation of the biblical story of Noah and any relevant scriptures relating to the impacts posed by climate change and sea level rise would need to be tuned to the same note across the board of EKT pastors. Any inconsistency or contradiction in their interpretations would only result in confusion among the EKT congregational members. Indeed, my research findings show that there exists a huge asymmetry in EKT pastors' understanding of Noah's narrative.

By and large, there is a considerable divergence in EKT pastors' theological understandings of climate change and sea level rise, particularly the correct

interpretation of Noah's narrative. This enigma of interpretation led to ambiguity as to the EKT's theological position on climate change. On one hand, there are those who hold the traditional interpretation of the Bible as absolute. To them, the story of Noah and especially God's covenant that there will be no more floods is unequivocal in all senses of the promise. The former president and now deputy president of the EKT said:

The EKT's position [referring to climate change and sea level rise] is founded in the Bible, that is, the story of the covenant between Noah and God. As a Christian, I believe in Noah's narrative, although it is in a different context (Rev. Tofiga Falani, 59 year old male pastor).

In the same vein, the designated pastors of Nanumea and Hastings, New Zealand, subscribed to this biblical story of Noah but in slightly different ways:

There is a religious belief about climate change and sea level rise. The EKT believes in the Bible and the story of Noah. I, in my EKT religious belief, I believe in God's covenant with Noah. I hold firm to this religious belief; God has a plan (Rev. Alefaio H. Pine, 45 year old male pastor).

The EKT believes in God. If I weigh God's covenant with Noah against scientists' predictions, and my personal observation of the impacts imposed by climate change and sea level rise, my faith dictates that I should hold firmly to God. So, I don't believe there is something going to happen to Tuvalu [referring to predicted submergence of Tuvalu by rising sea level]. These happenings are just testing our faith in God's covenant (Rev. Alona Alona, 31 year old male pastor).

The two deacons I interviewed also shared this theological perspective:

I don't believe Tuvalu will ever disappear under the water because of Noah's story. Although there are problems, we should know how to face them. The belief that people have, and also my belief as a deacon, is that the covenant between God and Noah is genuinely true; Tuvalu will never be submerged. That is my belief, which is also our belief (Selu Luuni, 47 year old male EKT Senior Deacon from Nui).

I don't believe that Tuvalu will submerge, because I rest my belief in God. Those [referring to talks about climate change and sea level rise, particularly the issue of predictions that Tuvalu may be submerged in the future] are just men's knowledge of what they know. But God has his own divine way, and as per his covenant in the Bible, I believe

in it; Tuvalu will not disappear (Sualo Kauani, 55 year old male EKT Senior Deacon from Nanumea).

On the other hand, there are those who see Noah's narrative as a biblical myth as opposed to an historical factual occurrence. They do not take Noah's narrative literally in the traditional sense that most EKT congregational members understand. This strand of theological understanding is more apparent in those pastors who seem to have been exposed more to climate change advocacy programmes. More so, this standpoint is very strong in young and junior pastors and those who did research studies on climate change, as well as those who represented EKT at climate change meetings and conferences within and outside Tuvalu. It seems that their theological consciousness of the biblical text has been impinged upon by recent scientific publicity about climate change. In clarifying his view, one of the most senior male pastors of 59 year old said:

There is a religious belief of the EKT about climate change, and that is the story of Noah... I therefore think we should not bring Noah's narrative to our present context as an answer to the issue of climate change and sea level rise. I do not accept Noah because his time has long gone (Rev. Pitoi Etuati).

The EKT President and Secretary General also aligned themselves with this view. Noah's narrative to them is nothing concerning climate change and sea level rise.

The EKT believes that climate change is real. Tuvalu can be submerged...God's covenant with Noah is a one-way promise that he will not send the floods again but climate change is nothing to do with God. So it's unfair to view that God is breaking his promise (Rev. Tafue Molu, 49 year old male pastor).

The flood in Noah's narrative is a punishment from God because of the sinfulness of humanity. But this [referring to climate change and sea level rise] is not a punishment because it is a human induced phenomenon (Rev. Penitusi Taeia, 55 year old male pastor).

As heads of the EKT, both Rev. Taeaia and Rev. Molu¹³ are constantly involved in climate change meetings, and thus their views on the theological interpretation of Noah's narrative have been greatly transformed.

The controversy within the EKT is further compounded by the overlying views. The majority of the pastors have a mixture of views. Some accept the traditional interpretation but at the same time disregard it as a misconception. Others trust God's promise but at the same time question its relevance to the present context. The distinction in the way they expressed their views is unclear. What is certain though is that there exists a considerable confusion in the EKT as to where it stands. Paradoxically, this confusion also goes right to the very heart of the EKT. When asked whether there is an official position of EKT on climate change at the time of the fieldwork, the rest of the pastors, even the former and present presidents, said no, except the incumbent Secretary General who firmly said there is one. While they acknowledged this paradox, they also justified their positions by saying that faith is all that matters in the pursuit to theologically understand climate change and sea level rise. The EKT General Assembly in Vaitupu in 2016, however, endorsed an EKT's theological statements entitled "Dancing with God in the Rainbow", which contains paragraphs relating to the church's viewpoint about climate change.

9.5.2 Faith: Fakatuanaki galue versus fakatuanaki sagasaga

Given the variety of contradictory interpretations among EKT spiritual leaders, faith has emerged as a caveat for the correct way to interpret biblical scriptures relating to climate change and sea level rise. Almost all pastors I interviewed made reference to faith. They appeared to have the conviction that faith is the answer to the theological mystery of climate change and sea level rise. As discussed in detail later, this line of argument or justification leads to further confusion. Faith is a word that can be defined like any other but it is one of those words that is hard to understand. In *The Oxford Dictionary of English*, faith means 'complete trust or

¹³ Rev. Molu's master thesis was on the issue of climate change entitled: "Punishment of the Innocent: The problem of global warming with special reference to Tuvalu" (2004).

confidence in someone or something, or strong belief in the doctrines of a religion, based on spiritual conviction rather than proof” (Stevenson 2010).

But what is faith in theological discourse? Philosophers (like Augustine¹⁴ and Aquinas¹⁵) and theologians (such as Newman and John Locke) have dissected faith to understand the depth of its meaning (Gallagher 2008; McIntosh 2013). In their pursuits, words like “belief”, “trust”, “knowledge” and “reason” often come into the equation. Without diverting the rest of the discussion to theology, I think it is essential to point out Newman and Locke’s views of what faith is because it sheds light on the *fakatuanaki galue* and *fakatuanaki sagasaga*.

In short, Locke maintained the view that faith must be preceded by reason. In other terms, faith cannot be regarded as such unless it is reasoned out (McIntosh 2013 435). In contrast, Newman broadly argued that faith is not entirely based on “reason” although reason may contribute to probing and clarifying what faith is, but it does not on its own give rise to faith. Quoted by McIntosh (2013, p.429), Newman explains it hypothetically that faith does not spring from:

the believing mind itself; unless, indeed, to take a parallel case, a judge can be called the origin, as well as the justifier, of the innocence or truth of those who are brought before him. A judge does not make men honest, but acquits and vindicates them: in like manner, Reason need not be the origin of Faith...though it does test and verify it.

According to most pastors, the biblical scriptures, particularly the story of Noah should be understood in terms of faith. For some, faith was raised in a rather general sense leaving the individual to ponder what exactly is faith and how should it be understood in light of climate change. One 31 year old male pastor discussed faith and said that climate change is just another challenge that God is testing our faith with. It is another way that God is trying to see how faithful people are about the

¹⁴ According to Augustine, faith is believing in that for which there is no evidence or cannot be seen. He, however, added that the lack of evidence for something is not a necessary condition our having faith in it. Accessed on 18 September 2016 from the InterQuest Website of Oregon State University eCampus: <http://oregonstate.edu/instruct/phl201/modules/Philosophers/Augustine/>

¹⁵ St. Thomas Aquinas asserts that faith builds on reason. Since faith and reason are both ways of arriving at truth – and since all truths are harmonious with each other – faith is consistent with reason. If we understand faith and reason correctly, there will be no conflict between what faith tells us and what reason tells us. Accessed on 18 September 2016 from <http://www.harryhiker.com/re/r-a4--00.htm>.

covenant he made with Noah (Rev. Alona Alona). This view is quite common among most Christians in Tuvalu, particularly those who associate more closely with church activities. They appear to vest their belief entirely in God as the ultimate saviour who will help them from the worst consequences of climate change.

9.5.2.1 *Fakatuanaki sagasaga*

The foregoing discussion of faith is what some pastors labeled as *fakatuanaki sagasaga*. It literally means “sitting faith” or “inactive faith”. A 59 year old male pastor sarcastically described faith as something that one can easily place at the upper side of one’s ear, but only bring it to life when asked about it (Rev. Pitoi Etuati). In clarifying this, the pastor said that one should understand that faith is something one personally possesses because it is something to do with what cannot be seen. Sitting faith, as the name most pastors preferred to use, refers to the faith that sits and does nothing. It is dormant. It is a faith that does not respond to the reality of life. Two pastors explained the notion of sitting faith by telling a fictional story of a man in a flash flood who refused to jump on to a boat but went on top of his house to pray for God to come and rescue him. He ignored two rescue boats but stayed faithful on top of his house that God would rescue him. In the end, the flood finally drowned him and he died. He went up to heaven and complained to God for not helping him. He said to God where were you when the flood came? I prayed faithfully for you to save me but you never turned up. God responded, I sent two rescue boats but you did not accept my assistance (Rev. David T. Noa, 56 year old male pastor and Rev. Tafue Molu, 49 year old male pastor).

In essence, the story tells that faith must not be latent. If Tuvalu Christians believe that God’s covenant not to cause any more flood is unequivocal, and therefore they need to do nothing about climate change, they are just like this poor man. Their *fakatuanaki sagasaga* may also drown them. There are many EKT members who affiliate themselves with this category of faith. They, as argued by Newman, maintain that faith should not be reasoned out, because to justify the cause means that one lacks faith.

9.5.2.2 *Fakatuanaki galue*

Fakatuanaki galue is just the opposite. It refers to working faith. It is faith that is dynamic and active. Proponents of active faith stress that people must not view Noah's narrative using a piecemeal approach by looking only to certain parts of God's covenant. It must be interpreted and understood in its totality. Noah's faithfulness to God made him work to construct the ark and do all that God told him before the deluge took place. His faith in God's warning and instructions saved him and his family. Impacts posed by climate change and sea level rise must therefore be accepted as practical reality and as a signal or warning.

Further, faith must be comprehended through contextual application of the Bible. Most pastors who took this line of thinking asserted that the Noah narrative was a consequence of God's punishment of the wicked at that period of time. However, climate change is nothing to do with God and should not be equated to Noah's narrative:

To compare my religious faith in Noah's narrative and my personal observation of impacts by climate change and sea level rise, I believe [referring to scientists' findings] those are knowledge God gave them, so they are true. It tells that there are things happening, and I can testify to it. But the Bible, I am not saying that there will be no more flood because of God's promise to Noah, no! God's promise says, "I shall not do it again", but climate change and sea level rise are caused by humanity (Rev. Alamatiga Lusama, 49 year old male pastor).

My view about God's covenant with Noah is that it is a totally different thing from climate change and sea level rise. The Book of Ecclesiastes 3 tells that things happened on the times that have been set for them to happen. So what happened to Noah is not applicable to our present context (Rev. Ionatana Panapa, 40 year old male pastor).

Active faith encompasses the articulation of knowing the deeper meanings of the Bible scriptures and their rightful application at any given time. From this perspective, faith needs to work to uncover what is unknown. It must dedicate time and effort to inform one's bank of knowledge more sensibly rather than taking for granted the literal writings in the Bible. This is a great challenge that the EKT is facing. As one pastor said, the greatest task faced by EKT now is how to

communicate this message to the rest of the EKT members. This is because the majority still have sitting faith in God's promise in the story of Noah (Rev. Pita Tanile).

9.5.3 Views of other religious denominations in Tuvalu

In an effort to cover a wider view of religious perspectives, I also interviewed seven pastors or priests from other churches.¹⁶ All but one belong to Christian denominations. Of the six Christian churches, five appear to side with the biblical story of Noah, like the general views of EKT members. They acknowledge that Noah's narrative is pre-history, but they claim that God has a plan for the world. Climate change and sea level rise to them is part and parcel of God's plan. Three of the five supporters of biblical teaching strongly argue that God's promise to Noah is everlasting and Christian believers should not question it in light of ongoing talks about climate change and sea level rise as per the following excerpts:

The issue about Tuvalu becoming submerged, I do not subscribe to it because I strongly believe in God's promise to Noah (Litagi T, 36 year old man from the Brethren Church).

I have high belief in God's covenant with Noah. Despite the problems we see today, we believe that God cannot leave us to suffer like this. We believe that God will intervene at some stage (Ionatana Taulia, 50 year old man from the Jehovah's Witness).

Climate change is a man's creation but the flood in Noah's story was caused by God. I do believe in the promise that God had with Noah that there will be no more floods. And yes, I believe that God's promise is everlasting (Talia Talia, 48 year old man from the Soldier of Christ).

Bahá'í Faith's representative however, did not support Noah's narrative although he said that Bahá'í generally believe in the Bible. In terms of climate change and sea level rise, he said that Bahá'í Faith believes that there are calamities and catastrophes humanity will encounter, especially if humans do not follow the spiritual laws. In fact, he said:

¹⁶ Other religious bodies include (i) Assembly of God, (ii) Brethren Church, (iii) Catholic Church, (iv) Jehovah's Witness, (v) Seventh Day Adventist (SDA) Church, (vi) Soldier of Christ, and (vii) Baha'i Faith.

Bahá'í Faith believes in science. However, we feel that scientists have not thoroughly addressed climate change and sea level rise through spiritual perspectives. We also believe in the perpetual existence of the process of integration and disintegration. So what we see happening [referring to climate change and sea level rise impacts] are all part and parcel of that ongoing process of change (Nakala Nia, 61 year old man).

In the same vein to the Bahá'í Faith's point of view, the SDA respondent asserts that the Bible must go along with science and vice versa. He said that 'SDA have faith in God's promise to Noah, but SDA also believe and support science because they are factual and they were [referring to climate change and sea level rise] caused by humans' (Motulu Petro, 60 year old man).

All in all, these non-EKT religious perspectives generally view God's promise of the rainbow as eternal, but some are inclined to take on board scientific findings in the way they interpret Noah's narrative.

This section reveals a paradigm shift in people's religious perspective of the Bible scripture due to their exposure to climatic events and information about climate change and sea level rise. The rainbow is fading. In the next section, I explore the people's views about ways to save the islands by reconstructing Noah's Ark in the Tuvaluan context.

9.6 The Ark

One of the issues that often emerged from discussions with the people as they talked about their concerns of the impacts of climate change, particularly sea level rise, resonated with the concept of the ark. The ark has a significant meaning in the Bible. It is found in two of the most famous stories in the Bible, but is applied in different but related contexts. The story that is relevant in this context is the story of the "Ark of Noah", which is the ship or boat that saved him and his family together with chosen animals during the global floods (Genesis 6). It was used in the context of a life-saving object. In modern terms, the ark was a "lifeboat" that saved Noah and

everything on-board. The other famous story in which the ark concept was used is the story of Moses and the “Ark of the Covenant”¹⁷.

Etymologically, however, the word ark originated from the Latin word ‘*arca*’, which originally referred to a box or a chest and was later extended to mean a place of refuge (Harper 2016). An ark is a storage place for valuable things. It is also through this original meaning that the word *arcane* arose in the sense of ‘hidden’, ‘concealed’ and ‘secret’ (Arvindus 2011).

As an important concept in the Bible, the ark has been further theologised as the human head. In explaining this notion, Tilghman (2012) argued that the human head is the ark that safely conceals and preserves the brain. Noah's Ark (ship) and the Ark of the Covenant (container) symbolise the human skull within which God's most precious gifts, knowledge and wisdom, are stored and preserved. This suggests that each human has his or her own ark where they treasure the knowledge they acquired throughout life. Perhaps this conceptual view of the ark as an object, within which valuable things are safely kept, can be applied to all sorts of situations from a museum and a church building to a laptop and a legal document such as a constitution. It may well extend to the context of our efforts to preserve the world from the impacts of climate change by imagining the United Nations Framework Convention on Climate Change (UNFCCC) as an ark. In a broad sense, I think the essence of the ark as a function of protection can be comfortably applied in such contexts. I am indeed inclined, as revealed in the following subsection, to use that conceptual form of the ark in the context of options to save Tuvalu from becoming uninhabitable and submerged.

9.6.1 Reconstructing the Ark of Noah in the Tuvaluan context

Respondents reconstructed the Ark of Noah in the Tuvaluan context in many different ways. The most popular ark they mentioned, which I decided to explore in detail here is “praying and trusting God”. As a religious atoll state, Tuvaluans view praying and trusting God as the ultimate answer. Even though this is not an

¹⁷ In this context, the ark was a chest or box in which the Ten Commandments that were given to Moses by God were safely kept (Exodus 37). In this case, the ark was a protective and preservative object, which in today's language is sometimes called the vault.

ark per se, people see it as an invisible ark; a spiritual ark. They view God as the ark himself, and thus rest their trust in Him to save Tuvalu as per some of the respondents' responses given here:

There are lots of options for us to continue to live here but as Tuvaluans, the most important of all is to pray to God. To ask God to look down on our islands and to distance the climate change problems from us (Tapuli Paitela, 49 year old man).

There is no other option besides asking God through prayer to help prevent us from the consequences of his own work (Galu Moeava, 55 year old man).

In order for us to stay here, my best option is found in the Bible. Jeremiah 5: 22-23, talks about waves and islands, and in Proverbs 28-29 and Job 38:10, they talk about God's divine power to lock the flow of rivers. So, I have no other idea to save Tuvalu but to pray and trust in God because God has already made his vow not to kill us (Ailesi Apelaamo, 79 year old man).

The option now left for Tuvaluans to remain here, I think, is to pray to God because he made all these things. That is our religious belief (Enesi Tiale, 51 year old man).

Included in this ark option of praying and trusting God is people's strong religious belief. As revealed in the first part of this chapter, Tuvaluans' still largely believe that God put them on the islands and He will not cause any floods to destroy them. So, they unfalteringly believe that the only thing they need to do is to continue praying and strengthen their trust in God and everything should be fine. How long this praying and trusting God will go is uncertain, but the rainbow is fading slowly in the centre of Tuvalu's religious governing structure, the EKT. Praying and trusting God is a worrying ark option, not only because it is invisible but also because the very people who should be upholding it are starting to see it as an unrealistic option. Be that as it may, other ark options raised by the respondents vary in form and complexity. In view of limited space, I decided to outline and provide brief descriptions of these arks in Table 9.1 but provide a more thorough examination of them in Appendix 1.

Table 9.1: Ark options to address the issue of Tuvalu disappearing.

Type of Arks	Descriptions
1. Encircled seawalls	Build large concrete seawalls (dyke) around the edge or beach of the entire islands.
2. Elevate islands & Reclamation	Raise the level of the islands about two or three metres above the existing levels and reclaim outward to the edge of the reefs.
3. Ark-of-Noah islands	Construct floating islands that can support long term human habitation.
4. Underwater islands	Build a submarine-type of island that support human habitation in the long run.
5. High rise buildings	Start constructing high rise buildings that can withstand the strength of ocean like those in Venice, Italy.
6. Suspension islands	Build on top of existing islands platforms that mirror the main features of the islands.

Source: Author's fieldwork findings.

Despite the political and social complexities and financial difficulties associated with the ark options given in Table 9.1, reconstructing Noah's Ark in the Tuvaluan context, or any other context for that matter, requires an approach that is inclusive and consultative. The views and ideas of affected people must not be secondary, but come first in any phase of planning, designing and so forth of the arks. This is a critical point because it has been widely criticised that most, if not all adaptation and even other development aid programmes have been traditionally donor driven (Lewis 2003). Recipient communities and countries had very little say in what was best for them because the support was financially motivated. Most have failed. One of the failures, at least in the Pacific, relates to the fact that development partners tend to avoid peoples' religious viewpoints in most development programmes, especially those related to nature. In a recent study by Nunn and others (2016, p.491) about future climate change adaptation interventions, they pointed out that people in the Pacific are 'receptive to pro-environment messages but is [sic] more likely to respond positively when these are conveyed through culturally-appropriate and/or religious channels rather than secular ones'.

In essence, the reconstruction of Noah's Ark in the context of affected countries must be considered in the spirit of saving people's lives and their traditional ways of life. Safety cannot and should not be compromised. Therefore, considerations of

the given ark options should not be discounted because of their costs. Tuvaluans and other people in similar situations whose lives and livelihoods are being affected by the selfish acts of developed and other industrialising countries should not be left to perish. It will be an injustice if that happens. Major GHGs emitting countries should therefore lend sufficient support in constructing the arks to save Tuvalu, other atoll countries and the world over.

9.6.2 Exodus: Crossing the sea of islands

Even though Tuvaluans strongly prefer to remain on their islands, they also know that if the “eleventh hour” comes, and after all ark options discussed earlier fail to save and protect Tuvalu, the only way out would be exile. History tells many stories of peoples’ exile forced by many causes. Exodus¹⁸ is a word more associated with the mass movement of the Israelites out of Egypt as given in the second book of the Bible, the Exodus. The march out of Egypt is perhaps the most important event in the history of Israel. It provides not only the history, but also and more importantly the future, and the nationhood of Israel (Dempster 2008, p.4). It ‘is the determinative event in Israel’s history for all time to come’ (Rendtorff 2005, p.47). Today, many people or societies are in exile, some due to conflicts within their own territories, whereas others are because of environmental disasters. Climate change and sea level may cause an exodus of many people around the world, including those from low-lying atolls such as Tuvalu.

Exodus is extremely difficult as it has enormous economic, financial, social, legal, cultural, and other implications. Such an eventuality would shake the core of many societies and states, and would reshape their future with uncertainty. The case of the Israelites as we know today, after four thousand odd years since they were exiled from Egypt to this day, has never been resolved. Their status as a sovereign state remains problematic and has been a subject of ongoing conflict with Palestine and its neighbours. With that in mind, the following are two possible ways of exodus raised by the respondents that could be considered to minimise the adverse impacts to those concerned. For clarity's sake, I use exodus in its original Latin meaning;

¹⁸ Exodus comes from the Latin word *exodos*; *ex* means ‘out’ and *hodos* means ‘way’ (*Online Etymology Dictionary*). The *Oxford English Dictionary* defines exodus as the act or an instance of going out, or departure of a large number of people.

the “way out”, and “diffused” and “concentrated” exodus to distinguish migration and relocation respectively. I wish to make it clear that exodus as an option is only addressing the people’s safety, but it does not address the plights of other habitats and the territorial land issues.

9.6.2.1 *Diffused exodus*

I use the phrase “diffused exodus” to describe scattered movement either via migration as one pleases or relocation of groups to various destinations around the globe. The nature of such a “way out” may result in people from one community, such as Tuvalu, ending up in different destinations as shown in the illustrative model in Figure 9.1. In Chapter VIII, I discussed migration in detail and noted that it has been promoted as one of the adaptation options for affected communities due to climate change and sea level rise. However, in the context of diffused exodus, the aspect of migration relating to remittance as a means of strengthening the resilience of affected communities is irrelevant because communities would have moved out of the affected locations. This is what Shamsuddoha (2015, p.9) describes as adaptation failure.

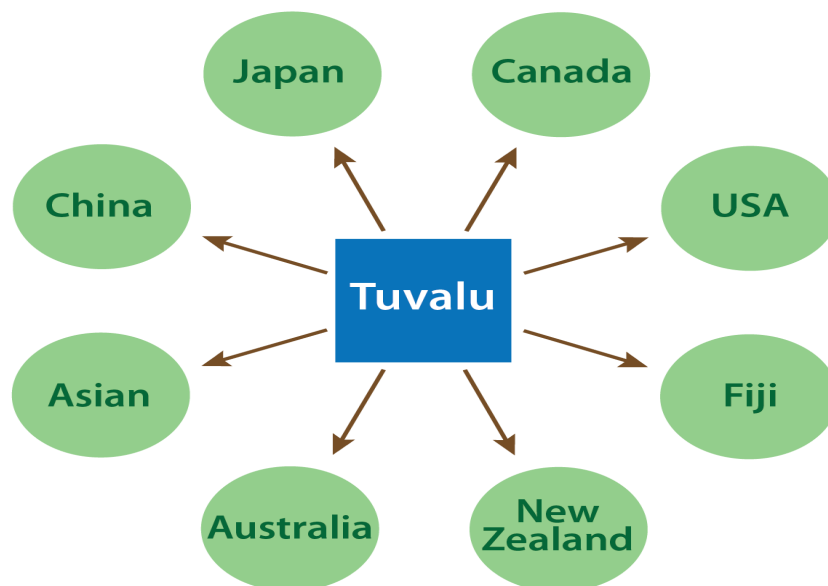


Figure 9.1: Diffused exodus model – Scattered movement all over the world.
Source: Author’s own model.

In view of the prevailing immigration restrictions around the world, climate change migration, to be an effective option must begin by introducing an international legal framework that accommodates it. The call by Tuvalu's Prime Minister, as noted in Chapter VIII, seeking a UN resolution to give legal protection to people displaced by climate change is an important global approach. Simply, there must be a similar convention such as that applied to refugees – The Refugee Convention 1951 – for migration under climate change impacts to be recognised. Regional efforts should also start looking at a regional mechanism to address migration. Perhaps it is time to consider reverting to the free movement – the ocean in us – within 'our seas of islands' that ancestors of the Pacific region enjoyed for many centuries prior to the introduction of colonial boundaries (Hau'ofa 1993; 1998).

Furthermore, multilateral and bilateral arrangements such as the Pacific Access Category (PAC) and Samoan Quota Resident Visa (SQRV) with New Zealand should be enhanced and promoted in other destinations. Fiji's willingness, as continuously advocated by their current prime minister, to take on people from Kiribati and Tuvalu when catastrophic climatic events happen is a signal to other countries such as Australia, Papua New Guinea and nearby countries to consider. Such pledge must not wait until it's too late, but to start tangible processes soon.

9.6.2.2 Concentrated exodus

I refer to "concentrated exodus" as an organised movement of people or relocation as defined in Chapter VIII – but most importantly the relocation from their place of origin to one specific destination. In other words, it refers to a relocation of one entire community (e.g. Tuvaluans) from their place of origin to a single new destination where they are not scattered, but concentrated to continue to practice their culture and enjoy their usual way of life. It would be a type of relocation where the community moves to a single designated place and replicates its cultural identity as best as it could be. In the case of Tuvalu, for instance, concentrated exodus would require the people to take with them their sovereign rights as a state, land tenure system, cultures, social lifestyles and so forth as shown in Figure 9.2.

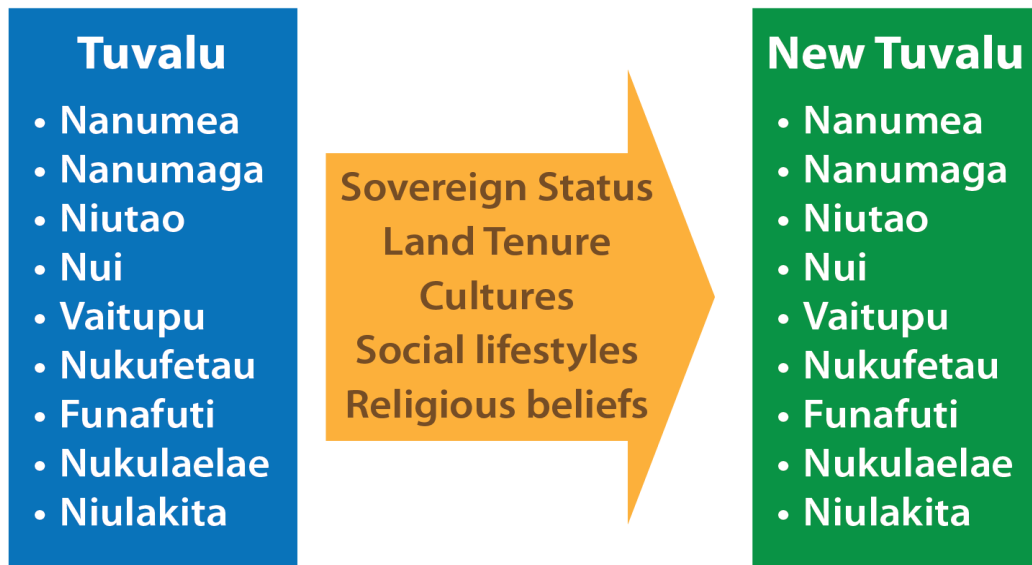


Figure 9.2: Concentrated exodus model.
Source: Author's own model.

Relocation, as covered at great length in Chapter VIII, is another “way out” of adapting to climate change (Birk 2012; Bronen 2011; Campbell 2010a; 2010b; 2014). It is perhaps the most difficult solution to the problem of climate change, particularly if people are forced to leave their land (Campbell 2010a, p.35). Despite the many difficulties, relocation is an option of last resort. How it is to be carried out must not be arranged in a one-size-fits-all approach. Perhaps, establishing an international legal framework (e.g. a Convention) that allows legal recognition with less restriction of such mass cross border movement would be an ideal starting point. However, each and every relocation must be considered on an individual community and country basis. Besides the financial and economic costs of relocation, social aspects such as culture and religion should be considered with due care in order for the relocated communities to adapt to their new destinations with few problems. Issues such as weather, the environment, both land and oceans, to pick a few, are fundamentally important. For people who lived along the coast or surrounded by the ocean, they should be relocated to a similar environment in their new destinations. Those who live in tropical weather should not be relocated to destinations below 20° Celsius. However, it is acknowledged that finding such places and obtaining access to other people's land, especially in the Pacific, could be extremely difficult.

As discussed in the previous chapters, the fieldwork findings reveal that the people of Tuvalu prefer the “concentrated exodus” model if there were to be no alternative left for them to remain on their islands. To them, they desire a new Tuvalu that would replicate most if not all features of Tuvalu. Indeed, they want a new Tuvalu that has eight or nine plots of land, if nine islands are impossible, where they can practice their individual island cultures from traditional governance (e.g. *taupulega* and *tautua* systems) to lifestyle (e.g. *akai* and *niu hihi* traditions). As one participant in the *sausautalaaga* I had in Vaitupu said:

We live here, we live with our customs, so I incline with the idea suggested by others [referring to other participants] that we go together. If Vaitupians move, we all go together, and each island would have its own plot, ...so we can practise our own customs there and enjoy life together with our children and grandchildren... (Pulusi Ale, 57 year old man).

What underpins all the above preferential features of a new destination was the issue of land and the Tuvalu land tenure system. This is because land is the backbone to the core values and customs of the traditional way of life of Tuvaluans. Furthermore, the principle of islandism or *loto fenua* has a great deal of influence upon the people’s preferences. Thus, both national and island identities are central to Tuvaluan’s ideal new home. The intersection between these identities is overlapping but distinctive. As discussed in detail in Chapters VI and VII, national identity is made up of collective island identities more clearly seen by outsiders through the national flag, emblem and so forth. Island identity is a domestic notion that is embraced by island spirit and visible only to insiders through their distinctive cultures.

Having a New Tuvalu with all the ingredients of a concentrated exodus is almost impossible. Notwithstanding that, the Banaban relocation is a case in point in most aspects of the concentrated exodus model (Collins 2009; Edwards 2013). Banaba is an island in the Central Pacific blessed with large deposit of phosphate soil. In the early 1900s mining of phosphate on the island began. After forty years of excessive extraction of phosphate, the island became barren, leaving a very limited amount of edible vegetation growing on the island. As a consequence, the British

government decided to relocate the entire Banaban population, albeit a few people remained, to Rabi island in Fiji.

Akin in most aspects to the concentrated exodus model, the Banaban relocation to Rabi involved taking with them their culture, religion, and social lifestyle. Their new home is an island as was their old home, although the topography and size are different. Having the whole island to them to live in as a community and observe their own customs was what Edwards (2013, p.796) observed as something the Banabans were adamant to the relocation arrangement. Sovereignty was perhaps the only missing ingredient. But it was to be expected given that at the time both Banaba island and Rabi island were British colonies, and therefore it was not seen as an issue.

Nine's (2010) proposition of a New Tuvalu is interesting and relevant. She argued using Lockean property right theory that 'if we understand the "preservation of humankind" as a foundational moral mandate for property rights, then the "establishment of justice through the preservation of self-determining groups" is a foundational moral mandate for territorial rights' (Nine 2010, p.362). Risse (2009) made a similar argument that people displaced by climate change should have immigration and resettlement rights on the basis of individual common ownership rights of the earth. While these theories have merits in their own spheres, and although they are far from reality, they must not be dismissed. Tuvaluans' preference for a concentrated exodus is perhaps possible under these theories and therefore it is strongly recommended that they must be explored further.

9.6.2.3 *Atafou exodus*

Observing the complexities of the two forms of exodus raised by the respondents, especially the second one, prompt me to offer an alternative. I call this *atafou* exodus. The word *atafou* means new form. The *atafou* exodus model is where each community in one country moves to different locations around the globe but remain as a one sovereign state with its central government operating from its original place, as in Figure 9.3. The allocation of the eight island communities of Tuvalu to

the different destinations in the model is an illustration only and does not represent any specific preference of the people.

In any case, this model has several advantages. First, it allows communities to maintain their traditional social lives, kinship relationship and practise their cultural way of life in their new homes. Also, they can still rightly claim their cultural identity because there still exist in their original home a small population as caretaker of their rights. Second, this model releases pressures on host countries from hosting an entire population from a single country. Third, the relocated community can maintain its national identity because the central government is still operating from within its original territorial jurisdiction.

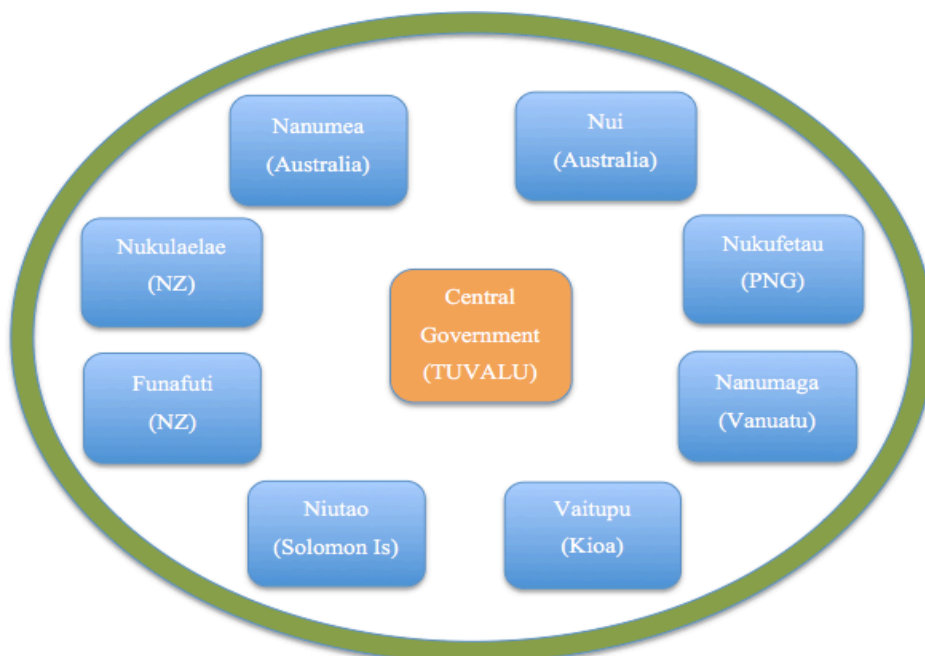


Figure 9.3: *Atafou* exodus model.
Source: Author's own.

The *atafou* model, however, requires a relook into the existing international legal frameworks to accommodate things like (i) relocatees holding two citizenships, that of their new homes and Tuvalu; (ii) the government to be elected as is the current system although the constituencies are living in different locations or a revised one that address other concerns; (iii) relocatees are subject to both laws of their new homes and origins; and a host of other issues. By and large, this model operates more like a federated government system such as the Federated State of Micronesia. Notwithstanding that, this model requires to be explored further but that is an assignment for another time.

9.7 Conclusion

I revealed in this chapter the conundrum that exists among Tuvaluans as a result of their strong religious beliefs. Shaped by their socio-historical development, Tuvaluans' perspectives on the impacts of climate change are underplayed by their religious faith. However, this is not exclusive to Tuvaluans. Already, theologians around the globe have acknowledged the existence of this enigma in various platforms. At the apex of all are the biblical stories of God's creation and God's covenant pronounced to Noah. Many Christian literalists and fundamentalists in different corners of the world, Tuvalu included, who have resolute faith in God's divine power appear to lack the desire to support ongoing climate change talks. On the contrary, Christian realists are interpreting biblical scriptures more in the spirit of scientific discourses about climate change and sea level rise.

Views expressed during interviews with EKT pastors and deacons clearly show that there exists within the institution a problem of unity in addressing climate change. The shining rainbow that the EKT pastors used to see, and is still there for some pastors, is slowly fading out, particularly in the minds of those who have been exposed to, and deal more strongly with, climate change issues. However, the popular view that EKT members appear to still possess is that God's covenant symbolised by the rainbow is everlasting. All these diverse views boil down to faith – the belief in something that cannot be seen – something that is subjective and depends on individuals' own judgment. Non-EKT churches mostly share similar views with the EKT, upholding God's covenant with Noah as perpetual.

Nevertheless, Tuvaluans do understand the need to address these problems and thus suggested to construct arks that could save Tuvalu and its people. While these ark options are imaginative and highly unattainable, it is imperative that people's ideas are considered. Furthermore, although Tuvaluans predominantly prefer to stay in the islands, they are also conscious that if the worse scenario hits the islands they should exile. However, they prefer a “concentrated exodus” so that they can continue to practise their cultural way of lives and keep their national and cultural identity in their new home. An alternative model is *atafou* as it both gives relocated communities and recipient communities certain advantages.

CHAPTER X

FAKAOTIGA O TE KAMATAGA

This is not the end, this is not even the beginning of the end, this is just perhaps the end of the beginning.

Churchill (1942 para. 6)

10.1 Introduction

As I draw this thesis to its conclusion, I know that I am not concluding the sentiments, emotions, and thoughts of the people of Tuvalu about the profound threats posed by climate change and sea level rise. The nature of the impacts of climate change and sea level rise are too complex to comprehend and resolve with precision. This is because it is an ongoing phenomenon that continues to be characterised by great uncertainty. Global, regional and national efforts to combat this phenomenon should therefore, endure accordingly. The achievements made so far, particularly the winning of the battle in Paris, and the ensuing ratification and enforcement of the Paris Agreement ‘is not the end...’ (Churchill 1942). By the same token, what I have uncovered in this thesis is not the end, not even the beginning of the end, it is just the end of the beginning – *fakaotiga o te kamataga*.

In this final chapter, I sum up what I set out to achieve in this research. Firstly, I address the research questions by reiterating the fundamental issues discussed in the relevant chapters as answers to each question. Secondly, I recap the key thematic findings that emerged from the research, particularly the (i) coconut roots and coconut fruits, (ii) fading rainbow, and (iii) ark and exodus. Last but surely not least, I end the chapter by noting my theoretical contributions, the limitations of my research, and a brief reflection of my journey throughout this research endeavour.

10.2 Addressing the research questions

In this research, I situated my work within the parameters of human geography relating to the impacts of climate change and sea level rise in the context of Tuvalu. More specifically, what I embarked on throughout this research journey to achieve was an answer to my key research question reproduced below:

How do the people of low-lying states like Tuvalu view the uncertainty surrounding the future of their identity as people of an independent state with a unique cultural heritage in light of the impacts of climate change and sea level rise?

Addressing this question required me to break it up into six specific thematic research questions, which I now attempt to answer precisely.

(i) *What is the state of climate change and sea level rise in general, and in the Tuvalu context in particular?*

By and large, I gathered from the discourse in the literature that climate change and sea level rise are very complex phenomena compounded with divergence of scientific views and political agendas. However, there exists an overwhelming body of views that climate change is real. The earth's temperature is getting warmer because of excessive anthropogenic gases being released to the atmosphere. The sea level is rising as a result of thermal expansion and melting of land ice. Recent climatic events impacting on the environment, species of all kind and humanity are being observed as partly attributable to climate change. Anxious of the consequences of these global impacts, the international, regional and national communities have been working tirelessly over the past two decades to address it. The UNFCCC is driving climate change processes with the aid of IPCC and of course governments, non-government organisations, and civil societies that are all working toward addressing these phenomena.

In Tuvalu, I noticed from the fieldwork that the vast majority of the people subscribed to the notion that climate change and sea level rise are happening. Many of the respondents described climate change in terms of cyclones and strong-winds, droughts; and sea level rise in terms of waves overtopping the islands, coastal erosion and land inundation. Their views were being framed on the basis of their real life experiences and their exposure to media representations and other advocacy programmes about these phenomena. Ironically, I realised there is little knowledge among the people about what climate change really is, because the manner in which they described it was in line with the description of climate variability. Notwithstanding that, Tuvaluans perceived climate change and sea level rise as the most profound threats, and thus had been very strong and active in the fight against climate change. This has resulted in the formulation of *Te Kaniva*,

which is the national climate change policy that is charting Tuvalu's journey through the challenges of climate change.

(ii) *How do the people of Tuvalu perceive the impacts of climate change and sea level rise to its national identity?*

I can verify from my fieldwork that national identity is of paramount importance to the people of Tuvalu. There exists a general perception among the people that Tuvalu's identity may be lost because of climate change, and especially sea level rise. This perception was a combined result of people's own experience of the change in the weather pattern from their traditional knowledge of weather in Tuvalu coupled with their exposure to media and climate change activist representations of this phenomenon. They fear the consequence of Tuvalu becoming submerged, as that may result in Tuvalu losing its national identity. This perception of worrying about the national identity is countered by people's religious beliefs that I discuss in relation to the relevant question later. Interestingly, this perception is not only prevalent among Tuvaluans living in Tuvalu but also those living overseas.

(iii) *How do the people of Tuvalu view the impacts of climate change and sea level rise to their core cultures and cultural identity?*

My fieldwork findings reveal the grave concerns of the people of Tuvalu about the impacts that they perceived as caused by climate change and sea level rise to their cultural way of life. They claimed, for example, that their traditional dietary patterns such as eating *pulaka* and drinking coconut were being affected because of the change in the weather and salinity of ground water causing crops to become less productive. More importantly, their worldview of the impacts from these phenomena is that they would lose their cultural identity. This perception is also shared by Tuvaluans living overseas. This view relates to the extreme scenario of Tuvalu disappearing because of sea level rise. They strongly assert that their cultural identity could only be properly preserved if they practise their culture in Tuvalu. Land or *fenua* was the most fundamental element of cultural heritage that the people fear of losing if Tuvalu is eventually submerged.

(iv) *How do the people of Tuvalu view migration and relocation against staying or remaining in Tuvalu?*

In spite of the general perception of Tuvalu losing ground because of climate change and especially sea level rise, the vast majority of the people prefer to live in Tuvalu. They do not want to migrate or relocate. My fieldwork results indicate that there exist a number of characteristics of Tuvalu that people give weight to in their preference to remain in the islands. Things like the lifestyle in Tuvalu, security in terms of freedom of movement and having their own piece of land, are among the reasons that the people would rather remain in Tuvalu than migrating or relocating somewhere else. Concomitant with that was the fear that migration and relocation may place them in a worse situation. Issues such as cold and non-tropical weather, high landscapes and landlocked destinations, and living among people of different ethnicities and cultures are some of the concerns.

(v) *How do religious beliefs influence the manner in which Tuvaluans think about climate change and sea level rise?*

As a religious state where the great majority of citizens are Christians, there exists a strong influence of religious teachings and beliefs in the way the people think about climate change and sea level rise. As noted earlier, the fear of Tuvalu becoming submerged is downplayed by the people's belief in God's promise in Noah's narrative. The rainbow remains as an everlasting hope of salvation to Tuvaluans. Within the Tuvalu Christian Church (or EKT), there exists confusion and disagreement amongst the pastors as to the true interpretation of the rainbow. The rainbow to some, is starting to fade because of their interpretation of the reality of life from these phenomena.

What became clear from my research was that strong churchgoers were those who talk most emphatically about not moving elsewhere. They appear to be less accepting of climate change and sea level rise because their faith dictates that God's divine intervention, and keeping His promise not to send the floods, will therefore save Tuvalu from sinking. Faith is a key determinant of peoples' religious interpretation of bible teachings and the reality surrounding them.

(vi) *What are the possible solutions available and those envisioned by the people of Tuvalu to address these phenomena?*

Beside the ongoing efforts on mitigation and adaptation, the fieldwork findings appear to indicate that people's responses were more on solutions to save Tuvalu. They envisioned solutions that could maintain the islands so that they continue to live in Tuvalu. As covered in Chapter IX, people talked about encircled seawalls, elevation and reclamation of lands, and other options to be constructed so that the islands could be able to withstand the impacts from climate change and sea level rise in particular. Interestingly, some people were very imaginative in their visions to address these phenomena by talking about floating and underwater islands, and even praying to God to save them. However, the people also have a perception, that if time is up for them to leave Tuvalu then they have to go. To them, they envisioned an arrangement where they could be relocated to a new destination that could accommodate most, if not all, of the way of life they now enjoy in Tuvalu. I realise that the more urgent issue is to educate the people on some crucial scientific information, so that they are in a better position to interpret the climatic events they experience against the media rhetorics of climate change.

10.3 Key findings of the thesis

To add substance to the answers given in the preceding section, I provide in this section the key findings from recurring thematic issues in the literature reviews, interviews and focus group discussions, household survey questionnaires, and my personal observations.

10.3.1 Traditional knowledge of climate

Generally, there exists traditional knowledge among the majority of the people that climate change is happening in Tuvalu. The wet season from October to March, and dry season from April to September that used to occur every year in the past has drastically changed. Many people pointed out that in the last few years, the rainy season has inconsistently occurred at any time of the year. Consequently, the dry season has also become variable and recently has occurred more commonly towards the end of the year.

Further, people shared that even the direction of the cyclones that used to come from the westerly side of the islands had recently changed to come from all sides of the islands. The frequency has reduced but the intensity has increased tremendously. Coastal erosion and seawater intrusion is another surprising occurrence in recent years. Places that were usually dry in the past are inundated with seawater bubbling from underneath the ground.

Moreover, the change in the weather patterns has impacted on certain traditional knowledge. Traditional ways of predicting the movement of migratory fish such as bonito and tuna has been difficult because cloud patterns and wind directions have varied quite unpredictably. The traditional art of growing crops such as *pulaka* and *taro* were becoming unworkable because of the salinity of the ground water (Tekinene 2013). Likewise, traditional knowledge of pruning and maintaining coconut trees to continue to bear fruits has become difficult and unworkable.

10.3.2 Uncertainty of statehood and national identity

The literature on states and statehood reveals the uncertainty of the status of states, which are predicted to become uninhabitable, or even disappear as a result of climate change and sea level rise. Given the strict criteria to qualify as a state, Tuvalu's future status as a sovereign state is at stake (Crawford 2006, Raic 2002). If its territorial land is completely submerged and/or its population has all migrated because the islands are no longer habitable, Tuvalu may no longer be qualified as a state so properly called, under the Montevideo Convention 1933 (Crawford 2006, Burkett 2011, Nine 2010).

Losing such status would result in countries losing their sovereign rights and they would not be recognized as a distinct state among the family of nations. Tuvalu may become a lost state forever. Consequently, its identity as an independent state symbolized by its name, flag and other national symbols would be forever gone. Tuvaluans living in Tuvalu and those overseas shared grave concerns because they fear that if it happens then they could no longer identify themselves as Tuvaluans.

10.3.3 Susceptibility of culture and cultural identity

Although culture has never been static (Flinn 1997), the cultures of vulnerable countries, the people of which may eventually be displaced due to the impacts of climate change and sea level rise, are susceptible and may cease to exist over the course of time. Fieldwork findings reveal that culture can be affected if it is practiced in a different contextual environment. In New Zealand, the young Tuvaluan generation is slowly losing grasp of Tuvalu traditions and customs. The Tuvaluan language is hardly heard spoken by the young Tuvaluans, even in their own family and community settings. In New Zealand, the language week programme in the last two years indicates that the majority of young Tuvaluans in New Zealand do not know basic Tuvaluan terminologies. The individualistic lifestyle is also becoming a norm in the young population of Tuvaluans. The influence of capitalism in their way of thinking has compromised the collectivism and reciprocity customs of Tuvalu.

This is little different to Tuvaluans living in Fiji. Members of the Tuvaluan diaspora mostly living in Suva and those in Kioa Island, particularly the young ones, are conversing in Fijian most of the time. The Fijian custom of serving the ceremonial drink called “kava” is now part of the lives of Tuvaluans in Fiji. Tuvaluan sport and entertainment lifestyles are hardly seen practiced by Tuvaluans residing in Suva. Obviously, the traditional governance systems are nowhere practiced in New Zealand and Suva, although they still exist in Kioa.

The eroding effect on culture, as highlighted above, is gradually impinging cultural identity accordingly. My findings in Kioa in this context were quite surprising and attested to the plasticity of cultural identity. Of the various groups of respondents I interviewed, the youngest generation came out clearly that they want to identify themselves as Fijians rather than Tuvaluans. Although they acknowledged that they descend from Tuvalu, they do not see themselves as Tuvaluans. The Fijian identity is now becoming theirs.

10.3.4 Challenges of religious establishment

The findings of the study showed that there existed a strong influence of the religious establishment in Tuvaluans’ understanding and accepting of the reality of

climate change. Against their personal observations and knowledge, Tuvaluan Christians' absorption of climate change and sea level rise as a phenomenal reality is offset by their faith. Findings from interviews with pastors and religious leaders indicated the prevalence of the conflict within the Ekalesia Kelisiano Tuvalu (EKT – lit. Tuvalu Christian Church).

In view of the fact that the majority of Tuvaluans are Christians, efforts to advocate and make people understand climate change and sea level rise is a major challenge. If this conflict within the EKT is not resolved, then it remains a barrier for the government and other organization to solicit the support of the people on any climate change related programs.

10.4 Synthesis of metaphorical themes

I now turn to the metaphoric themes that emerged from the research as they further provide substance to the foregoing sections. I intend neither to discuss them under each of the six thematic questions or key findings, as that would lure and entice me to repeat myself, nor in any order of ranking as that would be prejudicial in itself. Instead, I succinctly discuss them as philosophical themes.

10.4.1 Coconut roots and coconut fruits

I coined this metaphor, as it is appropriate to explain and demonstrate the way of life of the people of Tuvalu. Like many Pacific island countries, the coconut tree is an important part of Tuvalu's traditional way of life. History tells us and holds true about the value of coconuts to Tuvaluans. As a life-sustaining crop, the coconut is food, drink, medicine and the list goes on, to the people of Tuvalu. Traditionally, coconuts portray many social values such as wealth, manhood and leadership. Thus, Tuvaluans are “coconut people” and I believe this can appropriately be applied to other Pacific islands that give high value to coconut in their traditional ways of life as well.

The idea of “coconut roots”, on one hand, illustrates the closeness and connectedness of the people of Tuvalu to their lands. It metaphorically depicts the significance of the land to the people of Tuvalu and how intrinsically rooted they are to their *fenua* as does the roots of the coconut to the land. The coconut roots,

like roots of any tree for that matter, need land with fertile soil to be able to survive and prosper. By the same token, the people think of their *fenua* as fertile in terms of lifestyle, customs and so forth such that they just cannot live without it. The coconut roots therefore signify their strong sense of place and attachment to their *fenua*. The *fenua* is all they have. Once removed from the land they considered themselves insecure, unsafe and probably dead, similar to a coconut that dies if uprooted.

The idea of “coconut fruits”, on the other hand, portrays the fluidity of movement of Tuvaluans. The coconut fruit can drift in the open sea for weeks at the mercy of the wind and currents and once washed ashore it will establish and reproduce itself. The history of Tuvalu speaks volumes of the mobile nature of the people who traversed the Pacific and established homes within the archipelago for many centuries in a similar fashion, as does the coconut fruit, albeit not necessarily at the mercy of the ocean because many were scheduled and planned movements. However, if the worst scenario of climate change unfolds, it may result in Tuvaluans having little control of where to move to, a bit like the coconut fruits. The mobility of the people of Tuvalu has made a significant contribution to the social lives of the people from the remittances, materials and knowledge that migrants have brought to those living in the islands.

10.4.2 The fading rainbow

I used the fading rainbow as a metaphor to illustrate my findings of the creeping influence of Tuvaluans’ exposure to climatic events and the discourse about climate change and sea level rise, into their religious belief of Noah’s narrative. Tuvaluans are mostly Christians, therefore their social upbringings were largely shaped by biblical teachings and principles. Many Tuvaluans know the story of Noah and the flood, particularly God’s promise symbolised by the rainbow that there will be no more global deluge. Tuvalu Christian fundamentalists, those who are actively associated with church programmes, strongly uphold the rainbow as an unequivocal and indispensable promise by God.

Paradoxically, my research findings revealed that there is a change in perception among religious leaders. The discussion with EKT pastors convinced me that a new

interpretation of the rainbow is already taking place. Such a hermeneutic view gave me the impression that already some members of the Christian community are seeing the rainbow slowly fading away. In simple terms, Tuvalu Christians are losing faith about God's promise that there will be no more floods. Their exposure to recent dialogues about climate change, coupled with their personal observations of cyclones and wave surges, inland flooding and erosion, have cast doubt among them about the true meaning of the rainbow. It seems that the rainbow they used to see as a symbol of hope is now slowly fading away in their minds.

10.4.3 The ark and the exodus

I referred to these two biblical terms to illuminate my fieldwork results of what Tuvaluans think are the best solutions for them in light of talks that the islands would soon become uninhabitable because of sea level rise. Apparently, the ark is used to represent the people's perceptions of the best options to save them and the islands so that they can continue to stay and enjoy life as usual. There is an overwhelming perception among the people that saving Tuvalu is the optimal option because that will preserve Tuvalu's identity, such as the Ark of Noah that saved humanity and other species. Coastal protection such as seawalls and elevated and reclaimed land are the arks that people envisioned to be constructed around the islands, but praying and trusting God is the popular ark option.

Notwithstanding the insistence to construct the best ark, I found that people do understand that their stubbornness to stay rooted to their *fenua* may have to be renounced in the "eleventh hour". That is the one, and only scenario that they said would compel them to seek exile for their safety. Interestingly, I noticed that the people prefer to leave as in one whole unit, which I called "concentrated exodus", and to have them placed in a destination that replicates most of the features of Tuvalu in terms of geographical location, meteorological environment and cultural set up such as their land tenure, and sovereign status as a distinct state among the family of nations.

10.5 Conclusion - *Fakaotiga o te kamataga*

What I have done here is just the *fakaotiga o te kamataga*. In essence, my part as a Tuvaluan to unearth and communicate the deep meanings of this phenomenon in the true Tuvaluan context is neither conclusive nor an end in itself. I, and other Tuvaluans who have done similar research work, as well as foreign scholars, have just laid the groundwork and the profile of knowledge that needs to be enhanced.

10.5.1 Theoretical contribution

At the outset, the overarching theoretical contribution of this research is the production of a thorough study of the human dynamics of climate change in the Tuvaluan context. While the study was built on the theoretical foundation laid by earlier researchers of this topic in Tuvalu such as Farbotko, Lazrus, and Corlew to whom I am so grateful, the scope and extent of issues covered in my research were much wider and deeper. In terms of scope, most of these researchers' works were based on the Tuvalu population living in one or two islands, particularly Funafuti and Nanumea but my work encompassed all the island communities in Tuvalu, and also Tuvaluan communities living in Fiji and New Zealand. The extent of the research is deeper in the sense that I was able to tease out some fundamental issues that an outsider would not be able to understand the way Tuvaluans' perceive and feel about.

The research also contributes to understanding the cultural geographies of Tuvaluans in light of the impacts of climate change and sea level rise. It provides a renewed understanding of Tuvalu's old and new culture and those that may be reshaped as a result of the impacts of climate change and sea level rise. For example, the study draws on the likely consequence of this profound threat on the national and cultural identities as revealed by the young generation of Kioans who want to be known as Fijian but still see themselves as Vaitupuans instead of Tuvaluan.

Furthermore, the research also contributes to understanding the emotional geographies of Tuvaluans in the context of the impacts, and the likely consequences, of climate change and sea level rise to their *fenua*. The deep connection of Tuvaluans to their land upon which the land tenure, customs and

traditions have evolved is part and parcel of the emotional geographies uncovered in this study, and gives insight into this important but neglected aspect of climate change.

10.5.2 Limitations of the study

This study inherited certain limitations. First and foremost was the scope of the research. Although I feel that I covered a substantial part of Tuvalu and Tuvaluans living overseas in the research, the outcome could not speak for others whom I did not manage to meet. In Tuvalu, I only managed to visit six of the nine islands. Although I did meet with community members of the other three islands living in Funafuti, I know they could not fully complement the knowledge of those on their islands. Likewise, the research did not cover Tuvaluan populations living around the world, and even in New Zealand I only carried out the study with some members of the Tuvaluan population in Auckland and Hamilton.

Secondly, I encountered various difficulties during the fieldwork trip to the sites. Time constraints and transportation inconveniences that hindered my ability to carry out a thorough study of the chosen islands were the main ones. I also encountered cultural barriers in some of the islands. For instance, in Niutao I did not meet the council of chiefs. This is because of the atmosphere at the time of the fieldwork was one that was impossible to arrange due to cultural norms. Similarly, I encountered the uncooperativeness of some people in Tuvalu, both in the government and outside the government in providing some of the information I requested. All these situations had affected the quality of the research.

Thirdly, I admit that some of the cultural issues I discussed require more thorough research to be carried out. A key one is the Tuvalu land tenure system, as there are gaps that need to be filled by further research work.

10.5.3 Personal reflection and final remarks

My journey in this research traced its origin back to my young days when I used to play with my father at the beach at Alae village in Vaitupu. I began to learn about Tuvalu, its environment, culture and climate from a very young age. I did not know, and never anticipated, that all these were changing until I started to absorb the

immense reality of climate change in the last few years. As I listened to media transmissions and people's discussions about climate change as a topic, I began to fear the worst was approaching fast. Whether it eventuates or not, only time can tell. However, I remembered my father's pronouncement about *te koga ne fati iei toku laupua*. As I began to fully involve myself in climate change undertakings within and outside Tuvalu, my appetite for learning more soon led me to the conviction to which I finally confined myself, in this research work, for three years and four months.

My desire to pursue climate change studies was punctuated with excitement and fear. I felt excited because I was going to make a contribution by projecting to the world how Tuvaluans see and feel about climate change. I knew that there have been a number of media projections and scholarly articles about the people of Tuvalu's concerns, but I equally understand that there are gaps that need to be patched up to avoid misconceptions. What I feared, however, was my ability to pursue the study at the doctoral level.

As I progressed through my research, my fear grew stronger and stronger. However, at this time it was not about my ability to continue, but because of my growing understanding of the people of Tuvalu's grave concerns about their livelihood and future. I must admit that talking to people and finding out what and how they feel about climate change was very moving and touching. I did not see what they see. I did not know what they know. I learnt a lot although I am part of them. Now that I have weathered the climate of climate change in Tuvalu, I am sure readers will see the complexity of the human dynamics of climate change in a small and remote low-lying atoll state such as Tuvalu. I hope that this small piece of work will represent not only Tuvaluans, but also people from other low-lying atolls – the coconut people – in general.

In summing up, this study has interwoven a wide range of factors relating to the cultural and emotional geographies of the people of Tuvalu in light of the impacts of climate change and sea level rise. National sovereignty and cultural heritage are the two broad tenets that instigate anxiety among the people. Identity is central. The people perceived Tuvalu and all that is in it as simply their true identity. While the

discourse on the fate of low-lying atolls such as Tuvalu is uncertain and debatable, that in itself is already causing uncertainty, and at an overwhelming level among Tuvaluans. As coconut people, the impacts posed by climate change and sea level rise can well be illustrated in terms of the impacts caused by these phenomena on the coconut tree.

Metaphorically, the coconut trees along the coast that have fallen and their coconut fruits washed and drifted away by the currents because of coastal erosion represent the coconut people who may have to migrate because of climate change. As for the coconut trees along the coast that are tilting seaward because of the encroaching ocean, they represent the people who are seriously thinking about migrating because of their increasing concern about sea level rise, but are still rooted to their *fenua*. Ironically, these people's sense of attachment to their land continues to root them to their *fenua*, like these coconut trees, but only time will tell whether they will either die rooted to their land or finally fall and drift elsewhere. Furthermore, the majority of coconut trees that grow inland characterise the majority of the people who remain strongly rooted to their *fenua* and do not wish to migrate or relocate. The impacts from soil salinity and drought causing their leaves to turn yellowish characterise people who are very concerned about these phenomena but do not think of moving elsewhere. As a special coconut, the *te niu fakamauginu* (the coconut-tying coconut) remains a symbol of hope in times of trouble to the people of Tuvalu, but for the *te niu fakamauganiu* to survive and remain useful we need to save Tuvalu *toku tia*.

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APPENDICES

Appendix 1: The Arks

1. Encircled Seawall

Seawalls have long been a form of coastal protection used in Tuvalu and elsewhere in the Pacific. Studies on coastal protection that have been undertaken in the Pacific reveal certain good and bad sides of this option (Cummings and others 2012; Gombos and others 2014; Paeniu and others 2015). By definition, a seawall is a structure that is built parallel to the shoreline, sandwiched by the existing landform or reclamation on one side while exposed to the ocean or lagoon waves on the other (Cummings and others 2012, p.35). The structure is often made up of concrete as depicted in Figure: A1.1 of the two different types of seawalls in Funafuti.



Figure A1.1: Concrete Seawalls in Funafuti, Tuvalu.
Source: Adapted from Paeniu and Others (2015, p.61).

However, only certain parts of the islands are being protected with concrete seawalls, particularly those areas that are badly hit by coastal erosion and places where there are important buildings alongside the coast. In light of the cost of concrete seawalls, some locals have resorted to building their seawalls using materials such as coconut trunks, stones, and/or drums filled with gravel (Figure A1.2).



Figure A1.2: Small-scale seawalls in Tuvalu.
Source: Author's own photo (left photo is a place in Nui) and courtesy of Apinelu Tili (right photo is a place in Funafuti).

Lessons learnt from previous seawall projects, particularly the unsuccessful ones have propelled new seawall designs to come into existence, at least in Tuvalu. In 2011, the Japanese International Cooperation Agency (JICA) funded a study of the most appropriate coastal protection measures for Funafuti. The study concluded that “beach nourishment” is the optimal type of coastal protection for Funafuti’s main island of Fongafale. As this is a new design, the first ever in the Pacific, JICA funded the implementation of a beach nourishment pilot phase project about 300 metres long in Fongafale in 2015. However, it is to be noted that this is, strictly speaking, not a seawall. Also in progress, as I write this thesis, another form of a seawall is being implemented in Nukufetau using large geo-synthetic bags filled with sand dredged from the lagoon that could last for 25 years. This, however, has been built a few metres off the coastline and the space between the bags and coastline filled with dredged sands forming reclaimed land for the island¹. Figure A1.3 includes photographs of two new forms of seawall in Tuvalu.



Figure A1.3: Beach nourishment and Geo-synthetic bag seawall in Tuvalu.
Source: (Left photo) Courtesy of Apinelu Tili and (Right photo) Used with permission from Newswire website (R)².

Interview respondents who suggested seawalls envisioned one that encircled the whole islands. As Seelu Namoto put it ‘the option, I think, is to build huge seawalls all around the islands’. Others prefer a very high seawall that protects the islands from the rising sea levels as suggested by two old men: ‘we need to raise the land and build a seawall, very big seawall, to protect us’ (Laloniu Samuelu); ‘I think we should stay here but the government needs to work together with us to construct seawalls so that we can be safe’ (Fauvaka Keniseli). Given the different configuration of the atolls in Tuvalu, this encircled seawall island concept is perhaps more suitable for reef islands such as Vaitupu, Niutao, Nanumaga and Niulakita, as opposed to atolls because of the physical formation as shown in Figure A1.4. However, some respondents acknowledged this predicament but suggested to undertake such options at the main settlements and perhaps select some islets as

¹ Another related project currently ongoing is the Foraminifera Sand project but on a microscopic scale. This is the reproduction of sands, using new technology from Japan, to replenish the beach sands on coastlines of the most affected areas. This is a rather slow project simply because growing sands take a long time.

² See <https://www.newswire.com.fj/world/pacific/tuvalu/construction-of-500-metre-long-seawall-commences-in-tuvalu/>

well if funds permit. But the issue of seawater intrusion remains a challenge under this ark option.

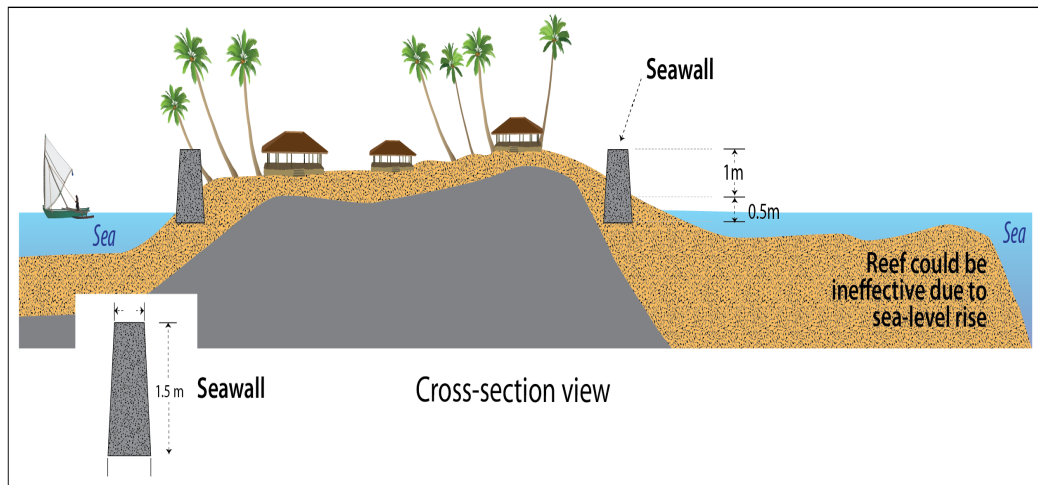


Figure A1.4: Encircled Seawalls Model.

Source: Author's own with the assistance of Max Oulton, Department's Cartographer.

Exposure of Tuvaluans to other places and media coverage on TV where they saw huge seawalls convinced them that seawalls are the way to go. As one interview respondent said: 'I think we should build high seawall behind Funafuti and other islands. I have seen those kind of high seawalls in France, and that is why I want those type of seawalls for all our islands in Tuvalu' (Finiki Siaosi). Seawalls provide a strong and long-lasting barrier of the coast from erosive force of the ocean (Cummings *et al* 2012), but they may not solve the soil salinity problem from seawater seeping into the groundwater lenses. Also, seawalls often reduce erosion on the site but cause erosion on other sides of the islands.

2. Elevated and Reclamation Land

Elevation and reclamation of islands are very expensive and beyond the capacity of most Least Developed Countries (LDCs) like Tuvalu to complete singlehanded. Tuvalu's first attempt of a land elevation project was in 1991-1993 under the Pacific Islands Applied Geoscience Commission (SOPAC) funding. This was the elevation or infilling of borrow pits³. This was a pilot project but it did not progress to a fully-fledged project (Eade 1994). More than 20 years later, the New Zealand government kindly agreed in 2013 to fund a NZ\$10m project for the rehabilitation of borrow pits on Funafuti. The project was implemented in 2015 and has provided many advantages, from increasing available land by eight per cent to reducing outdoor pollution nuisance, as well as improving health issues caused by mosquitos from the borrow pit swamps (Innovate NZ Award 2016). Figure A2.1 shows a borrow pit before and after the remediation project.

³ Borrow pit was a result of excavated land soil used by the US army to construct the runway during World War II.



Figure A2.1 Borrow pit before and after the rehabilitation project in Funafuti.

Sources: Extracted from a presentation by the Calibre Consulting (2016).

Unexpectedly, at least for Tuvaluans, the refilled borrow-pits were filled with dredged sands from Funafuti lagoon to levels some two to four metres above the ground level in some areas. Impressed by the project's success, the government of Tuvalu requested the company which implemented the borrow-pit remediation project to stay on and carry out a reclamation project under the government's own funding. This was a major land expansion of about 80 meters from the shoreline and about 500 meters long, on the lagoon side where the main government building and government residential area at Vaiaku village on Funafuti are located. Improvement on this reclamation has begun with seedling mangroves being planted along the edge. Since its completion, the reclaimed land has been used as a government open-park for official functions. The reclaimed area directly alongside the government main office has been named The Queen Elizabeth II Park to commemorate the place where Her Majesty arrived at Funafuti from her ship during her tour in 1982.

What has sounded like an impractical option in the minds of most Tuvaluans has now become doable but only with the support of aid funds. However, the elevation of islands and reclamation has been ongoing for decades although not because of climate change. The unprecedented pace of the rising sea levels experienced by atolls has triggered some to embark on elevation and reclamation projects such as in the Maldives. Maldives is carrying out a reclamation project to create an artificial island called Hulhumale, adjacent to Male, the capital. The artificial island is about 10 square kilometres and some two metres above the sea level mark, making it higher than the average atolls in Maldives (Schmetzer 2000). Coincidentally, in describing this project Schmetzer (2000, p.1) said that the 'idea is that Hulhumale could become a modern Noah's Ark for the Maldives' 280,000 inhabitants'.

Elevation of the islands to a level that would withstand the highest predicted sea levels was considered to be a better option that was quite prevalent among the interview respondents and the general public in Tuvalu. The then *Kaupule* and now *Ulu Fenua* (lit. Island Head) of Funafuti said this in his interview: 'the best option for us to do in order to retain our country so we could continue to live here, is to raise our islands. We need to dredge sands from the ocean to elevate our islands about five meters high' (Kaitu Nokisi). Another interview respondent said: 'the option for us to continue to live here in Tuvalu, is to request developed countries

not to leave us, but to raise our islands, to help elevate the level of the land a bit higher' (Freda Resture). Some of the interview respondents extended the option of elevation to also include reclaiming more land. Two respondents even envisioned the Palm Islands in Dubai as an example for Tuvalu to consider. I recalled during the formulation of *Te Kaniva* when we toured the islands that this idea also came up, particularly in Vaitupu where one participant described the model. He stressed that, with technology and wisdom already used worldwide, elevation and reclamation is doable although expensive. Figure A2.2 is a sketch of what an elevated and reclamation option that Tuvaluans appeared to envision to protect the islands. This option is most appropriate for islands that have an extended shallow reef such as Vaitupu and atoll islands such as Nanumea, Nui, Funafuti, Nukufetau, and Nukulaelae. However, given the sparse nature of islets in the atolls, perhaps this model can be used only in a few selected islets in each of the aforementioned atolls.

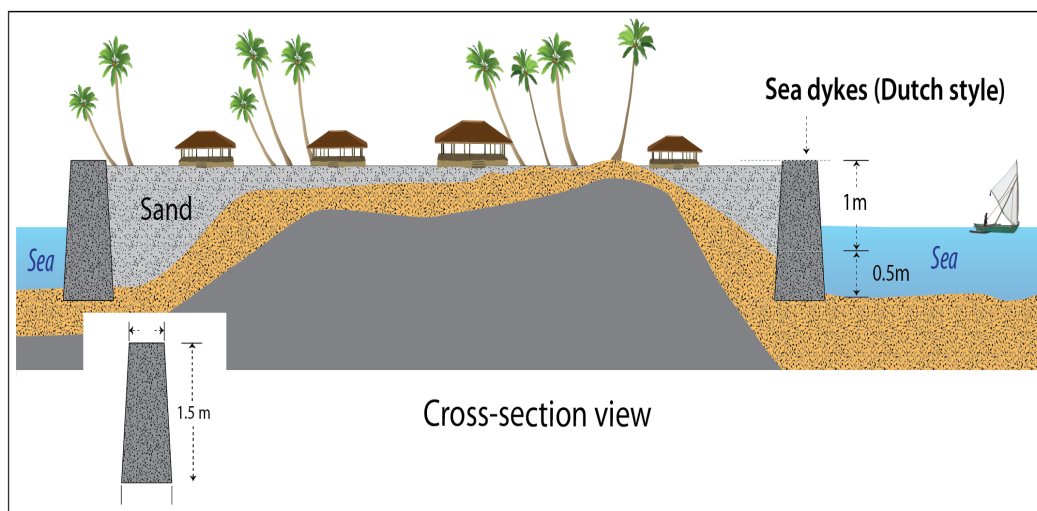


Figure A2.2: Elevated and Reclamation Model.

Source: Author's own with the assistance of Max Oulton, Department's Cartographer.

3. Ark-of-Noah Island

The Ark-of-Noah Island is a concept based on the biblical story of Noah's ark and the flood. It is simply a floating island. The idea is derived from various interview respondents' expressions of the option to save Tuvalu, particularly the discussion that ensued during the *sausautalaaga* that took place at Alofi, Vaitupu during the fieldwork. First, let's get some of the interview respondents' views:

In my mind, in that kind of situation [referring to Tuvalu becoming submerged], we need to build a ship. I always remind my children to build a large and safe boat to keep us when that eventuates. We must stay here, so with a large boat we can just float here because I do not want to go anywhere (Faailo Liufau).

If sea level continues to rise, each of us should have a floating apparatus [laughing and sigh]. I think it is hard because we don't have the money. But we have a government who should buy big ships or

those big floating things like barges for people to live (Lepana Filipo).

I think the best solution for us if the sea level rises and submerges the islands is to build floating houses (Snow Seelu).

If we are to continue to stay here, the most optimal idea is to construct floats, like boats, for us to float on (Kapule Lopati).

These expressions of having floats were finally crystallised into a clear floating island concept during the *sausautalaaga* at Vaitupu referred to above. In clarifying the concept, participants in the *sausautalaaga* described a form of island that is floating like Noah's Ark, hence one interjected and suggested to call it the 'Ark-of-Noah island'. Figure A3.1 is a model of what this floating island option looks like.

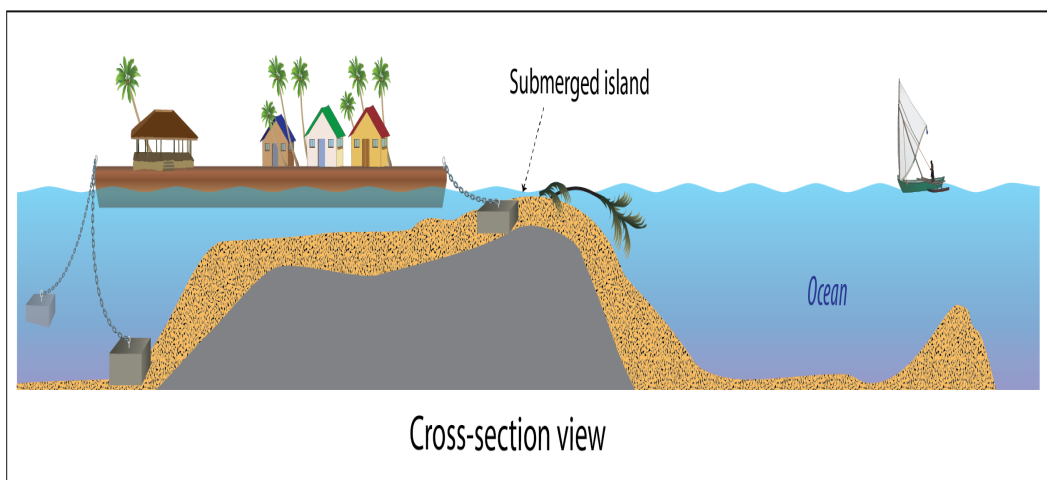


Figure A3.1: Ark-of-Noah Floating Island Model.

Source: Author's own with the assistance of Max Oulton, Department's Cartographer.

Floating islands are neither a new nor a theoretical concept. In fact, there are natural and artificial or human-made floating islands existing around the world. "Natural" floating islands are particularly found in large river flood plain areas and lakes, and could grow from a few square metres to hectares in size and as high as 12 metres (de Freitas and others 2015). By definition, natural floating islands are:

floating pieces of land that commonly consist of peaty soil buoyed by gases released from the decomposition of organic matter, or masses of buoyant aquatic vegetation that often contain organic sediments trapped among rooting tissues (Wetzel 2004, p.1).

In the Amazon River plain in Brazil, the floating islands are called "matupas", and according to local Amazonians, floating islands are different from floating mat vegetation because the latter 'have no soil substrate, so it is possible to ride over them in a canoe' (de Freitas *et al* 2015 6).

Human-made floating islands have been in existence for decades, if not centuries. In Peru for instance, the tribe of Uros has been living on artificial islands (40 small and one large) in Lake Titicaca for decades (Sumitra 2013). In the recent past, the

idea of human-made floating islands has drawn the interest of some countries and private developers. Already, there are such islands like the famous ‘spiral island’ built in 1998 with recycled plastic bottles off the Mexico coast by British artist Richart Reishee Sowa⁴, and the floating Kansai airport in Osaka, Japan. These are but some of the existing artificial floating islands. With the looming concern about the consequence of climate change and sea level rise, the concept of man-made floating islands has advanced both in discourse⁵ and conceptual designs. The idea has gone viral on the Internet, and many amazing designs have been proposed.

In fact, the floating islands concept has reached the Pacific Islands negotiation domain during a number of climate change dialogues as an option for low-lying atolls. I recall in 2012 during the preparatory meeting of PIC member officials for the Sixth Pacific Alliance Leaders Meeting (PALM 6) held in Tokyo, a presentation was given by one Japanese engineering design company on floating islands. Following that, the then Kiribati president was very keen in pursuing this option and to have it tested in Kiribati first (Fox 2013). Moreover, the French Polynesia government signed a memorandum of understanding (MOU) with the Seasteading Institute in 2017 to design the first floating island by 2019. In signing the MOU, the Minister for Housing of the French Polynesia government praised the Seasteading Institute and said that ‘he sees in floating cities the kind of outside-the-box thinking that could solve such a problem’ (Reuters 2017).

4. Other ark options

Desperate to save and preserve their islands, some interview respondents came up with rather imaginative arks that may or may not be possible to realise. In short, these include:

Underwater Island - At first, the idea seemed completely weird when one of the participants during a *sausautalaaga* at Vaitupu interjected with the idea of an underwater island. This idea came out of a story told by one of the famous storytellers of Vaitupu named Fakasala Peni about a ship that was sunk some forty years ago. This story says that when the divers found the shipwreck it was covered with seaweed. Surprisingly, when the divers cleared up the seaweed at the side of the shipwreck, they saw inside it bunches of vegetables like cucumber and crops like potatoes with unusual size, three or four times larger than the sizes we know of these vegetables and crops. And on the other side of the shipwreck, the divers found live pigs of extraordinary sizes. Emerging from this made-up story is the idea to build an underwater island as it may not only save Tuvaluans but also provide unusual produce for sustenance. It sounded interesting so I decided to just note it down without knowing that this is not a new concept. In fact, there do exist underwater islands or cities in a similar fashion in Bulgaria and Dubai. And, there

⁴ See a short video clip and article of the plastic bottle floating island on website: <https://www.kickstarter.com/projects/scottmader/grand-launch-recycled-plastic-bottle-ecological-ar>

⁵ Beside climate change discourse, floating islands have also been discussed in a wide range of areas (see Duzer, Van Chet (2004) ‘Floating islands: A global bibliography’, Los Altos, California, Cantor Press; can be found on the website: http://pixelrauschen.de/wbmp/media/book/map_03_br_01.pdf).

already exist on the Internet speculative designs of underwater islands and cities⁶, which suggest that this is not such a weird option although it may cost a fortune.

High Rise Buildings – The interview respondents who talked about this option did not give any detailed description. This idea first came from a married woman in Nui who said: ‘my view is for us to construct a very high tower so we could live when the sea level rises’ (Tooga Sesilo). In Nukulaelae, an old man also supported this option by saying: ‘because I want us to continue to live here, I think the best option is to build something like a huge house high up, so when the rising sea levels start to submerge the islands we can all live in it’ (Tausegia Tafia). Judging from the way they expressed their views and others who aligned with this idea, it reminds me of Venice in Italy during my visit there in 2013. Venice is a city that is made up of buildings formed on submerged platforms that are separated from each other by canals, but linked by small bridges. The underlying rationale is for atoll islands to start building high-rise buildings that could remain standing when the islands eventually became submerged. Yamamoto and Esteban (2014, p.155) discussed a similar design but named it a ‘lighthouse’ type of structure. This is a progressive long-term option and would need proper engineering design to explore its durability. Issues relating to sustaining life under this option did not emerge in the discussion but need to be taken into consideration.

Suspension Island – This concept came up during my meeting with the Kaupule members of Vaitupu, and surprisingly, one interview respondent in Kioa also raised it. In describing this option, they said that the idea is to construct a platform above the island with pillars to support it like overhead highways in bigger countries. The platform can be developed into a well-designed village or town with the necessary spaces for agricultural, recreational, community, and other purposes. Interestingly, the aim of such a concept was not to disturb the natural formation of the existing islands because of their traditional values, until nature (sea level rise) finally caused the islands to subside. Such a concept, according to these respondents, would also maintain the linkage of the people to their land by having the people living just above the islands.

⁶ These amazing engineering design works of underwater cities as well as floating islands could be found on the website: <https://www.youtube.com/watch?v=PaTvuudh014#t=69.620605>.

Appendix 2:

Letter of Ethical Approval

Philosophy Programme
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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Tapugao Falefou
Associate Professor John Campbell
Associate Professor Michael Goldsmith

Geography Programme

28 July 2014

Dear Tapugao

Re: FS2014-31 Living with uncertainty: Tuvalu's climate change and sea level rise, and the perceived loss of its national and cultural identity.

Thank you for submitting your amendments to me. They address all the points raised in my previous letter and I am happy to provide you with formal ethical approval.

I wish you well with your research.

Kind regards,

Ruth Walker
Chair
Faculty of Arts and Social Sciences Human Research Ethics Committee.

A handwritten signature in blue ink, appearing to read 'Philip Zulu'.

3/11/16

Current Chair FASS HREC.

On behalf of former chair Ruth Walker.

Appendix 3:

Information Sheets

University of Waikato
Faculty of Arts and Social Science

INFORMATION SHEET
for
PERSONAL INTERVIEW

Researcher: Tapugao Falefou

I am a student currently undertaking studies for the degree of Doctor of Philosophy in the Geography Programme at the University of Waikato, Hamilton, New Zealand. As a requirement for my doctoral studies, I am here to undertake research on the social implications associated with the uncertainty posed by climate change and sea level rise. I am particularly interested in examining the concerns of the people of Tuvalu about the perceived loss of national and cultural identity if Tuvalu is no longer habitable or is completely submerged by sea level rise.

I would like to invite you to participate in a 30 minutes to one hour interview with me. I will ask you some questions relating to the research topic and would appreciate it if you could answer them in the best way you can.

Rights to participate

If you choose to participate in my research, you have the right:

- To refuse to answer any particular question/issue;
- To withdraw or terminate the interview at any time you want;
- To seek clarification of the questions or ask any further questions about the research during or after the interview;
- To disagree to audio record the interview;
- To remain anonymous or to consent that your name be used in the thesis and any other report documents; and
- To withdraw from the research at any time up to three weeks after the interview.

Confidentiality of information

I wish to assure you that all the information you will provide in this interview process will be kept confidential. I will, to the best of my ability, keep your information safe and secure and I will archive them properly in the Tuvalu Government Archives (and if that is not feasible, they will be lodged in Paridisec, a digital archive based in Australia), after I have used them for the purpose of my doctoral thesis. As the information belongs to you, even if it is placed in the archive, it cannot be used by anybody else without your consent.

Inquiry about the research

This research has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Science, University of Waikato, therefore if you have any questions relating to the ethical conduct of the research please send them to the Secretary of the Committee at the following address:

Secretary
Human Research Ethics Committee
Faculty of Arts and Social Science
University of Waikato
Te Whare Wananga o Waikato
Private Mail Bag 3105
Hamilton 3240
New Zealand

Email Address: fass-ethics@waikato.ac.nz

Furthermore, if you have any questions relating to the research please feel free to contact me or my supervisors at the following addresses:

Tapugao Falefou
PhD Candidate/Researcher
Geography Programme
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand
Email: tf63@students.waikato.ac.nz or
falefou@gmail.com

John R. Campbell
Associate Professor
Geography Programme
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand
Email: jrc@waikato.ac.nz

Michael Goldsmith
Associate Professor
Anthropology Programme
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand
Email: mikegold@waikato.ac.nz

Appendix 4: Consent Form

UNIVERSITY OF WAIKATO FACULTY OF ARTS & SOCIAL SCIENCES

PARTICIPANT CONSENT FORM

Name of person interviewed: _____

I have been made aware of the purpose of my involvement after the Information Sheet describing the research project has been clearly read to me by the researcher. Any questions that I have, relating to the research, have been answered to my satisfaction. I understand that I can ask further questions about the research at any time during my participation, and that I can withdraw my participation at any time up to three weeks after the interview.

During the interview, I understand that I do not have to answer questions unless I am happy to talk about the topic. I can stop the interview at any time, and I can ask to have the recording device turned off at any time.

When I sign this consent form, I will retain ownership of my interview, but I give consent for the researcher to use the interview for the purposes of the research outlined in the Information Sheet. I understand that my identity will remain confidential in the presentation of the research findings.

Please complete the following checklist. Tick [✓] the appropriate box for each point.	YES	NO
<i>I consent to my participation to be audio and/or video recorded.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I consent to my name and identity to be used in any publication.</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I consent to my data being archived.</i>	<input type="checkbox"/>	<input type="checkbox"/>

Participant : _____ Signature : _____ Date : _____ Contact Details : _____ _____ _____	Researcher : _____ Signature : _____ Date : _____ Contact Details : _____ _____ _____
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Appendix 5:

Semi-structured Questions

(1) GENERAL PARTICIPANTS

A. Family cultural lifestyle

- i) Do you live on your own or are you living with some relatives? (*Tell me what you think of living alone or with your relatives?*)
- ii) How do you go about your daily life? (Tell me the work you do, what time do you normally start and finish your program for the day?)
- iii) Is there a family hierarchy in the way you live, and of doing things? (Tell me about your traditional family system of organizing family duties, responsibilities, etc?)

B. Community cultural ways

- i) What are the main traditional cultural way of communal activities? (Tell me how community activities and programs are organised, implemented and monitored?)
- ii) How does your chiefly system work? (Tell me how the chiefs are appointed, their tenure in office, their role in the community, etc?)

C. Land tenure system

- i) Do you know the land tenure system here in your island and how it works? (Tell me what type of land tenure system, how does land title pass from your ancestors, how does it translate in terms of fairness, etc, if not what else is important?)
- ii) How would you value land property in terms of financial gain and cultural worth? (Tell me, is land the most important thing in your culture, and how does land link to you and your way of life?)

D. Impact of climate change & sea level rise

- i) Do you experience any change to the weather? (Tell me what are those changes, do they have any impact on the island and the people?)
- ii) Is there any impact from the sea that you know of? (Tell me if there is any damage caused by the sea, what are those damages, and are they serious, and where are those places, and can we go there to see and take photos?)

E. Perspectives on migration and relocation

- i) Have you ever left your island for more than six months in the past? (Tell me if so, and how many times, where did you go to, why did you return?)
- ii) What do you think of the option of migrating from Tuvalu to another country? (Tell me whether you want to migrate, and if so where, and what would make you think of migrating?)

- iii) Can you explain your personal feeling and views about relocation of the people of Tuvalu (including yourself) to another place if Tuvalu is no longer safe to live in due to climate change and sea level rise? *(Tell me whether you like the idea of relocation, how would you recommend relocation take place and the destination for relocation; is it Fiji, New Zealand, Australia or other countries, or is relocation not an option?)*

F. Perspectives on national and cultural identity

- i) How do you consider yourself as Tuvaluan? (Tell me how important is Tuvalu’s identity to you, is it something you can forego for something else, say safety and security, or humanitarian grounds, etc.?)
- ii) How do you feel about the culture of Tuvalu to you or any other Tuvaluan for that matter? (Tell me is cultural identity important to you, how important is it, and what would you say about foregoing it for some other reasons?)

G. Others

- i) What would you say about leaving Tuvalu due to climate change and sea level rise?
- ii) Do you have any other thing to say about climate change and sea level rise and its impacts?

(2) TUVALU CHRISTIAN CHURCH & OTHER RELIGIOUS PARTICIPANTS

A. General

- i) What do you know about climate change and sea level rise? *(Tell me when, how and what do you know about climate change and sea level rise?)*
- ii) Do you have any personal experience of the impacts of climate change and sea level rise? *(Tell me what are those experiences and were they serious, regular, and causing any threat?)*

B. Religious Beliefs

- i) Is there any religious belief about climate change and sea level rise? *(Tell me what are they, if any?)*
- ii) How do you contextualize that religious belief to your own person experience of climate change and sea level rise? *(Tell me whether you agree with your religious belief more than what you personally see and experience about the impacts of climate change and sea level rise?)*

- (iii) Sea level rise as predicted by scientists may cause Tuvalu and other low-lying atolls to become submerged and disappear under the sea, what would you say about it as a religious person? *(Tell me whether this prediction will or will not eventuate, and why?)*

(3) RELOCATED & MIGRATED PARTICIPANTS
(NIULAKITA/KIOA/SUVA/AUCKLAND/HAMILTON)

A. Relocation/Migration arrangement

- i) How did you end up in Niulakita/Kioa/Suva/Auckland/Hamilton? *(Tell me when and how did you go/come to Niulakita/Kioa/Suva/Auckland/Hamilton?)*
- ii) How did you feel about your being moved to live in Niulakita/Kioa/Suva/Auckland/Hamilton? *(Tell me whether you like that arrangement, did you like it in the first place and then regret it later or was it ok?)*

B. Views of living in Niulakita/Kioa/Suva/Auckland/Hamilton

- i) What do think of living or having lived in Niulakita/Kioa/Suva/Auckland/Hamilton? *(Tell me how you feel/felt about living in Niulakita/Kioa/Suva/Auckland/Hamilton?)*
- ii) How do you compare life in your home island or Tuvalu with life in Niulakita/Kioa/Suva/Auckland/Hamilton? *(Tell me whether or not you like your home island or Tuvalu more than Niulakita/Kioa/Suva/Auckland/Hamilton, or it does not make any difference?)*
- iii) How do you consider yourself if you are asked about your national identity? *(Tell me, irrespective of your legal citizenship status, would you consider yourself a Tuvaluan, Fijian or Kiwi? and why?)*

C. Home Island or Tuvalu

- i) What is the most important thing that you would value the most about your home island or Tuvalu? *(Tell me something in your home island or Tuvalu that you miss the most, and how do/did you cope with it?)*
- ii) Do you think your home island or Tuvalu is your true identity or not? *(Tell me, why you think your home island or Tuvalu as your identity and in what ways?)*
- iii) Do you think you will return to your island or Tuvalu? *(Tell me why and why not?)*

D. Impact of climate change & sea level rise

- i) Do you think living in Niulakita/Kioa/Suva/Auckland/Hamilton would be a good choice given the threat that is caused by climate change and sea level rise to Tuvalu? *(Tell me what you think of the threat posed by climate change and sea level rise in terms of your future and the future of the people of Tuvalu?)*
- ii) What would you say about Tuvalu's national and cultural identity if scientific predictions that Tuvalu will not be inhabitable or even be submerged by the turn of this century due to climate change and sea level rise? *(Tell me whether you would want that to happen, and why, and what would you say about it?)*

Appendix 6:

Focus Group Discussion Questions

A. General cultural lifestyle

- (i) What are the cultural ways of life of families in your island? (Discuss the traditional lifestyle of families in the island, how they go about their daily activities, how family members are organized?)
- (ii) Is there any significant change in the way of life you know of in the past compared to the current state of traditional ways of family lifestyle? (*Discuss what are the changes in the traditional way of family lifestyle in the island*)

B. Community cultural ways

- (i) What are the main traditional cultural ways of carrying out communal activities? (Discuss how community activities and programs are organised, implemented and monitored?)
- (ii) How does your chiefly system work? (Discuss how the chiefs are appointed, their tenure in office, their role in the community, etc?)

C. Land tenure system

- (i) What is the land tenure system here in your island and how does it work? (Discuss the type of land tenure system, how does land title pass from your ancestors, how does it translate in terms of fairness, etc?)
- (ii) How do you value land property? (Discuss how important is land to your culture, and how does land link to you and your way of life?)
- (iii) What happens to land tenure when a person migrates? (Tell me if there is any customary way of treating absentism?)

D. Impact of climate change and sea level rise

- (i) Have you experienced any change to the weather? (Discuss what those changes are, do they have any impact on the island and the people?)
- (ii) Is there any impact from the sea that you know of? (Discuss if there is any damage caused by sea, what are those damages, and are they serious?)

E. Perspective on migration and relocation

- (i) What do you think of the option of migrating from Tuvalu to another country? (Discuss whether you want to migrate, and if so where, and what would make you think of migrating, and also discuss return migration versus permanent migration?)
- (ii) What do you think of migration in terms of remittance? (Tell me, is migration a good thing because it is another source of income for families remaining on the island, or it is not, and why?)
- (iii) Can you explain your feelings and views about relocation of the people of Tuvalu to another place if Tuvalu is no longer safe to live due to climate change

and sea level rise? (*Discuss whether you like the idea of relocation, how would you recommend relocation should take place and the destination for relocation example is it Fiji, New Zealand, Australia or any other country, or is relocation not an option?*)

F. Perspective about national and cultural identity

- (i) How do you consider yourself as Tuvaluan? (Discuss how important is Tuvalu's identity to you, is it something you can forego for something else, say safe & security, humanitarian ground, etc.?)
- (ii) How does the culture of Tuvalu relate to you or any other Tuvaluan for that matter? (Discuss how important is cultural identity to you, and how would you say about foregoing it for some reason of most important to life?)

G. Others

- (i) Do you have any other thing to say about climate change and sea level rise and its impacts?

Appendix 7:

Essay Writing Questions

A. PRIMARY SCHOOL

1. Write a story about climate change and sea level rise and what it will be like in Tuvalu 20 years from now?

B. SECONDARY SCHOOL

1. Climate change and sea level rise is one of the most important topics in Tuvalu and the world at large. Explain what you would think of climate change and sea level rise, and what you will do about it as a Tuvaluan.

Appendix 8:

Household Survey Questionnaire (HSQ)

Date: _____ Island: _____ Respondent: _____ (Optional)

A. General

- i) Age: *Below 25* _____ *26–45* _____ *46–65* _____ *Above 66* _____
- ii) Marital status: *Single* _____ *Married* _____ *Divorced* _____ *Widow* _____
- iii) How long have you lived here? *Less than one year* _____ *Less than 5 years* _____
6–10 years _____ *More than 10 years* _____
- iv) Do you have any children? *Yes* _____ *No* _____
- v) What source of income do you have? *None* _____ *Paid Job* _____
Remittance _____ *Others* _____

B. Traditional Knowledge of Climate & Weather

- i) Is the weather now hot or cold compared to the past? *Cold* _____ *Hot* _____
- ii) Is the island having more rain now compared to the past? *More* _____ *Less* _____
- iii) Do you notice any change to the sea's impact on the island? *Yes* _____ *No* _____
- iv) If yes to (iii) above, what are the impacts? _____

- v) Is the weather affecting the trees and plantations or not? *Yes* _____ *No* _____
- vi) If yes to (v) above, please explain the trees and plantations that have been affected and why? _____

- vii) Do you know what climate change and sea level rise is about? *Yes* _____ *No* _____

C. Future Plan

- i) Do you plan to remain here or move to another place? *Remain* _____ *Move* _____
- ii) If your answer is to move, what makes you think of moving?
Work opportunity _____ *Concern about climate change/sea level rise* _____
Education ambition _____ *Others (please mention)* _____
- iii) If your answer is to remain, what makes you think of remaining here?
Like traditional lifestyle on the island _____ *Feel secure and safe* _____
Take care of family heritage _____ *Others (please mention)* _____

Appendix 9:

Letters Seeking Permission

Geography Programme
Faculty of Arts and Social Science
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand

Date: _____

Permanent Secretary
Ministry of Education, Youth and Sports
Government of Tuvalu
Funafuti
TUVALU

Dear Sir,

Subject: Permission to carry out research study with school children

I write to seek your kind approval to allow me to carry out part of my research with primary and secondary school children in Nanumea, Niutao, Nui, Vaitupu, Funafuti and Niulakita.

I am a Tuvaluan student currently studying for the degree of Doctor of Philosophy (PhD) at the University of Waikato, Hamilton, New Zealand. I am now undertaking my research here in Tuvalu as part of my PhD thesis. In short, my research topic is about 'living with uncertainty; climate change and sea level rise in Tuvalu, and the perceived loss of national and cultural identity'. I am intending to seek the views of school children by way of getting them to write an essay on the topic. With your permission, I intend to have this essay writing organized and administered by the school teachers.

I wish to thank you in advance for your favourable support and am looking forward to receiving your reply at your earliest convenient.

Yours faithfully,

Tapugao Falefou
PhD Candidate/Researcher

Geography Programme
Faculty of Arts and Social Science
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand

Date: _____

Island Secretary
Kaupule
_____ Island

Dear Sir,

Subject: Permission to meet with council members (kaupule)

I humbly request if I could meet with members of the council.

I am a student at the University of Waikato, Hamilton, New Zealand. I am currently pursuing my research as part of my doctoral thesis. In short, my research topic is about 'living with uncertainty; climate change and sea level rise in Tuvalu, and the perceived loss of national and cultural identity'.

The main purpose of the meeting with members of the council is to ascertain their views, as policy makers of the island, with regards to issues associated with climate change and sea level rise. The meeting will not take too much of their time as it will only run for about an hour or an hour and a half.

I would highly appreciate your kind assistance in organizing such meeting.

Yours faithfully,

Tapugao Falefou
PhD Candidate/Researcher

Geography Programme
Faculty of Arts and Social Science
University of Waikato
Private Mail Bag 3105
Hamilton
New Zealand

Date: _____

To: (*Insert - Name & Address of School Children's Parents*)

Dear (*Insert - Parent's Names*)

Subject: Information about your child's participation in the Essay Writing

I wish to inform you that your child (*child's name*) will participate in an 'essay writing' exercise that I have organized with the school as part of my research study.

I am a Tuvaluan student currently studying for the degree of Doctor of Philosophy (PhD) at the University of Waikato, Hamilton, New Zealand. I am now undertaking my research here in Tuvalu as part of my PhD thesis. In short, my research topic is about 'living with uncertainty; climate change and sea level rise in Tuvalu, and the perceived loss of national and cultural identity'. I am intending to seek the views of school children by way of getting them to write an essay on the topic.

I trust that your child's participation in my field study through the essay writing exercise will be most useful to the outcome of my doctoral thesis.

Yours sincerely,

Tapugao Falefou
PhD Candidate/Researcher