Flinders University

Toward the Global Goals:

Examining the intersection of climate change, migration, and the Sustainable Development Goals in the South Pacific

By

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ABBREVIATIONS AND ACRONYMS

2030 Agenda	United Nations 2030 Agenda for Sustainable Development
ACFID	Australian Council for International Development
ADB	Asian Development Bank
AIMS	Atlantic, Indian Ocean, Mediterranean, and South China Sea
AIS	Archipelagic & Island States
AOSIS	Alliance of Small Island States
APPF	Asia Pacific Parliamentary Forum
APTC	Australia Pacific Training Coalition
AR	Assessment Report (IPCC)
ASPI	Australian Strategic Policy Institute
ASTHO	Association of State and Territorial Health Officials
BPOA	Barbados Programme of Action
CARICOM	Caribbean Community and Common Market
CBA	Community-Based Adaptation
CCES	Climate Change and Environmental Sustainability
CEDAW	Committee on the Elimination of Discrimination Against Women
CER	Closer Economic Relations
CIA	Central Intelligence Agency
CoC	Council of Councils
COP	Conference of the Parties
COVID-19	Coronavirus Disease 2019
CROP	Council of Regional Organisations of the Pacific

CSIRO	Commonwealth Scientific and Industrial Research Organisation
DFAT	Department of Foreign Affairs and Trade
DSDG	Division for Sustainable Development Goals
EEZ	Exclusive Economic Zone
ERS	External Relations and Security Committee
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FAME	Fisheries, Aquaculture and Marine Ecosystems
GCM	Global Compact for Safe, Orderly and Regular Migration
GDP	Gross Domestic Product
GEF	Global Environment Facility
HADR	Humanitarian Assistance and Disaster Relief
HDI	Human Development Index
ICT	Information and Communications Technology
ILO	International Labour Organization
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
JNAP	Joint National Action Plan
JPOI	Johannesburg Declaration of Implementation
MFAT	Ministry of Foreign Affairs and Trade
MIRAB	Migration, Remittance, Foreign Aid, and Public Bureaucracy
MSG	Melanesian Spearhead Group
NAMA	Nationally Appropriate Mitigation Actions
NBF	Needs Based Finance
NbS	Nature-based Solutions

NCRAS	National Climate Resilience and Adaptation Strategy
ND-GAIN	Notre Dame Global Adaptation Initiative
NEET	Not in Employment, Education, or Training
NGO	Non-governmental Organisation
NSDP	National Sustainable Development Plan
OHCHR	Office of the High Commissioner for Human Rights
PALM	Pacific Australia Labour Mobility
PCRIC	Pacific Catastrophe Risk Insurance Company
PICs	Pacific Island Countries
PICTs	Pacific Island Countries and Territories
PIEMA	Pacific Islands Emergency Management Alliance
PIF	Pacific Islands Forum
PLG	Polynesian Leaders Group
RDI	Research for Development Impact
REDD+	Reduce Emissions from Deforestation and forest Degradation, and foster conservation, sustainable management of forests
RISA	Regional Integrated Sciences and Assessment
SAMOA	Small Islands Developing States (SIDS) Accelerated Modalities of Action
SDD	Statistics for Development Division
SDGs	Sustainable Development Goals
SDSN	Sustainable Development Solutions Network
SIDS	Small Island Developing States
SPC	Pacific Community (formerly South Pacific Commission)
SPREP	Secretariat of the Pacific Regional Environment

SREM	Strategic Roadmap for Emergency Management
TEK	Traditional Ecological Knowledge
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNEP	United Nations Environment Programme
UNFCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UNSD	United Nations Division for Sustainable Development
UNU-EHS	United Nations University's Institute for Environment and Human Security
UNU-INWEH	United Nations University Institute for Water, Environment and Health
VNR	Voluntary National Review
WMO	World Meteorological Organisation

ABSTRACT

A number of Pacific islands countries are finding it increasingly difficult to sustain their populations due to the effects of climate change. At the same time, many of these same countries have an historical and social reliance on migration as an appropriate and effective way to manage both economic and population capacity issues. This research considers both of these factors to explore what effective, long-term climate change adaptation and mitigation strategies could look like in the Pacific region. The research further examines how the global visibility and national responsibilities of the Sustainable Development Goals and the broader international awareness of the intersection of climate change and migration can be incorporated into regional action and cooperation by focusing on South Pacific small island developing States.

The original contribution to knowledge provided by this research is offering a new analysis and reframing of the intersection of climate change, migration and the achievement of the Sustainable Development Goals within a Pacific regional context. It utilises a case study approach to detail findings from the Kingdom of Tonga and the Cook Islands by focusing on the issues of climate change and migration for each country and identifying specific challenges that occur when the two issues intersect in the local context. The role of remittances and associated migration activity is a factor for both countries, particularly when considered in light of their respective ability to fund and implement climate change adaptation initiatives. However, the implications of these practices in this context go beyond the economic. For Tonga, the challenges of rebuilding after extreme weather events are exacerbated when a large proportion of the workforce is engaged in labour overseas. For the Cook Islands, there is a lack of available workforce to support its primary economic sector of tourism; a sector that is in itself vulnerable to, and exacerbating of, the environmental impacts of climate change.

The research also broadens the understanding of the relationship between migration practice and policy in the Pacific region, the impacts of climate change on Pacific small island developing States and the influence of the Sustainable Development Goals on these intersecting issues. Distinct goals focused on Climate Change (Goal 13) and Partnerships (Goal 17) as well as a clear and stated priority for supporting small island developing States have enabled Tonga and the Cook Islands to actively engage with and benefit from new initiatives in these areas. These activities have highlighted the significant potential for reciprocal exchange of knowledge and practice between developed and developing countries and emphasised the unique contribution Pacific island countries could make to an integrated regional approach.

Within the nexus of climate change, migration and the Sustainable Development Goals there are new opportunities for regional climate change adaptation planning. This research offers suggestions for an approach that is sensitive to specific contexts and promotes a cooperative

regional strategy flexible enough to address both current challenges and future contingencies. Existing partnerships should be leveraged and expanded to support adaptation plans focused on achieving social as well as economic, political and development outcomes. As climate change and migration continue to have significant impact in the Pacific region, the Sustainable Development Goals offer a focus and mechanism through which regional cooperation and mutual benefit can be realised.

DECLARATION

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text. I further state that no professional editing services were used in the preparation of this thesis.

Signed: Melinda M Dodd

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CHAPTER 1 INTRODUCTION

1.1 Background

The disproportionate vulnerability of small island developing States (SIDS) to environmental change has been widely recognised by national, regional and international governments and organisations (see Agenda 21 1992, Barbados Programme of Action 1994, BPOA+5 1999, JPOI 2002, Mauritius Strategy 2005, MSI+5 2010, The Future We Want 2012, SAMOA Pathway 2014, 2030 Agenda 2015, among others). This recognition has been accompanied by recommendations, actions, strategies, and focus areas aimed at supporting SIDS sustainable development capabilities and, more recently, increasing SIDS ability and capacity to address the impacts of climate change through effective planning and management.

In the case of South Pacific SIDS specifically, susceptibility to the effects of climate change is due to a range of factors, including environmental, geological, geographic, political, and demographic. Of particular relevance are indications of rising sea levels, resulting in coastal erosion, sand loss and sea wall destruction, and the severity of climate fluctuations and associated increases in droughts and storms, resulting in damage to fragile ecosystems, loss of livelihood and housing, and economic instability. These occurrences further disadvantage South Pacific SIDS by increasing the salinity of available water sources, exacerbating the already challenging issue of fresh water supplies and further impacting agriculture and food sources.

As a result, the Pacific region is increasingly challenged to cope with the effects of climate change and its adverse impacts on local populations. All Pacific Islands are at some risk with regard to coastal degradation, issues of water supply, food security, and infrastructure damage. However, half of them have been assessed to be at severe risk or more, with low lying atolls and raised coral islands considered to be extremely vulnerable to the impacts of climate change (analysis based on World Bank Group and CIA World Factbook data; see also ND-GAIN Vulnerability Ranking and the World Risk Index). This is raising questions as to the viability of local populations continuing to reside in their current locations (see Barnett & McMichael 2018; Kumar et al 2018; Nurse et al 2014; Scandurra et al 2018; Steele 2019; UNEP & UNDESA 2013).

Over the last decade there has been an increased focus on the interconnectedness of climate change and migration. In 2012, the Asian Development Bank released the Final Report of a project intended to ‘generate policy response to migration stimulated by climate-related factors.’ The Report, entitled *Addressing Climate Change and Migration in Asia and the Pacific,* is notable for being one of the first to propose policy recommendations focused on how environmental events affect migration at a regional level (ADB 2012). Shortly thereafter, during 2013-2016, the Pacific Climate Change and Migration Project was conducted with a view to strengthening the ability of er countries to manage the effects of climate change on migration (ESCAP, ILO & UNDP 2014). The

Project, funded by the European Union and implemented by two United Nations divisions and the International Labour Organization, covered the Federated States of Micronesia, Kiribati, Nauru, Republic of Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu, and identified Kiribati, Tuvalu and Nauru as 'target countries' in recognition of their extreme vulnerability to climate change (ILO 2015; Campbell & Warrick 2014).

At the same time that these reports were being released, the United Nations was evaluating the success of the Millennium Development Goals, which ran from 2000-2015 and addressed eight areas of global concern: poverty and hunger; primary education; gender equality; child mortality; maternal health; disease; and environmental sustainability. This was also the time that the Sustainable Development Goals were being developed. The 2030 Agenda for Sustainable Development, the core of which is 17 Sustainable Development Goals (SDGs), was adopted by all United Nations member states in 2015 and, in January 2016, the SDGs, also known as the Global Goals, came into effect. The SDGs build upon the Millennium Development Goals but differ significantly in that they are applicable to all countries regardless of development status, and interconnected, meaning that 'often the key to success on one will involve tackling issues more commonly associated with another' (United Nations 2015). While each of the 17 SDGs focuses on a particular area and comprises a number of specific targets within it, 169 in all, the two Goals of particular relevance here are related to Climate Action (Goal 13: Take urgent action to combat climate change and its impacts) and Partnerships for the Goals (Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development).

Globally, the next step to achieving the SDGs was for each country to create national sustainable development plans and strategies that address their respective national circumstances and priorities while recognising that achieving the Goals will require actions across many sectors of society, including government, business, universities and society more broadly (Sachs 2015a). The specific challenges identified for and by individual countries depend on a number of factors, among them geography, history of the country, state of development and relationship with world markets and regional economies (Sachs 2015a).

The framework of goal-based development that forms the SDGs and the global visibility and universal national responsibility that goes with them provide a new opportunity to encourage regional action and cooperation by diverse stakeholders aimed at mitigating, adapting to and managing the impacts of climate change in the South Pacific. While the interconnected nature of the SDGs indicates that other Goals and sub-Goals will also align with this research, of particular relevance to the focus of this project are the following Targets of the SDGs:

> **Target 13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities;

Target 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries;

Target 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships (United Nations 2015).

The Declaration of the 2030 Agenda for Sustainable Development also addresses the issue of migration, recognising 'the positive contribution of migrants for inclusive growth and sustainable development' and 'that international migration is a multi-dimensional reality of major relevance for the development of countries of origin, transit and destination, which requires coherent and comprehensive responses' (United Nations 2015, Section 29). It further recognises the value of and need for engagement as well as the value of cooperation at regional and subregional levels, particularly in providing 'useful opportunities for peer learning, … sharing of best practices and discussion on shared targets' (United Nations 2015, Section 80).

Recent collaborative, jointly funded international initiatives have recognised the link between climate change and migration in the Pacific and highlighted the need to enhance the capacity of Pacific Island nations to manage these issues now and into the future. Key factors for consideration with regard to the intersection of climate change and migration in the Pacific are: 1) the increasing inability of individual islands to sustain their population due to the effects of climate change; and 2) an historical and social reliance on emigration as an appropriate and effective way to manage both economic and population capacity issues. The geographical proximity and historic regional responsibility of Australia and New Zealand with respect to South Pacific SIDS indicate that the approaches these two developed nations take toward managing the effects of climate change and addressing issues of regional migration will have significant impact on the capacity of South Pacific SIDS to appropriately plan for and manage the effects of climate change on their populations.

1.2 Statement of the Problem

Pacific SIDS are a collection of largely independent countries, which has contributed to the region's difficulties with regard to having any power, authority or influence relative to its size on a global stage. Even multilateral government initiatives have only been able to do so much, and are often complicated by a history of colonial power structures, the disproportionate influence of developed nations and tension over native/traditional ownership and rights. Additionally, many Pacific nations have a 'culture of migration' that contributes to the economic capacity and sustainability of both individuals and the State. At the same time that climate change is

disproportionately impacting Pacific SIDS, the importance of migration, in terms of opportunity, sustainability and stability, is also growing. As Pacific SIDS plan for the impact of climate change and develop adaptation strategies, they must also consider migration as both a contributing and mitigating factor. It is in this context that the SDG Targets listed above, namely Target 13.b, Target 17.16, and Target 17.17 can be beneficial in focusing international cooperation on these issues.

It has been widely acknowledged that the SDGs have built within them the potential to broaden the global sustainability agenda and actively engage members of the global community that have historically sat outside such initiatives, including businesses, individuals, NGOs, students, and community leaders (Sachs 2015a, 2015b). Additionally, they have come into effect at a time when alternative forms of collective action are coming to the forefront of multilateral initiatives; a time when partnerships and cooperative networks are being formed that are 'informal, non-binding, purpose-built … coalitions of the interested, willing and capable' (Patrick 2015a). Add to this the rapid evolution of new technologies and a changing global political environment and there is significant potential for increased commercialisation, information and resource sharing and broader applications of knowledge, support and expertise than ever before.

A number of convincing arguments and research point to the need for appropriate enabling environments, goal-based development and the creation of knowledge communities in order to successfully address large, global issues such as climate change (Sachs 2015a, UN 2005). The same can be said for issues of migration, and, within a Pacific context, the intersection of the two becomes even more complex. There is potential for the SDGs to act a mechanism to focus regional action and cooperation on these issues in the Pacific region. In order for this to occur and be effective, there needs to be a better understanding of how climate change, migration, and the SDGs intersect in different contexts. This research contributes to this understanding by taking a case study approach to examining this nexus.

1.3 Research Objectives and Questions

The aim of this research is to examine the complex relationship between climate change, migration and the achievement of the SDGs within the Pacific context and contribute to a deeper understanding of how this interconnection manifests within specific Pacific environments. Given the acknowledged lack of significant progress in the area of climate change adaptation and associated migration support in the region despite 25 years of global attention, the following suppositions informed the focus of this research:

- A deliberate, planned and integrated regional approach will be more effective than the current piecemeal, individual, reactionary approach;
- New partnership structures and transnational cooperation mechanisms are needed;

- The current global political environment necessitates consideration of ‘new multilateralism’ and ‘coalitions of the capable’; and
- Experimental forms of and nimble approaches to international cooperation, including likeminded informal alliances will be needed.

These suppositions combined to inform the development of the primary research question, which is: *Can the SDGs be utilised to address the connected issues of climate change and migration in the Pacific within the next decade and build a foundation for a sustainable future in the region?* Given the complexity of this question, the research approach and structure described by Robinson (2018) was adapted to effectively manage and address the multiple dimensions of this research.

Following an examination of relevant literature, the following research objectives were identified:

1. Identify initiatives at the local level related to climate change adaptation and planning, including sustainable development best practice and consideration for traditional knowledge.
2. Identify and evaluate emerging trends in new forms engagement on climate change and migration related initiatives within the region, including relevant regionally focused initiatives of Australia and New Zealand.
3. Illustrate how local and regional networks, relationships, and practices can be utilised to create enabling environments and knowledge communities for effective climate change planning in the region, including the role of Pacific diaspora and migrants.
4. Consider the role of relevant established, high-level partnership structures currently in place within the region in addressing the interrelated issues of climate change, migration and the achievement of the Sustainable Development Goals.
5. Evaluate the role that partnership structures, including microlateral and minilateral initiatives, can play in increasing the capacity to adapt to the impact of climate change and achieving the Sustainable Development Goals.

1.4 Significance of the Study

This project investigates Pacific Island vulnerability to climate change, current trends in addressing issues and challenges specific to the Pacific region, and the feasibility of future approaches with regard to migration, funding and engagement. The value and benefit of this is in providing a framework for new analysis focused on the experiences and intersections of Australia, New Zealand, Tonga and Cook Islands. By studying national and transnational migration patterns and decision making in two contrasting South Pacific small island developing States (SIDS) alongside the respective strengths and approaches to aid of two developed nations in the region, this research will broaden the understanding of the relationship between Pacific migration practice,

regional migration policies, the impacts of climate change on SIDS and the influence of the Sustainable Development Goals.

When viewed from a regional perspective, the potential for the effective use and mobilisation of new multistakeholder networks and ‘coalitions of the capable’ appears significant, particularly when the potential for application alongside the growing number of environmental transnational social movements and the incorporation of traditional knowledge structures into long term planning and action are considered. Researching this nexus of engagement and activity will contribute to a deeper understanding of the role of these new partnership structures in a regional, and perhaps global, context while also providing concrete mechanisms to increase capacity for climate change related planning and migration.

Intentional, focused and specific cooperation of the type that will be proposed by this research includes the potential for broader lateral application and developing frameworks. This is applicable in terms of ‘hard’ climate change technology, i.e. improved infrastructure and monitoring capabilities, etc., but also in terms of cooperative planning and responsibility, broader application of new technologies, information gathering, stakeholder relations and buy-in, and communication within and among vulnerable communities.

The original contribution to knowledge provided by this research is offering a new analysis and reframing of the intersection of climate change, migration and the achievement of the Sustainable Development Goals within a Pacific regional context. By examining national and transnational migration patterns and climate change decision making in two contrasting South Pacific small island developing States alongside the respective strengths and approaches of two developed nations in the region, this research broadens the understanding of the relationship between Pacific migration practice, regional migration policies, the impacts of climate change on SIDS and the influence of the Sustainable Development Goals.

1.5 Argument of the Thesis

Historical ties, geographical proximity and a closely connected environment may reinforce regional responsibility, but how this manifests itself in the context of the smaller Pacific Island nations with respect to climate change and migration is of significant interest. One approach is community-based, focusing on such strategies as establishing migration quotas, promoting Pacific culture and encouraging Pacific communities as an integral part of society and actively maintaining a significant humanitarian and activist presence in a number of Pacific Island nations and a commitment to Pacific culture at home and abroad. A second approach focuses on supporting regional research and funding adaptation and mitigation strategies within the Pacific states, including longitudinal data collection and analysis, developing and funding infrastructure improvements, and improving food and water security. Yet a third approach is to intentionally and

deliberately combine these strategies to support Pacific Island nations in developing community action plans and increasing their capacity to plan and manage the impacts of climate change. It is in this third space that the potential for new goal-based partnership structures and microlateral initiatives may have the greatest relevance and impact.

There is a perception that there will be an increase in migration related to climate change that will involve the national displacement of populations to other countries. While this may be true in some contexts, there is still widespread debate as to how this is measured, and whether or not climate change is the primary driver. In the Pacific context, this view is exacerbated by the frequently cited examples of Kiribati and Tuvalu, the situations of which have brought global attention to the issue of 'environmental migrants'. Less attention has been paid on a global scale to the internal migration that may occur due to climate change and its environmental and economic impacts within a nation. Once again, within a Pacific context, it is of particular relevance that there is both a culture of migration and an economic dependence on both remittances from significant diaspora populations and foreign aid from developed nations as well as international organisations and funding bodies.

There is already a strong history of cooperation among Pacific countries, which, if shifted from focusing primarily on national priorities to a broader, committed, synchronised regional strategy, would allow countries to contribute in their areas of strength while providing some measure of assurance that the gaps of an individual, piecemeal approach do not have unintended consequences. How these approaches intersect and support local initiatives and priorities will significantly impact how effective cooperative mechanisms are in increasing the capacity for climate change related planning, with potential for new partnership structures to provide an additional mechanism through which broader goals are supported and achieved.

1.6 Limitations of Scope

Given the diversity of the South Pacific geographically, politically, and culturally, it was determined that a case study approach examining two different Pacific Island contexts would allow the research to effectively present both convergent and divergent aspects of the climate change-migration-SDG nexus while remaining manageable within the limitations of the thesis structure. As such, in order to reasonably focus this research, it was necessary to formulate selection criteria that would aid in determining which South Pacific SIDS have significant potential and need to engage within the nexus of climate change and migration issues while also providing different contexts within which new partnership structures could be effectively utilised. Given that consideration of the role of Australia and New Zealand is integral to any discussion of regional migration, two South Pacific SIDS, the Kingdom of Tonga and the Cook Islands, were selected to provide some diversity of context while still ensuring that the research was achievable in scope. The selection factors used are as follows:

1. Regional inclusion: Oceania - South Pacific;
2. Susceptibility to Sea Level Rise: Extreme or Severe;
3. Historical and contemporary reliance on migration as a social and/or economic safety net;
4. Contrasting population patterns, including 'pyramid' structure, urban vs rural, age structure, gender balance and population density;
5. Indications of significant engagement with Australia and/or New Zealand with regard to migration, aid, education, and diaspora.

Statistical data was accessed via the Australian Bureau of Statistics, Statistics New Zealand, Pacific Community Statistics for Development Division, and the United Nations Statistical Commission as well as relevant government and intergovernmental reports. Collected data includes monetary aid distribution, soft support mechanisms, migration trends, economic costs of rising sea levels, and remittances levels. A review of scientific literature and government reports as well as analysis of sea level monitoring data and reports of increased climatic events in the region yielded an initial assessment of Cook Islands' and Tonga's vulnerability to climate change while national and international strategy and development reports were consulted with a view toward establishing current and recent trends in addressing issues and challenges specific to the area. An assessment of Australia's and New Zealand's current policy environments with regard to migration was undertaken in order to provide a basis for reasonable expectation of involvement and contribution to future migration support mechanisms. These findings provided the foundation for the selection of Cook Islands and Tonga as the case study locations.

Further, as both the theoretical and applied frameworks for this research relate to effective and potential goal-based partnership structures, relevant established, high-level partnership structures currently in place within the region are considered, in particular the Trans-Tasman Mutual Recognition Agreement between Australia and New Zealand and the Free Association relationship between Cook Islands and New Zealand. While any number of financial, political and social arenas are impacted by these associations, of particular relevance here is the increased availability of multiple migration pathways open to residents of these three countries in relation to one another, thus expanding the range of migration mechanisms that could potentially be established to specifically address the impacts of climate change on the Cook Islands. This provides a unique foundation of engagement that may contrast with what is feasible or desirable with regard to Tonga or other Pacific SIDS.

1.7 Organisation of the Thesis

The thesis is structured with a view toward reinforcing the integrated nature of the issues, challenges, approaches and findings of this research. Following this introductory chapter, Chapter 2 frames the Pacific region, providing a brief overview of geographical, historical and political influences that have shaped it as well as contemporary practices of formal cooperation and

engagement. It also discusses current and emerging partnership structures, including transnational mechanisms, multilateral forums, and coalitions of the capable relevant to the region and its increasing global visibility.

Chapter 3 discusses the three intersecting global priorities of climate change, migration, and the 2030 Agenda for Sustainable Development and how they are manifesting in the Pacific region. It also explores the intersection of each of these priorities with one another in a Pacific context, highlighting recent initiatives' successes, challenges and failures. The chapter closes by identifying the knowledge gaps within these intersections and providing a visual representation the resulting space occupied by this research.

Chapter 4 details the research design and methodology and provides an introduction to the Pacific research principles that guided the research approach. It also addresses the scope and limitation of the study in more detail, including the challenges of addressing multiple complex global issues simultaneously and the rapidly evolving nature of these issues over the course of the project. Also noted are the circumstantial constraints presented by COVID-19 and Cyclone Harold and the resulting impact on the methods used to conduct the research. Process diagrams are presented that illustrate both the intended and realised research approach.

Chapter 5 examines the research project findings, beginning with an overview of location specific challenges involving inconsistent participation, limited and/or inconsistent data, and observational opportunity. It then details the findings with regard to Tonga and Cook Islands respectively, focusing on the issues of climate change and migration for each country and identifying the specific challenges that occur when the two issues intersect in the local context. It also highlights which Sustainable Development Goals each country has prioritised over the last five years.

Chapter 6 provides further analysis of the research findings through a comparison of Tonga and Cook Islands with regard to the intersecting issues of climate change, migration and the Sustainable Development Goals and highlights the resulting implications for other Pacific Island countries, including the increasing interest of other global nations in the region. It also provides an analysis of the respective approaches and engagement of Australia and New Zealand specific to these issues, reconsiders the applicability of the Sustainable Development Goals, and identifies new opportunities for regional engagement grounded in leveraging the strengths and needs of the relevant nations.

In conclusion, Chapter 7 summarises the major findings of the research in line with the research questions and objectives and discusses the potential for lateral application in other contexts, including policy implications and recommendations. It also highlights related issues and potential impacts and discusses the potential application of the findings and the implications for future research.

CHAPTER 2 PACIFIC REGIONAL ENGAGEMENT

This Chapter provides an introduction to the Pacific region, including a brief overview of geographical, historical, and political influences that have shaped it as well as contemporary practices of formal cooperation and engagement. It also presents current and emerging regional partnership structures, including transnational mechanisms, multilateral forums, and coalitions of the capable relevant to the region and its increasing global visibility, thus contributing to Objectives 4 and 5 of this research. In doing so, this Chapter provides the foundation for later discussions within the thesis of intersecting global priorities within the region and the potential for creating an enabling environment to address the interconnected issues of climate change, migration and achieving the United Nations Sustainable Development Goals (SDGs) in the Pacific.

2.1 Introduction

Up until the mid-twentieth century, when many Pacific Island countries gained independence or sovereign status, the vast majority of Pacific Island countries and territories had been subject to colonial rule, occupation, or administration as well as various degrees of oversight by larger, powerful nations from around the world. This has had significant impact on Pacific Island countries' economic, political, and social development, with continuing levels of affiliation, and in some cases dependency, on developed countries with historical and contemporary interest in the region. Some of the more obvious examples are the overseas collectivities of France, to include French Polynesia, Wallis and Fortuna, and New Caledonia, as well as the territorial status of American Samoa, Guam, and the Northern Mariana Islands to the United States, the Pitcairn Islands to the United Kingdom, and Tokelau to New Zealand.

It has been argued that such historical ties, even for independent countries, have resulted in the sublimation of 'traditional' structures of governance, kinship, social participation, spirituality, and self-identity of Pacific Islanders (Hau'ofa 1994; Meleisea 2005). Further, it has had a significant impact on mobility and migration within the region. Tabe (2019) highlights a number of forced relocation initiatives occurring across the Pacific from the 1930s through to the 1960s as a result of the political and economic interests of developed countries. At the same time, internal displacement, both temporary and permanent, was occurring in response to environmental hazards, including volcanos, drought, tsunamis, and environmental degradation (Tabe 2019). Such hazards will continue to impact Pacific Island populations under the projected impacts of climate change, including increased cyclone severity, sea level rise, air and sea temperature increases, and ocean acidification (IPCC 1998, 2014, 2018, 2021a, 2021b, 2021c). This situation has the potential to further strengthen ties among Pacific communities as they search for collective solutions to these challenges. It also has the potential to cause increased tension within the

broader Pacific region as the priorities of Pacific Island countries and territories meet those of developed nations.

2.2 The new Pacific

In 1998, Epeli Hau'ofa, a Pacific writer and anthropologist, wrote 'The Ocean in Us', in which he offered a Pacific Islander perspective on the Pacific region and regionalism, including a discussion on the idea of a 'substantial regional identity' based on the 'common inheritance' of the Pacific Ocean (p. 392). Hau'ofa's argument extended previous discussions of Pacific identity and belonging, many of which focused on issues of regional cooperation (see Fry 1991, 1997; Wendt 1976) and, according to Hau'ofa, were problematic in that they did not sufficiently consider the diversity inherent in the region, were overly reliant on geopolitics, and lacked an appropriate understanding of individual countries' interests. He points to the need to 'act together for the advancement of our collective interests, including the protection of the ocean for the general good' (p. 393).

He went on to say that:

> *The time has come for us to wake up to our modern history as a region. We cannot confront the issues of the Pacific Century individually as tiny countries, nor as the Pacific Islands region of bogus independence. We must develop a much stronger and genuinely independent regionalism than what we have today. A new sense of the region that is our own creation, based on our perceptions of our realities, is necessary for our survival in the dawning era. (p. 398)*

In making such a statement, Hau'ofa was espousing views that would later become one of the foundational tenets in the creation of a regional identity centred around the 'Blue Continent' (Fry 2019). Geographically, the Pacific region is a considerably large area, comprising the world's largest ocean and a vast number of diverse islands and island nations. Depending on the context, it can stretch from the Bering Sea and Alaska in the far north to the Southern Ocean surrounding the Antarctic continent in the South, and all of the islands in between. This thesis focuses on the Pacific Island countries (PICs) in the mid-southern latitudes that make up the subregions of Melanesia, Micronesia, and Polynesia (Figure 2.1), with particular attention to the intersection of climate change, migration, and the SDGs in specific island nations of Polynesia.

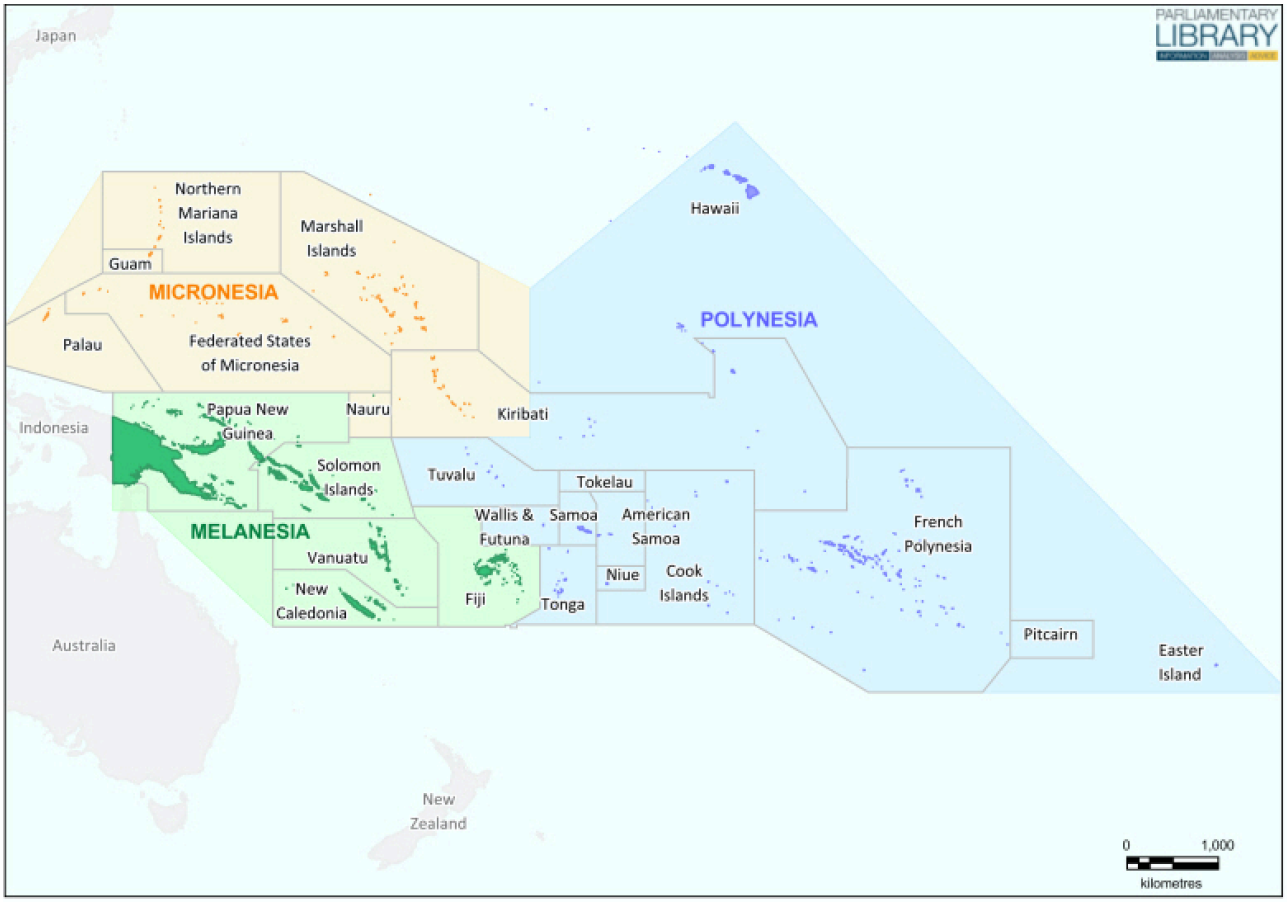

Figure 2.1: Map of Pacific Island countries and sub-regions
Source: Parliamentary Library, Statistics and Mapping, 2020
Reproduced with permission from Statistics and Mapping

Although all parts of the larger 'southern' Pacific area, the subregions of Micronesia, Melanesia, and Polynesia are distinct geographically as well as historically, culturally, and politically. Many of the island groups within these subregions are independent nation-states, while others are territories of larger developed nations or independent countries in free-association. Adding to the complexity of the region are situations such as those of the Torres Strait Islands, Timor-Leste, and New Zealand. For example, the Torres Strait Islands are politically divided between the sovereignty of Australia and Papua New Guinea (United Nations 1978), but, depending on the context, are at times considered part of Melanesia (Parliamentary Library 2020). Timor-Leste is an independent nation in Southeast Asia, but actively seeks engagement, and for some a linked identity, with its neighbours (Sousa-Santos 2015). Despite declaring independence from Portugal in 1975, Timor-Leste did not become fully self-governing until 2002 when, following an almost 30-year occupation by Indonesia, its independence was restored with the assistance of a United Nations peacekeeping force (Government of Timor-Leste n.d.). Timor-Leste now holds Observer member status in the Melanesian Spearhead Group and is included in Pacific development, aid, and migration programs (DFAT n.d.c; Worldvision 2020). New Zealand, with its significant Maori population and strong links to smaller Pacific Island countries and territories, has also been

classified as a Polynesian country but is just as often considered alongside Australia as a developed nation ‘outside’ the Pacific Island groupings (Parliamentary Library 2020).

Understanding this fluidity of inclusion and exclusion with regard to the Pacific region is key to understanding not only the complexity of how global issues impact the region as a whole, but also to evaluating what an effective regional approach to addressing such issues would entail. Equally important is understanding the continuing impact of colonial relationships and post-colonial affiliations in a Pacific context.

2.2.1 Post-colonial affiliations

Due in part to a long history of exploration and colonisation, many Pacific Island countries retain strong economic and political links to larger nations throughout the world. For example, in addition to the State of Hawai’i, the territories of American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam the three independent countries of the Federated States of Micronesia, the Republic of Palau, and the Republic of the Marshall Islands are all affiliated with the United States of America, with the latter three in free association (ASTHO 2014; Pacific RISA n.d.). In Polynesia alone, in addition to the United States, there are a myriad of developed nations with influence and responsibility: French Polynesia, New Caledonia, and Wallis and Futuna are overseas collectivities of France; Easter Island, the Pitcairn Islands and Tokelau are territories of Chile, the United Kingdom, and New Zealand respectively; Cook Islands and Niue are in free-association with New Zealand, while Kiribati, Samoa, and Tuvalu gained full independence from the United Kingdom (Kiribati and Tuvalu) and New Zealand (Samoa) only within the last 60 years (CIA n.d.a).

In keeping with a traditional Western understanding of a country or nation as ‘land-based’, the Pacific Islands were, and in some contexts still are, referred to as remote small island states or countries, with their value and utility predicated on their ability to provide a ‘place’ in the middle of a vast ocean from which, from a colonial perspective, security and sovereignty could be maintained, resources could be harvested, and a tropical climate could be enjoyed. Even into the mid-twentieth century, there was the view that Pacific Island economies would have to depend on agriculture, as they ‘have no appreciable resources other than their still rich and partly virgin volcanic soil and their tropical climates’ (Cumberland 1949 cited in Bedford 2011, p. 131).

These perspectives continue to be the overriding considerations for post-colonial engagement as well, with aid, development and research on and in the Pacific region focused in large part on the benefits for associated developed nations with regard to security, resources, and tourism. On the international stage, the Pacific is frequently placed within the broader ‘Asia-Pacific’ category. This is problematic for a number of reasons, not least of which is that Pacific “input is ‘lost’ in Asia concerns, the assumption being that Pacific needs are but a microcosm of those of Asia, or that

our ‘smallness’ (in comparison with Asia) makes our concerns insignificant” (Fairbairn-Dunlop 2005, p.64).

Compounding this issue is the insistence of developed countries of the Pacific Rim to approach engagement with Pacific Island countries as necessary to managing the opportunities and risks associated with the ‘rise of Asia’ in the twenty-first century. In the last decade, the United States announced ‘America’s pivot toward the Asia Pacific’, Australia initiated its ‘Pacific Step-up’, and New Zealand put in motion its ‘Pacific Reset’, all with a primary impetus of establishing security and stability in the region (see Australian Government 2017b; Cabinet ERS 2018; Clinton 2011). This is not to say that the relationships between these larger developed nations and the Pacific Island countries are not genuine, but rather to point out the continuing practice of approaching engagement with the Pacific as an adjunct to, or potential leveraging point for, the interests of larger developed nations and their engagement with Asia. China is also increasing its engagement in the region, offering financial and development support to Pacific Island countries seeking to improve or expand critical infrastructure, technology, and economic opportunities (Sen 2020).

This idea of the Pacific as something that can be leveraged by developed nations is not new. In discussing the language used to describe the Pacific Island region over time and its reflection of, and implications for, contemporary and future geopolitical views and actions, Hau’ofa (1998) argues that they are ‘significant indicators of … progressive marginalization’ and that the ‘problem of regionalism in the Pacific’ is due in large part to the inability of Pacific Islanders to define their region and their identity/ies on a global stage without the undue influence of external forces (p. 396). The impact of colonialism on both creating and naming any sort of Pacific Islands regional identity is illustrated in the use of the term ‘Australasia’ as encompassing of the Pacific Islands, as it ‘implies that the islands are in Australia’s orbit’ and noting that ‘Australians refer to the region as their “backyard”, the sort of area that has to be guarded against intrusions from behind’ (Hau’ofa 1998, p. 395). This language reflects an attitude that is still in evidence today, with much of the discussion around Australia’s ‘Pacific Step-up’ focused on the rise of China and the ‘security’ issues this raises for Australia in the region. Although the language of the politicians may be that of Pacific ‘neighbours’, the reality is closer to that as described twenty years earlier by Hau’ofa.

2.2.2 The Blue Pacific Continent

Despite such attitudes, the diversity of contemporary and historical colonial associations combined with the growing independence and inter-island cooperation among Pacific Island nations has led to a shifting of identity and vernacular in how the Pacific is perceived both internally and externally. As more Pacific Island countries achieved independence in the mid-to-late twentieth century and multilateral political forums and bodies were formed, the description of Pacific Islands began changing as well. Concepts such as ‘large ocean states’, ‘the blue Pacific’, and the ‘blue Pacific continent’ came to be used over the previously imposed identification of ‘South Seas’, ‘Region’,

and even ‘Asia-Pacific’ (Hau’ofa 1998). The understanding of the Pacific region as a collection of Small Island Developing States (SIDS) is changing, with ‘large ocean island states’ becoming a more common reference and Pacific Island nations and Pacific Islanders considering themselves part of the Blue Pacific Continent: an area diverse in cultures, linked by collective regional responsibilities and challenges, and politically connected by a cooperative framework of regional bodies (United Nations in the Pacific 2017, p. 23).

This language of the Blue Pacific Continent and the reframing of the Pacific Islands into ‘large ocean nations’ in the vernacular of developed nations engaging in the Pacific reflects a conceptual shift in thinking about the region as a whole; a shift that is evident in statements by Pacific Island parliamentarians and representatives that reinforce the view that many of the island states are more accurately described as large ocean states rather than small island states (Russel 2006; APPF 2020). Reenvisioning the region from a random collection of terrestrial islands to a vast ocean continent comprising extensive marine resources and a collective global voice offers a new way of considering, focusing, and prioritising actions and initiatives in and with Pacific Island countries and territories.

2.3 Pacific Island cooperation and organisations

This focus on the commonalities that bind the Pacific Island countries and territories together is also reflected in the multilateral bodies that have been established within the Pacific region. There is a long history of regional cooperation among the island nations of the Pacific region and many organisations, government agencies, non-governmental organisations (NGOs), and aid programs operating there. Of these, four in particular comprise the primary multilateral bodies that govern the region. The Pacific Islands Forum, the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP), and the Council of Regional Organisations of the Pacific (CROP) work closely with one another to promote and protect the interests of the Blue Pacific Continent and are guided in their work by the Framework for Pacific Regionalism (Pacific Islands Forum Secretariat 2014), which lays out the process for identifying and implementing regional priorities in line with key strategic issues. The Framework for Pacific Regionalism superseded the Pacific Plan for Strengthening Regional Cooperation and Integration of 2005 with an aim to ‘achieve deeper regionalism’, which is understood as:

> *The expression of a common sense of identity and purpose, leading progressively to the sharing of institutions, resources, and markets, with the purpose of complementing national efforts, overcoming common constraints, and embracing sustainable and inclusive development within Pacific countries and territories and for the Pacific region as a whole. (Pacific Islands Forum Secretariat 2014, p. 1).*

The work of these multilateral organisations is wide-ranging and there is significant commonality among the memberships, with both Pacific Island countries and territories as well as larger developed nations represented. The Pacific Islands Forum in particular has provided a venue for robust regional discussions on climate change, while the SPC has been instrumental in providing comparative data and statistics for Pacific Island countries and territories individually and collectively. As the name implies, SPREP provides a forum for Pacific Island countries and relevant developed nations to address environmental issues in the region. All three are members of CROP, which is a significant coordinating for the region.

2.3.1 Pacific Islands Forum

The Pacific Islands Forum comprises 18 member countries, including Australia and New Zealand, and is the primary political and economic policy organisation for the Pacific region. Its work includes 'fostering cooperation between governments, collaboration with international agencies, and representing the interests of its members' (Pacific Islands Forum n.d.a).

Despite the stated commitment to 'deeper regionalism' set forth in the foundational Framework for Pacific Regionalism, cooperation and agreement among Pacific Islands Forum members is not without its challenges, particularly with regard to issues of climate change. While the small island state members of the Pacific Islands Forum are in agreement that climate change poses the greatest risk to their survival, for some even greater than that of the COVID-19 pandemic, Australia and New Zealand have been reluctant to support calls to action, ambitious targets, or formal declarations to that effect. Such reluctance and lack of support has been evident at multiple Pacific Islands Forum meetings, most notably in 2015 and 2019. In 2015, Australia and New Zealand declined to support the position of the smaller island states to limit the rise in global temperatures to 1.5 degrees ahead of the Paris climate summit in December. Although it was eventually agreed that the smaller island states could present a separate proposal and argument at the Paris summit, the position of Australia and New Zealand was divisive enough to raise the possibility of smaller states leaving the Forum, or asking Australia and New Zealand to do so, as well as causing one member country's Prime Minister to boycott the Forum due to 'the refusal of Australia and New Zealand to step back and allow the Pacific Island nations to determine their own futures free from outside interference' (Gordon 2015).

This division was followed in 2019 by similar disagreement within the Pacific Islands Forum on climate change and the actions needed by and for the countries of the Pacific in order to ensure their survival. This time, Australia and New Zealand would not endorse the Tuvalu Declaration agreed upon by the smaller island States due to Australia's disagreement with sections in the Declaration on emissions reduction and coal use and both countries' reservations regarding funding for the United Nations Green Climate Fund. The end result was a compromise in the form of the Kainaki II Declaration for Urgent Climate Change Action Now, which significantly softens

statements included in the Tuvalu Declaration on emissions reduction, coal use, and the Green Climate Fund (Clark 2019).

This consistency of positions on issues related to climate change are despite Australia and New Zealand signing on to the Boe Declaration on Regional Security during the Pacific Islands Forum Leaders meeting one year earlier, the first declarative statement of which 'reaffirm[s] that climate change remains the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific and our commitment to progress the implementation of the Paris Agreement' (Pacific Islands Forum Secretariat 2018). The Boe Declaration is unique in that its development did not follow the usual processes for regional policy making as laid out in the Framework for Pacific Regionalism, but rather relied on extensive meetings in member countries throughout the development and drafting stages. It has been suggested that this process was 'more meaningful and conducive to promoting political buy-in' and that a similar consultative process has informed the current development of the 2050 Strategy for the Blue Pacific Continent (Cain 2020; Pacific Islands Forum n.d.b.).

In developing the 2050 Strategy for the Blue Pacific Continent, the Pacific Islands Forum has once again identified climate change as a driver of change and its impacts as a key issue to be considered, alongside the future of the region's ocean and its resources, global power competition, future economies, resilience, and COVID-19 (Pacific Islands Forum 2020). In laying out the regional context in which the 2050 Strategy is being developed, climate change is considered both an 'enduring challenge' and a 'new opportunity'; issues impacting migration, such as border closures and a willingness to withdraw from regional political groupings and trade agreements, and those influencing development, such as rising inequalities and degradation of natural resources, are listed among the global and regional changes interacting with and impacting on the already complex challenges and opportunities being considered (Pacific Islands Forum n.d.b).

While the development of such a strategy by the Pacific Islands Forum lends itself to supporting and encouraging stronger regional collective action, genuine progress, particularly on issues related to climate change, appears hampered by the inability of Forum members to work together effectively in the best interest of the Blue Pacific Continent. The previously discussed issues surrounding the Tuvalu and Kainaki Declarations are a case in point, as is the recent initiation of the formal process of withdrawal from the Pacific Islands Forum by the five Micronesian nations in response to a leadership dispute, potentially resulting in a reduction of the Forum's membership by one-third (see Republic of Nauru Government Information Office 2021). While it is unlikely that such actions will result in an inability to develop the 2050 Strategy for the Blue Pacific Continent, they are a timely illustration of the complexity and diversity of the region as well as the failures of and challenges to the effectiveness of contemporary multilateral structures and organisations in addressing complex global issues.

2.3.2 Pacific Community (SPC)

The Pacific Community (SPC), formerly the South Pacific Commission, is an international development organisation owned and governed by its 26 member countries and territories. In practice, as the principle scientific and technical organisation in the Pacific, its aim is to support evidence-based decision making through partnerships with communities, governments, non-state actors, universities, and the private sector (SPC 2020b). As a matter of priority, the SPC actively collaborates with regional and international organisations and agencies to support Pacific Island countries and territories in achieving the Sustainable Development Goals (SDGs). In addition to creating an SDG Dashboard on the Pacific Data Hub that provides information and progress on SDG-specific datasets and assisting Pacific Island countries and territories in completing their Voluntary National Reviews (VNRs) as encouraged in the United Nations 2030 Agenda for Sustainable Development, the SPC has also been accredited to access the Global Climate Fund, thus enabling it to develop and submit projects, including micro- and small-sized projects, to the fund, opening up avenues for climate initiative financing in the region (SPC 2018). The projects supported by the SPC align with its nine development objectives and five organisational objectives set out in its Strategic Plan and progress is mapped to the SDGs and reported in its annual Results Reports.

While the SPC is committed to continuing its work toward the region's achievement of the Sustainable Development Goals, it has revisited the development and organisational goals set out in its Strategic Plan in light of recent regional and global challenges. In late 2020, the SPC released its Transition Plan 2021, which outlines how it will support the Blue Pacific Continent to recover from the COVID-19 pandemic while continuing to address existing development challenges and achieve the Sustainable Development Goals. The organisational transition comes in shifting from the development and organisational objectives in place prior to 2021 to six key focus areas 'connected by sustainable systems, Pacific people, and knowledge integration' (SPC 2020b). Further details of this transition plan and its potential utility as part of the solution to addressing the intersection of climate change, migration and the SDGs are discussed in Chapter 6.

2.3.3 Secretariat of the Pacific Regional Environment Programme

The Secretariat of the Pacific Regional Environment Programme (SPREP) was established by the Governments and Administrations of the region and is responsible for protecting and managing the Pacific's environment and natural resources. SPREP comprises 21 Pacific Island nations and 5 developed nations which have direct interest in the region, namely Australia, France, New Zealand, the United Kingdom, and the United States of America, and is considered a key organisation for the region's sustainable development. With a core priority list that includes climate change resilience, island and ocean ecosystems, and environmental governance, its projects are partnership-based, wide-ranging, and knowledge focused. SPREP is also the coordinator for climate change action in the region and 'promotes integration of climate change adaptation and

disaster risk management through capacity building and within an ecosystem-based approach' (SPREP n.d.a).

2.3.4 Council of Regional Organisations of the Pacific (CROP) Organisations

These three organisations, the Pacific Islands Forum Secretariat (as Chair), the Pacific Community, and the Secretariat of the Pacific Regional Environmental Programme, are members, alongside six other regional organisations, of the Council of Regional Organisations of the Pacific (CROP). CROP views its role as a coordinating one, collectively working in the areas of policy advice, technical expertise, and resource provision in order to strengthen the Pacific region in line with the requirements of the Framework for Pacific Regionalism (CROP 2019). Among the guiding principles of CROP is to support the region's countries and territories in their efforts 'to meet their commitments under the 2030 Agenda for Sustainable Development and the achievement of the Sustainable Development Goals [and] the SAMOA Pathway' (CROP 2019).

For its part, the Small Islands Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway clearly lays out both the connection between climate change and sustainable development and its relevance to the Pacific region while also recognising the potential role of migration. Specifically, it states that:

> *We recognize that sea-level rise and other adverse impacts of climate change continue to pose a significant risk to small island developing States and their efforts to achieve sustainable development and, for many, represent the gravest of threats to their survival and viability, including, for some, through the loss of territory (paragraph 11);*
>
> *We recognize that the adverse impacts of climate change compound existing challenges in small island developing States and have placed additional burdens on the national budgets and their efforts to achieve the sustainable development goals (paragraph 15);*
>
> *The growth prospects of the small island developing States have also been hindered by other factors, including climate change, the impact of natural disasters, the high cost of imported energy and the degradation of coastal and marine ecosystems and sea-level rise (paragraph 23);*
>
> *Migrants and diaspora communities and organizations also play an important role in enhancing development in their communities of origin (paragraph 24). (United Nations 2014).*

2.3.5 Sub-regional engagement

In addition to the larger, regionally focused, multilateral bodies operating in the broader Pacific region, there is also a number of sub-regional forums through which Pacific Island countries and territories engage with and support one another, work toward common goals, and leverage their collective strength in broader global and regional negotiations. One such collective is the Melanesian Spearhead Group (MSG). The MSG was originally established in 1986 with a view toward 'developing a stronger cultural, political, social and economic identity and link between the people and communities of Melanesia' through the 'entire decolonization and freedom of Melanesian countries and territories which were still under colonial rule in the South Pacific'. The sub-regional group has since grown from its original three signatories (Papua New Guinea, Solomon Islands and Vanuatu) to include the Republic of Fiji (full member), the Republic of Indonesia (Associate Member representing Melanesian provinces), and Observer nations (Timor-Leste, West Papau) (MSG n.d.) While the MSG's programs are broadly focused on the areas of Political & Security Affairs; Trade, Investment & Economic Development; Governance & Legal Affairs; and Sustainable Development, it has also prioritised climate change as part of its strategic focus. With its recent development of a new Climate Finance Strategy, the MSG became the first sub-regional group in the world to complete such a strategy in line with United Nations Framework Convention of Climate Change (UNFCCC) Needs Based Finance (NBF) Project (Frazor 2019; MSG Media 2019). MSG Secretariat Director General Ambassador Amena Yauvoli characterised the MSG Climate Finance Strategy as 'a product of the combined cooperation and sharing of ideas', noting that 'like other small Islands States, the MSG also have common challenges and issues of interest in dealing with and accessing Climate Finance' (MSG Media 2019).

Another subregional body actively engaging on issues of climate change is the Polynesian Leaders Group (PLG), which was established in 2011 with the ratification of a Memorandum of Understanding by eight Polynesian island groups. This organisation is somewhat unique in that membership is open to any Polynesian society, not just nation-states, with the Leaders strongly supporting the inclusion of Hawaii, Maori and Rapa Nui following receipt of their respective membership applications in 2018 (Polynesian Leaders Group 2018a). Among the PLG's top priorities are achieving the Sustainable Development Goals and addressing the impacts of climate change, including recognition of the 'inextricable link' between oceans and climate change and its importance for Polynesian peoples (Polynesian Leaders Group 2018a). In 2018, as part of the Amatuku Declaration on Climate Change and Oceans, the PLG not only highlighted the specific risks to small island developing States outlined by the Intergovernmental Panel on Climate Change (IPCC) but also addressed issues of human displacement and migration due to climate change, calling for 'the development of a legal regime to protect people displaced by climate change' and 'the establishment of a Grand Coalition of Pacific Leaders on Climate Change Displacement and Migration to find regional solutions' to these issues (Polynesian Leaders Group 2018b).

2.4 Partnerships and the new multilateralism

To date, the influence of sub-regional organisations and groupings within the broader Pacific region has been varied. As the oldest and arguably most active, the Melanesian Spearhead Group is considered to have had significant impact on the Pacific Islands Forum and the region more broadly, while the various organisations formed by the Micronesian countries over the years have had minimal influence (Iati 2017). With regard to regional migration agreements and initiatives, the Pacific Islands Forum (PIF) and the Pacific Community (SPC) are of particular relevance in that they are the primary forums through which a majority of the Pacific labour market and skills development programs have been negotiated. The Secretariat of the Pacific Regional Environment Programme and the Council of Regional Organisations of the Pacific have a clear interest in the region's achievement of the Sustainable Development Goals. Regardless of their relative remits, there is significant focus in regional engagement forums around the issue of climate change. It is not only an area of significant concern, but also the issue around which Pacific Island countries and territories clearly see their interests cohering and is the topic on which Pacific Island countries, and small island states more broadly, have had the greatest amount of global influence and voice on the international stage.

As mentioned previously, there is a tendency within the global community to consider the Pacific as an adjunct to Asia and the smaller part of Asia-Pacific concerns. This is particularly evident in discussions regarding security in the Pacific region, both from the perspective of some of the small island countries and territories as well as the larger developed countries with interests in the region, whose 'pivots', 'step-ups', and 'resets' are focused in large part on ensuring regional security and stability. Although the impacts of climate change are often discussed as an existential threat and an environmental issue, it is also a threat to security and safety for regions, nations and individuals. As such it is important to consider the threat of climate change itself from a security and defence standpoint. In the last five years a number of reports, analysis and recommendations have come from military and defence departments within various governments that detail the threat of climate change with regard to both domestic and international security, stability and defence. In 2018, a panel comprising government officials, members of various defence departments, scientists, and academics discussed the impact and influence of climate change on military and defence planning, training, and operations (Clark 2019). As early as 2013, a report released by the Strategic Studies Institute highlighted climate change as a 'threat to the global commons' that has the potential to act as a catalyst for transnational organisation and collaboration, noting that 'never before have there been such strong incentives for interstate peace, stability, and cooperation' (Porter 2013, pp. 27-28).

This view of climate change as both a threat and an incentive for cooperation is evident in the broader approaches being taken by Pacific Island countries and territories. Coming out of what has

been, for many Pacific countries, disappointing outcomes from Pacific Islands Forum meetings, it is interesting to note the increased engagement and interest in broader multilateral partnerships both in and outside the region on the part of Pacific Island countries. In February 2020, Tonga signed a series of cooperation agreements with Morocco covering a number of key sectors, among them education and training, human and sustainable development, climate change, and biodiversity conservation (Kingdom of Morocco 2020). This follows statements made by a number of Pacific countries at the Asia Pacific Parliamentary Forum in January 2020 announcing their intention to become full members of the body as opposed to their current 'observer' status. These statements were met with broad support and applause on the part of the member countries. The Pacific Island countries are taking a larger role on the global stage, and are looking beyond their traditional regional partners of Australia and New Zealand, particularly in light of the former's current approach to addressing issues related to climate change and achieving the Paris Agreement targets and the latter's lack of support for stronger language in the 2019 Kainaki II Declaration.

2.4.1 Current and emerging partnership structures

In examining how this multitude of forums, groups, and organisation are working to address the complex issues of climate change and migration that will continue to impact the region, a new idea of lateral engagement began to emerge. In 2016, the Steering Committee on Partnerships for Small Island Developing States outlined the development of the SAMOA Pathway and emphasised the effectiveness of structured, genuine, durable partnerships in achieving the Sustainable Development Goals and other SIDS focused initiatives (pp. 11-12). However, this type of formalised structure has not always shown itself to be as effective as it has been portrayed. While partnerships and partnership structures are integral to addressing complex global issues, there is still a long history of calls to action, agreement of priorities, and statements of intention that have accomplished little over the last 20 years. It has been argued that multilateral and minilateral instruments may have a more positive impact on global challenges than an approach reliant on international organisations and traditional global forums (Patrick 2017). Further, with regard to the role of global institutions, there is the view that 'global problems are not necessarily best solved by global institutions, which are accountable primarily to internal bureaucracies rather than to external constituencies. Such institutions can play useful roles as conveners and centres for information sharing, but they lack the operational capacity to act at scale; bureaucratic complexity prevents them from accomplishing broader missions' (Schadlow 2020). In 2016, Ahmed Sareer, in his role as a representative to the United Nations and co-chair of the Steering Committee on Partnerships for Small Island Developing States, noted that while cooperation and partnership were nothing new in the work of the United Nations, the way partnerships had been 'leveraged' in SIDs with regard to the SDGs was different and 'could offer a model for other multilateral development efforts elsewhere' (p. 5).

This statement supports the argument that while there is a place for formalised, international, high level partnerships, there is a growing recognition of the potential for alternative, informal and/or non-traditional coalitions to play a significant role in SIDS' attempts to address the impacts of climate change on their communities, economies and populations. As shown, despite not being considered Pacific Island countries as such, Australia and New Zealand are members of multiple Pacific regional organisations and have extensive connections with individual Pacific Island countries, including assistance programs and PIC-specific partnership agreements aimed at achieving Pacific development and security goals (DFAT n.d.a, n.d.b, n.d.c; MFAT n.d.a, n.d.b, n.d.c). They also have significant, and growing, Pacific Islander diaspora communities and populations (Batley 2017; Bedford 2011; UNESCO 2017). Partially in recognition of this, both countries have gradually realigned themselves from 'Western European' to 'Asia Pacific' in international forum groupings in what has been called 'one of the better foreign policy decisions made by Australia and New Zealand in recent years' and in recognition that 'future interests were more likely to be influenced by … geography than by the history of 80 per cent of the population' (Marshall 2005, pp. 221-222).

Increasingly, there is the view that traditional multilateral partnerships and forums have become too large, too bureaucratic, too political, and too slow to be effective in addressing immediate and complex issues such as those being discussed here (see Patrick 2015a, 2015b, 2021; Schadlow 2020; McGregor 2011). In the words of Karen McNamara (2013) of the University of Queensland, 'multilateralism is utopian in theory but can also sideline the views of those most vulnerable to, and least responsible for, the devastating impacts of a changing climate'. Into this gap, we are seeing a rise in collaborative efforts at different levels and involving broader players. In the absence of the will, ability, or interest of national or global government structures, we see the rise of 'coalitions of the capable'. This is particularly true in the dynamic areas of information and knowledge exchange through informal and/or technological mechanisms, allowing for an agility and responsiveness that, to date, has shown itself to be incompatible with broader formalised structures.

An example of this is the global SANDWATCH project. Initiated by the United Nations Educational, Scientific and Cultural Organisation, SANDWATCH brings together interested parties and organisations, including universities, schools, NGOs, teachers, students, coastal communities, local governments and ministries, and provides a platform through which members of coastal communities worldwide can understand, monitor, and conserve their environment with a view toward climate change adaptation, while seeking to minimise negative impacts (Steering Committee on Partnership for SIDS 2016; UNESCO 2017). SANDWATCH leverages the increasing engagement of people interested in citizen science, climate change and the environment more broadly, allowing them to contribute not only to the development of a global data set but also to participate in open global community of practice.

2.4.2 Rising influence or limited voice

In 2013, a report for the Strategic Studies Institute identified ‘resilience against planetary disasters’ as having the potential to be the foundation for 21st century collaboration and cooperation among the major powers (Porter 2013). With this in mind, it is worth considering that while Pacific voices and concerns may have been sublimated into larger contexts in the past, on the issue of climate change in particular the influence of Pacific Island countries appears to be rising. Climate change has not only raised global awareness of the existence of and challenges facing small island developing States, but has given the region a voice and an influence in international forums that was not in evidence previously. Small island developing States, and Pacific Island countries in particular, have been credited with the inclusion of a stand-alone goal directly addressing concerns specific to small island states in the United Nations 2030 Agenda, namely Sustainable Development Goal 14: Life Below Water, which focuses on ocean and marine health. By successfully lobbying for this inclusion, they have also positioned themselves as ‘global ocean guardians’ with both responsibility for and leadership in ocean governance (Quirk & Hanich 2016, p. 68). This global positioning of the potential influence of Pacific Island countries was addressed again in a 2019 report for the Center for Strategic & International Studies discussing Pacific Island partnerships, which stated that ‘while outsiders often characterize the region as fragile, fragmented, and vulnerable, the region itself has coalesced around a vision of resilience, as a “Blue Pacific” capable of leveraging its collective stewardship of the ocean and its resources to drive positive change’ (Searight et al 2019).

2.5 Conclusion

Despite the vastness and diversity of the Blue Pacific Continent, there is a broad historical commonality in terms of exploration and colonisation that continues to impact the region today. Increasingly, countries and territories are strengthening their connection to one another and using their collective voice to address issues that are of significant concern to them. These include marine and ocean health, the impacts of climate change, accurate and timely regional data, and the Pacific environment and its natural resources, among others. Efforts and initiatives in these areas are supported by a number of regional organisations and cooperative endeavours, many of which also include membership and representation of developed countries with significant interest in the region. There is also a growing recognition of the potential role alternative, informal, or non-traditional coalitions can have in addressing these collective issues, particularly in area where there has been insufficient progress on the part of larger organisations and bodies. Among these collective issues for the region are climate change, migration, and sustainable development. How these three issues are impacting the Blue Pacific Continent and the connection between them is the focus of the next chapter. Together with the information provided here, these two chapters provide the foundation for the development of the research design presented in Chapter 4 as well as the case studies that are at the centre of this research.

CHAPTER 3 INTERSECTING GLOBAL PRIORITIES: CLIMATE CHANGE, MIGRATION, AND THE SDGS

This chapter introduces the three major global priorities of climate change, migration, and the 2030 Agenda for Sustainable Development and how they intersect with one another in the Pacific context. Networks and stakeholders that are engaging with these issues are also introduced to provide a foundational understanding of their roles, which will be examined more fully in subsequent chapters. As such, this chapter partially addresses four of the five stated objectives of this research: Objective 1, related to identifying climate change adaptation initiatives; Objective 2, focusing on emerging trends and engagement in the areas of climate change and migration; and Objectives 4 and 5, considering the role of partnership structures in addressing these issues in the Pacific region. It also provides background information for later discussions related to the role of Pacific diaspora and migrants in relation to climate change and the Sustainable Development Goals (SDGs) (Objective 3). The chapter closes by identifying knowledge gaps within the intersection of climate change, migration, and the SDGs in the Pacific context and providing a visual representation of the resulting space occupied by this research.

3.1 Introduction

In 2010, the Australian government released the Demographic Change and Liveability Panel Report, which formed part of an issues paper on developing a Sustainable Population Strategy for Australia. With full recognition of the 'complexity and multi-dimensionality of the range of issues' involved in such an undertaking, the Panel noted that 'climate change is one of the most important challenges to progress in the Asia-Pacific region and coping with the population related challenges of climate change is an important regional as well as national issue' (Hugo et al 2010, pp. i & 136). Although the Report was ostensibly intended to inform Australian policy, its findings with regard to climate change, migration, and regional responsibility are relevant more broadly. Pacific Island countries and territories (PICTs) are highly vulnerable to the effects of climate change, with local populations increasingly impacted by the related challenges of rising sea levels and increasingly unstable weather patterns. Understanding the broader regional context and how it fits with the current global environment is necessary to enable effective national planning for individual countries and provide a foundation for regional engagement.

More specifically, recognising the ways in which climate change is impacting Pacific environments and the movement of Pacific people, whether within national borders and island groups or internationally, will enable all countries in the region to allocate resources, whether financial, political or social, in a considered, cooperative, and effective manner. There is a perception that Pacific people, as they confront the impacts of climate change and rising sea levels will, in the long term, relocate to larger countries in the region or to less impacted islands within their own island

groups. This view is reinforced by reports of atolls and islands that are being inundated due to sea level rise, as in the recent examples of Kiribati, Tuvalu, and the Marshall Islands, as well as those impacted by the increasing severity of tropical storms, cyclones, and flooding, such as Vanuatu and Tonga (Ash & Campbell 2016; Australian Bureau of Meteorology & CSIRO 2011; Nurse et al 2014; Scandurra et al 2018). Both the events themselves and the perceptions surrounding them are currently converging in the Pacific to create a complex chain of considerations when it comes to the migration of Pacific people and adapting to climate change.

As discussed in the previous chapter, despite a shared geography and renewed Blue Pacific identity, the Pacific, and nations, are not a homogenous group. The three subregions of Melanesia, Micronesia, and Polynesia are geographically, historically, culturally, and politically distinct. Even within the subregions, individual governments, relationships, and cultures all differ vastly across the oceanic space they jointly inhabit. Post-colonial affiliations, territory status, and free-association relationships have resulted, for some, in economic and social ties to developed nations that differ from those of their island neighbours. With regard to Pacific migration, these ties offer particular opportunities for Pacific Islanders. However, many Pacific people are not interested in relocating, even within their own island groups, and to some extent extreme weather events and coastal erosion are viewed as an unavoidable aspect of living in a small island nation, particularly a small island atoll nation. However, there is also a growing recognition that climate change not only disproportionately impacts PICTs' physical, social, and cultural environments, but also their ability to recover from, or in some cases adapt to, conditions that are rapidly becoming the new norm. In many cases it is not economically or politically feasible for PICTs to implement adaptations strategies, whether or not they consider migration as an option, without global support and regional engagement.

It is within this space that the 2030 Agenda and the Sustainable Development Goals have the potential to affect significant progress in the region. In addition to providing a consistent message with regard to migrants and migration, targets within SDG 13: Climate Action and SDG 17: Partnership for the Goals address the utilisation of diverse partnership structures and the need to support small island developing States to effectively plan for and manage the impacts of climate change.

3.2 Climate Change in the Pacific

3.2.1 The special case of Small Island Developing States (SIDS)

Climate change has been a significant focus of concern for small island developing States (SIDS) for decades, despite their minimal contribution to global emissions and their impact on the planet. The combination of rising sea levels and the increasing frequency and severity of hurricanes and cyclones disproportionately impact SIDS, while their small size, remote geographies, and limited resource and export base combine to create 'unique and particular vulnerabilities' not experienced

by other developing countries (United Nations 2012; UNEP & UNDESA 2013). In 1990, in an effort to gain influence on a global scale and in anticipation of the United Nations Conference on Environment and Development (UNCED) to be held in Rio de Janeiro in 1992, SIDS from the three oceanic regions of the Caribbean, the Pacific, and Atlantic, Indian Ocean, Mediterranean, and South China Sea (AIMS) formed the Alliance of Small Island States (AOSIS). While the initial focus of AOSIS was the impact of climate change and rising sea levels on SIDS, it later expanded to include sustainable development issues more broadly in response to UN negotiations (Chasek 2005). The outcome of the 1992 UNCED, also known as the 'Earth Summit', was Agenda 21, which acknowledged SIDS as 'a special case both for environment and development' with 'special challenges' that would require 'the cooperation and assistance of the international community' while also advising SIDS to 'design and implement rational response strategies to address the environmental, social and economic impacts of climate change and sea level rise, and prepare appropriate contingency plans' (UNSD 1992, para 17.123, 17.126, 17.128g). Twenty years later, the 2012 UN Conference on Sustainable Development (Rio +20) also met in Rio de Janeiro and found that 'sea-level rise and other adverse impacts of climate change continue to pose a significant risk to small island developing States and for many represent the gravest of threats to their survival and viability, including for some the loss of territory' (United Nations 2012, para 178). It also acknowledged areas of 'insufficient progress and setbacks' since the Earth Summit of 1992 (para 20).

The intervening two decades between the Earth Summit and Rio +20 included a number of high-level forums, activities, and reports focused on SIDS, among them the 1994 Barbados Programme of Action (BPOA), which defined priorities and actions for sustainable development of SIDS, including identifying SIDS' particular vulnerability to 'global climate change, climate variability and sea level rise' as a basis for action (para 18) and acknowledging the challenges some SIDS face due to population pressures and migration (para 7). A subsequent review of the BPOA in 1999 identified climate change and environmental variability as urgent problem areas (UNDESA n.d.a.). In 2005, the Mauritius Strategy for Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States clearly stated that SIDS are 'experiencing major adverse effects of climate change' and that it may be a threat to their 'very existence' (United Nations 2005, p. 9). This finding that was reiterated at the Mauritius Strategy review five years later, with the additional detail of identifying sea level rise specifically as an existential threat to low lying atolls and noting the destruction of human settlements and concern for the security implications of climate change (United Nations 2010, p. 25, para 61).

This 2010 review was essentially the third review of BPOA and its implementation strategies since its establishment in 1994. One year prior, in 2009, the United Nations Climate Change Conference was held in Copenhagen, Denmark. The outcomes of the Conference are reflected in the Copenhagen Accord as well as the Reports of the Conference of the Parties on its fifteenth

session (COP 15). Despite high levels of engagement and progress related to clean development, forest conservation and sustainable management (REDD+), and draft decisions on adaptation, technology, and capacity-building, the Conference was largely considered a failure with regard to global action on climate change (Christoff 2010; Dimitrov 2010; McGregor 2011). For many Pacific Island countries and territories, the lack of support and agreement to significantly cut greenhouse gas emissions and limit global warming to two degrees Celsius or less compared to pre-industrial levels as proposed in earlier drafts of the Accords was tantamount to the destruction of Pacific Islands and their future (Bedford & Bedford 2010; McGregor 2011). However, it is worth noting that COP 15 was the first time that youth were recognised as a 'formal constituency', with over one thousand young activists participating in formal interventions, workshops, media events and demonstrations (UNDESA 2010). With an estimated 55% of the Pacific population aged 24 and under (SPC 2016), the participation and recognition of youth in broader climate change discussions and policy making forums is imperative for Pacific SIDS.

In 2013, four years after Copenhagen, the United Nations Environment Program (UNEP) and Department of Economic and Social Affairs (UNDESA) co-hosted an expert workshop to identify emerging environmental and socio-economic issues from the perspective of SIDS. Despite initially approaching environmental and socio-economic concerns separately, it rapidly became apparent that, for SIDS, the two issues are strongly linked to one another (UNEP & UNDESA 2013). Recognising the disproportionate impact of climate change and sea level rise on SIDS due to the confluence of high vulnerability and low adaptive capacity, there was a stated urgency to develop and implement adaptive strategies that would utilise local knowledge and traditional skills and technology. The concern was that external adaptation strategies may reflect external agendas and technologies rather than focusing on the specific needs and capabilities of SIDS. Inappropriate strategies of this nature could result in wasted resources and potential maladaptation, which in turn would compound the economic dependencies that cause SIDS to be highly vulnerable to external economic variability (UNEP & UNDESA 2013). These workshops took place prior to the release of the IPCC Fifth Assessment Report in 2014, the commencement of implementation of the Sustainable Development Goals and the UNFCCC's Paris Agreement of 2015, and the IPCC's *Special Report on Global Warming of 1.5°C* in 2018. As such, a number of the issues and recommendations that came out of the workshops were reflected in later discussions and negotiations that led to the 2030 Agenda and the implementation of the Sustainable Development Goals.

Despite the amount of high-level attention and activity given to the 'special case' of SIDS and the changes necessary to address the impacts of climate change, there was arguably little significant progress in the twenty-five years from the creation of AOSIS to the implementation of the 2030 Agenda and the Sustainable Development Goals. As indicated in Table 3.1, while there continued to be a growing awareness and recognition of the impacts of climate change and their implications

for SIDS, the main contribution of many reports was the identification of additional and more specific threats to SIDS and a strenuous reiteration of previous findings as opposed to substantial measurable progress.

Table 3.1: Timeline of Selected High-Level Resolutions and Agreements – Climate Change & SIDS

Year	Event	Outcome Document	Relevance to SIDS/PICTs
1992	United Nations Conference on Environment and Development (UNCED) (Earth Summit)	Agenda 21	Acknowledged SIDS as special case with special challenges related to environment and development requiring international cooperation and assistance.
1994	Global Conference on the Sustainable Development of SIDS	Barbados Programme of Action (BPOA)	Defined priorities and actions for sustainable development of SIDS
1998	Assessment Request of the IPCC	The Regional Impacts of Climate Change: An Assessment of Vulnerability	Included small island states as a 'region' and expected that almost all SIDS would be adversely affected by sea level rise, with atoll islands of the Pacific and Indian among the most vulnerable to climate change, climate variability, and sea level rise.
1999	Special Session to Review of BPOA	BPOA+5	Identified climate change and environmental variability as urgent problem areas for SIDS.
2005	Mauritius International Meeting (BPOA+10)	Mauritius Strategy for Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (MSI)	Reported that SIDS are experiencing major adverse effects of climate change and that it may be a threat to their existence.
2009	United Nations Climate Change Conference (COP15)	Copenhagen Accord	Did not support containing the rate of global warming to 1.5 degrees Celsius in opposition to AOSIS/PICTs proposals.
2010	UN General Assembly 65th Session: Five-year Review of the MSI	MSI+5 Outcome Document (A/RES/65/2)	Identified sea level rise specifically as an existential threat to low lying atolls. Noted the destruction of human settlements and Security Council discussion on security implications of climate change.
2012	United Nations Conference on Sustainable Development (Rio +20)	The Future We Want	Launched process to develop the SDGs. Acknowledged insufficient progress and setbacks since 1992; identifies climate change as a persistent crisis threatening the survival of nations.

2014	3rd International Conference on Small Island Developing States	SIDS Accelerated Modalities of Action (SAMOA) Pathway	Identifies key priority areas for SIDS, including climate change.
2014	IPCC Fifth Assessment Report (AR5)	AR5 Synthesis Report: Climate Change 2014; Small Islands, AR5, Working Group II	Small islands states are expected to face very high impacts due to sea level rise. Identification of climate related drivers of risks for small islands.

Source: Created by the Author based on literature review

When the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) was released in 2014, it comprised focused reports from each of its three Working Groups as well as a Synthesis Report integrating the findings and offering an overview of current scientific knowledge on climate change. These reports helped lay the groundwork for global cooperation on climate change in 2015, including the Paris Agreement that came out of the 21st Session of the Conference of the Parties (COP21) and the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Of particular relevance to SIDS is the high confidence and robust evidence reported alongside the identification of climate-related drivers of risk for small islands and their high level of vulnerability to multiple stressors (Nurse et al 2014).

3.2.2 Global cooperation on climate change since 2015

Arguably, the most significant aspect of the Paris Agreement, in addition to the overarching goal of keeping global temperature rise below 2 degrees Celsius, was the apparent global willingness to drive efforts to further limit global temperature increase to 1.5 degrees Celsius. Such cooperation had not been in evidence six years prior when SIDS, alongside other disenfranchised nations, had lobbied unsuccessfully for a 1.5 degrees Celsius limit in Copenhagen (AOSIS 2019; McGregor 2011). Following the Paris Agreement and COP21, there continued to be significant activism on the part of AOSIS, SIDS, and Pacific and Caribbean political forums in an effort to ensure achievement of a '1.5 degree world' (AOSIS 2019).

In 2018, one year before the UN Climate Change Conference (COP25) in Madrid, the IPCC released a special report on the impacts of global warming of 1.5 degrees Celsius, with the data indicating that emissions must be almost halved by 2030 and carbon neutrality must be achieved by 2050 (IPCC 2018). Citing the report, there was high-level expectation that despite 'utterly inadequate' global efforts up to that point, COP25 would result in 'a clear demonstration of increased ambition and commitment' in line with the leadership being shown by youth, cities, businesses, and financial institutions (Guterres 2019b). However, despite such efforts and the potential inherent in the Paris Agreement, finalising the Agreement's governing guidelines in 2019 proved to be 'lost opportunity' for the international community (Guterres 2019c). Many of the decisions slated to be determined at COP25 were deferred, with the intention to hold further

discussions as part of COP26 in 2020, which itself was postponed to 2021 due to the global COVID-19 pandemic.

This inability to achieve consensus at the international level was also reflected in the annual Report Card on International Cooperation for 2018-2019 released by the Council of Councils (COC), an initiative comprising twenty-eight global policy institutes, which ranked 'Mitigating and Adapting to Climate Change' as the top global challenge (up from fifth the previous year) while also ranking it the second lowest with regard to opportunity for breakthrough. This disparate ranking has been characterised as reflecting both the 'gaping chasm between what needs to be done to mitigate global warming and what countries are actually doing' as well as a 'pessimism about prospects for forceful collective global action' (Mullan 2019).

The absence of such 'forceful collective global action' on the part of governments can be contrasted with the efforts of subnational actors, businesses, cities, civil society, and others to address climate change locally, regionally, and globally. It has been argued that the Paris Agreement modified the roles of both state and non-state actors, creating new opportunities for engagement and establishing a hybrid architecture and multilateralism that is distinct to international climate cooperation (Backstrand et al 2017; Kuyper, Linner & Schroeder 2018). Formal recognition of the potential roles and contributions of nonstate entities in addressing climate change has been further magnified by discussions regarding the rise of minilateralism and microlateralism (see Abbott 2014; Falkner 2015; Patrick 2014, 2015a, 2015b). Such 'informal, non-binding, purpose-built' enterprises have a number of advantages, among them speed, flexibility, experiment potential, and access to the resources and knowledge of the private sector (Patrick 2015a, 2015b). These advantages are of significant value to the countries and territories of the Blue Pacific Continent, which are particularly vulnerable to the impacts of climate change even among SIDS more broadly, a vulnerability due in large part to the convergence of environmental, geological, geographic, and demographic factors impacting the region.

3.2.3 Vulnerability of Pacific Island countries

The previous chapter provided an overview of the geographic, historical, and political influences that have shaped the Blue Pacific Continent, including the diversity inherent in the region. This diversity extends to the environmental, geological, and demographic factors that contribute to Pacific Island countries and territories' (PICTs') vulnerability to the impacts of climate change.

Among the environmental consequences of climate change, sea level rise and increasing natural disasters are the two most frequently cited as having the largest negative impact for the Blue Pacific Continent (IPCC 2014; Nurse et al 2014; Steele 2019). Over half of PICTs are considered to have 'extreme' or 'severe' susceptibility to sea level rise based on an equal weighting to altitude, island numbers, total land area and island type (Table 3.2) (Woodward, Hale & Weinstein 1998). With these consequences come the associated challenges of coastal erosion, land loss,

infrastructure damage and destruction, severe flooding, loss of food sources, and increased salinity of freshwater supplies (CSIRO 2012; Mann 2019; UNEP & UNDESA 2013). In 2010, increasing sea temperatures were also cited alongside an increased intensity of major weather events as already having a negative impact on SIDS in both the Caribbean and Pacific regions, with particular concerns around freshwater resources, fisheries, and coastal ecosystems (UNDESA 2010).

Table 3.2: Pacific Island states ranked by susceptibility to sea level rise

Nations	Major island type	Maximum altitude (m)	Susceptibility to sea level rise
Tokelau	Atoll	4	Extreme
Marshall Islands	Atoll	4	Extreme
Tuvalu	Atoll, raised coral	4	Extreme
Line Islands	Raised coral	8	Extreme
Kiribati	Coral, atoll	81	Extreme
Micronesia	Various	791	Severe
Palau	Coral	207	Severe
Pitcairn	Coral, atoll	304	Severe
Nauru		71	Severe
French Polynesia	Volcanic, atoll	2,237	Severe
Cook Islands	Volcanic, varied	652	Severe
Niue	Coral	67	Severe
Tonga	Various	1,125	Severe
American Samoa	Volcanic	931	Moderate
Fiji	Mixed	1,323	Moderate
New Caledonia	Mixed	1,628	Moderate
N Marianas	Volcanic	965	Moderate
Solomon Islands	Mixed, volcanic	2,446	Moderate
Vanuatu	Mixed	1,979	Modest
Wallis and Fatuna	Volcanic	769	Modest
Easter Island	Volcanic	600	Modest
Papua New Guinea	Mixed	4,694	Modest
Guam	Mixed	393	Modest
Samoa	Volcanic	1,857	Modest

Source: modified from Woodward, Hale and Weinstein 1998
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While there has been significant debate regarding the extent of rising sea levels and climate fluctuations in recent decades, longitudinal data on sea level trends in the Pacific support the argument of continuing sea level rise. The South Pacific Sea Level and Climate Monitoring project began in 1992 and continues to provide data and analysis of rising sea level and climate fluctuations in the Pacific that indicate sea level rise. Similarly, a study conducted by Commonwealth Scientific and Industrial Research Organisation (CSIRO) scientists determined that the frequency of extreme weather events across Pacific Island nations will increase due to

increases in greenhouse gas emissions, with associated impacts including severe droughts and flooding, food shortages and coral reef mortality across the Pacific (Cai 2012; CSIRO 2012).

The IPCC AR5 released in 2014 provided additional information and context, noting 'significant improvement in understanding and projection of sea level change' since its previous report in 2007 (2014, p. 13). Indications are that global mean sea level will rise at a faster rate in this century than had been observed from 1971 to 2010, with 70% of coastlines 'projected to experience a sea level change within ±20% of the global mean' (IPCC 2014, p. 13). However, there has been, and will continue to be, significant regional differences in the rate of sea level rise as compared to broader global observations (IPCC 2014; Nurse et al 2014; WMO 2021). It was reported that in some parts of the tropical Pacific the rate of sea level rise has been significantly higher than the global average, and up to four times higher in the tropical western Pacific where there are a large number of small island communities (Nurse et al 2014, p. 1619). Recent data further confirm this, with the World Meteorological Organisation reporting that global mean sea level continued to rise in 2020, but, consistent with previous findings, did not rise uniformly across regions. It found one of the strongest regional trends from January 1993 to June 2020 to be east of New Zealand in the western Pacific ocean (WMO 2021).

3.2.4 Effects on human populations

Over twenty years ago, Woodward et al presented a ranking of states based on their susceptibility to sea level rise as determined by an equal weighting of altitude, island numbers, total land area, and island type and determined that sea level rise was a 'major threat' in the region (1998, p. 35). Despite over half of Pacific Island states being considered to have 'extreme' or 'severe' susceptibility, it was noted that there was 'a reluctance to give the issue high priority' in some countries, citing the lack of locally generated and controlled information as a possible explanation (Woodard, Hale & Weinstein 1998, p. 35).

While the vulnerability of Pacific Island states continues to be high (see Kumar et al 2018; Scandurra et al 2018; Steele 2019), it can no longer be argued that there is any reluctance on the part of Pacific Island countries and territories to prioritise issues of environmental change on their islands, oceans, and communities. As mentioned previously, the 2013 UNEP-UNDESA-hosted expert group meeting on 'Emerging Issues in SIDS' resulted in a joint outcomes report on the environmental and socio-economic issues facing SIDS. The report clarified that climate change is not an 'emerging' issue for SIDS, which are considered to be 'on the front lines' of its effects. Rather, it is an ongoing issue that is increasingly undermining water and food security, impacting revenue streams such as fisheries and tourism, and causing loss of land and territory (UNEP & UNDESA 2013). There was also an awareness that both economic activity and social development can contribute to climate change, as well as the complicating factors of extreme weather events, which destroy land, property, and infrastructure, and the broader implications of sea level rise,

coral reef destruction, and loss of biodiversity (UNEP & UNDESA 2013, p. 40). In this context, it is further recognised that for some SIDS, climate change is forcing people to migrate as land and economic opportunities are lost. There is concern that as younger portions of island populations migrate, communities run the risk of losing inter-generational local and indigenous knowledge. Of particular concern is the loss of knowledge that relates to disaster preparedness, land use, and construction that could aid in developing appropriate and island-specific adaptation measures (UNEP & UNDESA 2013, p. 41).

In addition to migration, either permanent or temporary, as a response to the impacts of climate change, other issues have also emerged as social and economic vulnerabilities specific to SIDS. Among these concerns are traditional sources of food security such as fisheries and agriculture, as fish stock move or die in response to rises in ocean temperature, and as agriculture production, including traditional crops and farming techniques, is threatened due to loss of land, drought, flooding, or increased water salination in response to rising sea levels and extreme weather events (UNEP & UNDESA 2013). Tourism has also been highlighted as an emerging concern for SIDS due to climate change, with many island nation economies depending, to a greater or lesser degree, on tourism for economic stability and employment opportunities. In addition to damaging broader island infrastructure, an increase in extreme weather events may deter visitors and increase the vulnerability of coastal real estate dedicated to tourist accommodation and activities (UNEP & UNDESA 2013, p. 41.).

3.2.5 Recent trends to addressing climate change in the Pacific

Given its high vulnerability and particular socio-economic situation, there is wide acknowledgement that the Pacific region requires ‘differentiated long-term development strategies … that focus on building resilience to climate change, reducing risk, responding effectively to disasters, and protecting the Pacific Ocean and its resources’ (SPC 2020a, p. xi). To that end, a number of PICTs have developed climate change policies aimed at increasing resilience and promoting adaptation initiatives within national boundaries while at the same time actively engaging with regional partners to promote and achieve climate change goals (Department of Climate Change 2016; Government of Palau 2015; Solomon Islands Government 2012). However, many of the localised mitigation and adaptation measures enacted may not be effective for much longer, potentially resulting in increased pressures toward relocation (Steele 2019). While some smaller communities across the Pacific have already relocated to other islands, the low-lying countries of Kiribati and Tuvalu have considered evacuation and relocation of their entire populations, including, in the case of Kiribati, implementing programs for upskilling their population to aid in international relocation (Roberts & Andrei 2015; Smith & McNamara 2015; Steele 2019; Tong 2009). Subsequent initiatives have moved away from migration as an adaptation solution and focused on encouraging increased cooperation from development partners to expand fisheries and tourism, develop a blue-

green green economy, and increase liveable land mass through dredging (Maamau 2017; Mallin 2018; Walker 2017).

Despite these ongoing efforts, it is understood that most Pacific Island nations do not have the economic capacity to install high tech monitoring systems, build preventative or mitigating infrastructure without assistance, or provide for large-scale relocation. This necessitates a cooperative, multi-faceted approach, as recognised in 2009 by the UNHCR Regional Representative in the Pacific, Richard Towle, who stated that "finding solutions to these challenges means listening, consulting, and responding to the specific needs of affected populations – whether they be coping mechanisms and adaptation or eventual relocation" (Farrell 2009). A similar sentiment provided the foundation for the announcement of the Kiwa Initiative by the President of the French Republic at the 2017 One Planet Summit. Launched in March 2020, the Kiwa Initiative is a multi-donor program aimed at addressing the challenges of climate change adaptation and resilience in PICTs by providing funding to Pacific organisations, civic groups, and NGOs for Nature-based Solutions (NbS) (AFD n.d.).

Along with an increase in international funding partnerships and initiatives focused on climate change adaptation, there is also an increasing acknowledgement that much of the responsibility for the impacts of climate change on PICTs and other SIDS lies with the developed countries that are substantially responsible for global emissions (Figure 3.1). This has led to increased collective action on the part of SIDS and official complaints to the UN Human Rights Committee with accusations of human rights violations, including access to clean drinking water, standard of dignity, and right to life through food security, for failure to take appropriate action on climate change (UNHRC 2020).

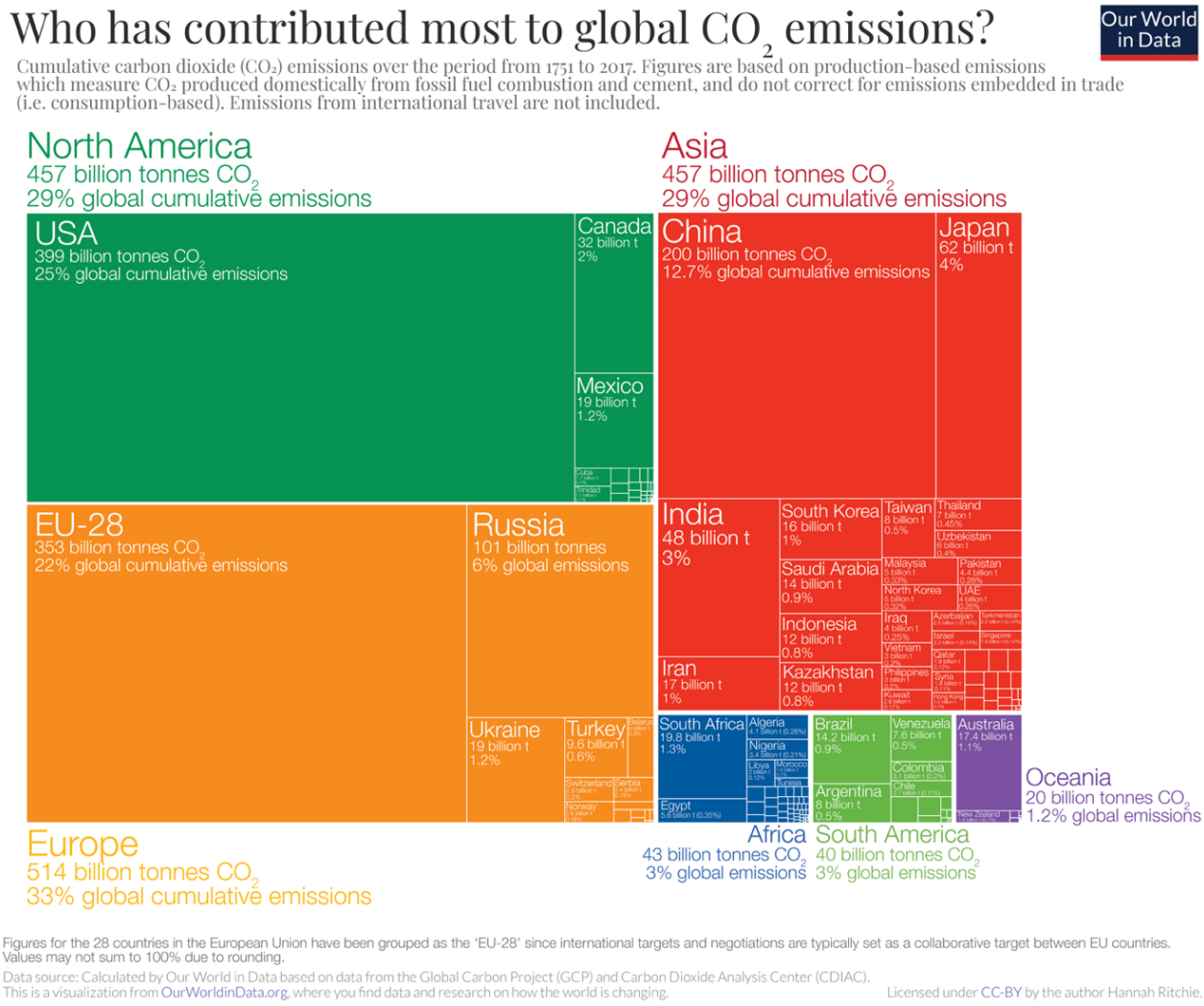

Figure 3.1: Cumulative global carbon dioxide emissions by region and country, 1751-2017
Source: Ritchie 2019, 'Who has contributed most to global CO2 emissions?', Our World in Data, <https://ourworldindata.org/contributed-most-global-co2>.
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As a region, Oceania as a whole has contributed the least in terms of cumulative carbon dioxide emissions, with Australia responsible for the bulk of regional emissions (Figure 3.2). In comparison, among PICTs the largest two emitters are New Caledonia and Papua New Guinea, each of which contributed 0.01% of global emissions (Ritchie 2019).

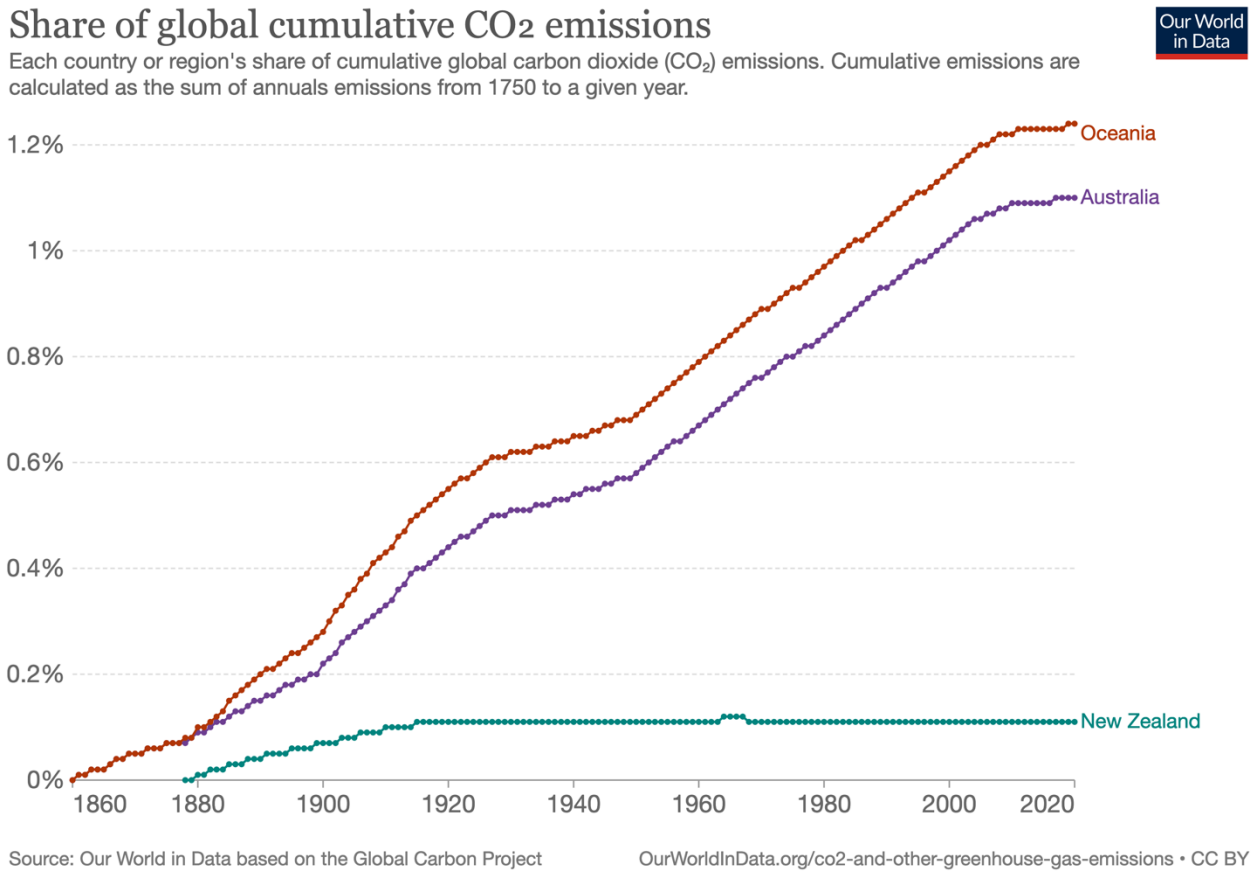

Figure 3.2: Oceania's cumulative global carbon dioxide emissions, 1751-2017
Source: Ritchie 2019, 'Who has contributed most to global CO2 emissions?', Our World in Data, <https://ourworldindata.org/contributed-most-global-co2>.
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This disparity in terms of responsibility and vulnerability led to a complaint made by Torres Strait Islanders against Australia in 2019 highlighting the unique vulnerability of low-lying islands and seeking financial redress of at least $20 million to assist with protective infrastructure and other adaptation measures (Lyons 2019; SBS 2019).

Actions such as seeking financial compensation and assistance and filing complaints with the UN Human Rights Committee reflect an increasing and broader understanding of responsibility as well as loss and damage associated with climate change. Such issues have been the contention of PICTs and other island and developing nations for decades (see previous discussion in Section 3.2.1), however it was the 2013 Warsaw International Mechanism for Loss and Damage that finally created 'a legitimate policy space to discuss and address the negative consequences of climate change if society's efforts to mitigate and adapt are not sufficient' (Warner 2013). While the Warsaw Mechanism has been characterised as a 'notable step forward' and a 'pivotal stepping-stone', there remain a number of concerns with regard to the allocation of responsibility and effective action on the part of developed nations (McNamara 2013; Ralston 2013; Warner 2013). Among them is the view that progress with regard to climate change will be stunted if there is not

sufficient funding from high-income nations, considered to be the cause of historic climate change, to assist developing economies to grow sustainably (UNEP 2021). The SDGs attempt to address this as part of SDG13 Climate Change, Target 13.a, which states the need to 'implement the commitment undertaken by developed-country parties to the UNFCCC' regarding the mobilisation of funding 'to address the needs of developing countries in the context of meaningful mitigation actions' (United Nations 2015).

However, it is not just mitigation but also broad-based adaptation measures that are the focus for PICTs. Arguably, much of the funding for climate change mitigation and adaptation for PICTs has come in the form of official development assistance, foreign direct investment, grants, and loans from overseas governments as well as international funding bodies, with Australia and New Zealand responsible for over half of all aid to the Pacific region (Lowy Institute 2020).

3.3 Migration in the Pacific

3.3.1 Pacific culture of migration

When considering migration within a Pacific context, it is important to understand that some PICTs have a culture of migration going back generations. Historically, certainly in terms of populating the islands thousands of years ago, but also significantly within the last century as an economic imperative for both individuals and their families, and for many of the island nations as a whole. Hauofa (1994) describes this movement of Pacific people as a continuation of 'what their ancestors did … strik[ing] roots in new resource areas, securing employment and overseas family property, [and] expanding kinship networks through which they circulate' (p. 155).

These practices have created a structure of interdependence among kin and communities that stretches across the countries of the Pacific and Pacific Rim. The resulting economic and political environment has been categorised by some as dependence in terms of aid, remittances, and the assistance of developed nations, but is perhaps better understood as an extension of historic ancestral mobility, expanding diaspora communities and reflecting a practiced social reciprocity (Hauofa 1994). Additional, though not incompatible, interpretations focus on the continued impact of imperial and colonial engagement in the region, arguing that the foundation of many 'traditional' Pacific Island institutions of governance are in actuality 'colonial compromises' that have nonetheless become part of both the individual and collective Pacific identity (Meleisea 2005, p. 78).

Arguably, colonial affiliations continued to impact Pacific development and identity following many Pacific Island nations' independence in the mid-twentieth century and enabled the formation of vast Pacific Islander diaspora communities across Australia, New Zealand, Canada, and the United States (Bedford 2011; Connell 2006a, 2006b; Hazledine & Collins 2011; Meleisea 2005, UNESCO 2017). With regard to Polynesia in particular, Bedford (2011) points out that 'by the 21st

century, most of the Pacific's Polynesian societies, as well as Fiji, had extensive diaspora in cities in New Zealand and Australia, as well as in Hawai'i and the west coast cities of Canada and the USA', leading to the conclusion that 'an inclusive definition of the region makes sense in any analysis of Pacific peoples' (p. 127).

Regardless of whether Pacific Islander mobility is a continuation of historical practice or the result of colonial influence, it is clear that migration within the Pacific region and among Pacific Island countries and territories increased significantly in the mid-twentieth century in response to economic, environmental, and social pressures. In the 1940s, under agreement by their respective colonial administrations, migrants from what are now Tuvalu and Kiribati relocated to Fiji due to concerns regarding future population pressure (Tuvalu) and the impact of mining and a subsistence economy (Kiribati) (Bedford & Bedford 2010). Relocations of this type were not uncommon at the time when the economic and political priorities of the respective administrations were in conflict with the views of local communities (Tabe 2019). New Zealand's mid-twentieth century approach to Pacific migration, including a relatively relaxed attitude toward visa overstay, resulted in an increase of its Pacific Islander population to over 50,000 in the early 1970s, up from only 3,600 two decades prior, and was followed by the introduction of a specific Pacific migration program in the mid-1970s (Curtain et al 2017). More recently, Pacific labour programmes supporting the agriculture and tourism sectors in Australia and New Zealand have resulted not only in a growing Pacific Islander diaspora, but also increased remittances to the Pacific Islands (Batley 2017; World Bank Group 2016a).

3.3.2 Recent trends in Pacific migration

These trends in Pacific Islander mobility have continued over the last decade, resulting in an increased number of Pacific migrants as well as a growing diaspora. Using 2013 and 2017 as snapshots, an evaluation of the World Bank Group's bilateral estimates of migration stocks shows a continuation of the previously mentioned Pacific migration patterns and diaspora development, with the top three receiving countries by far for migrants from the Pacific region reported as Australia, New Zealand and the United States of America (Tables 3.3 & 3.4).

Table 3.3: Bilateral estimates of Pacific migration stocks – top 5 receiving countries 2013

Destination (across) Source country (down)	*American Samoa*	*Australia*	*Canada*	*New Zealand*	*United States*	Top 5 Destination Total	World Total	Top 5 as % of World
American Samoa	0	219	130	0	0	**349**	**3,319**	10.5%
Fiji	471	67,233	27,978	52,755	43,916	**192,353**	**201,462**	95.5%
French Polynesia	0	390	120	0	2,321	**2,831**	**3,801**	74.5%
Guam	0	128	40	0	0	**168**	**2,764**	6.1%
Kiribati	0	718	0	1,476	1,878	**4,072**	**5,367**	75.9%
Marshall Islands	0	43	0	0	9,038	**9,081**	**9,768**	93.0%
Micronesia, Fed. Sts	0	32	56	0	19,765	**19,853**	**29,335**	67.7%

New Caledonia	0	1,249	130	0	362	**1,741**	**6,381**	27.3%
Northern Mariana Isls	0	3	0	0	7,298	**7,301**	**10,038**	72.7%
Palau	0	22	23	0	2,966	**3,011**	**5,575**	54.0%
Papua New Guinea	0	33,434	342	1,347	2,732	**37,855**	**38,951**	97.2%
Samoa	30,947	19,759	108	50,661	12,354	**113,829**	**114,568**	99.4%
Solomon Islands	0	2,238	34	0	108	**2,380**	**3,044**	78.2%
Tonga	1,827	10,613	91	22,416	20,515	**55,462**	**56,303**	98.5%
Tuvalu	0	161	0	1,419	144	**1,724**	**3,880**	44.4%
Vanuatu	0	1,435	0	0	147	**1,582**	**8,408**	18.8%
Total Pacific	**33,245**	**137,677**	**29,052**	**130,074**	**123,544**	**453,592**	**502,964**	**90.2%**

Source: Created by the Author; data from World Bank Group 2013

This is further supported by earlier analysis that found that much of the international migration that occurs in the Pacific is from a select number of countries, primarily in Polynesia and those with a political relationship, either free association or territorial oversight, to a developed Pacific Rim country such as New Zealand or the United States of America (Barnett & Chamberlain 2010). The number and destination of migrants from the Federated States of Micronesia, Republic of the Marshall Islands, and Palau (Tables 3.3 & 3.4), all in free association with the United States of America, illustrate the role of free-association with regard to migration (see also Nansen Initiative 2013a). As these three countries are considered at extreme or severe risk with regard to sea level rise and climate change (refer Table 3.2 above; see also Australia Bureau of Meteorology & CSIRO 2011, Nurse et al 2014), it follows that such relationships are relevant to broader discussions regarding climate change adaptation and mitigation.

Table 3.4: Bilateral estimates of Pacific migration stocks – top 5 receiving countries 2017

Destination (across) Source country (down)	*American Samoa*	*Australia*	*Canada*	*New Zealand*	*United States*	Top 5 Destination Total	World Total	Top 5 as % of World
American Samoa	0	460	130	0	0	**590**	**3,583**	16.5%
Fiji	471	71,800	28,241	56,274	43,406	**200,192**	**209,685**	95.5%
French Polynesia	0	520	133	0	2,321	**2,974**	**4,029**	73.8%
Guam	0	110	40	0	0	**150**	**2,774**	5.4%
Kiribati	0	650	0	1,573	1,878	**4,101**	**6,684**	61.4%
Marshall Islands	0	40	0	0	9,038	**9,078**	**9,764**	93.0%
Micronesia, Fed. Sts	0	30	56	0	19,765	**19,851**	**32,869**	60.4%
New Caledonia	0	1,680	130	0	362	**2,172**	**6,946**	31.3%
Northern Mariana Isls	0	11	0	0	7,298	**7,309**	**10,202**	71.6%
Palau	0	30	23	0	2,966	**3,019**	**5,959**	50.7%
Papua New Guinea	0	33,510	476	1,436	2,732	**38,154**	**40,862**	93.4%
Samoa	30,947	29,490	127	54,041	18,405	**133,010**	**134,757**	98.7%
Solomon Islands	0	2,430	34	0	108	**2,572**	**4,248**	60.5%
Tonga	1,827	12,440	103	23,911	20,515	**58,796**	**62,226**	94.5%
Tuvalu	0	190	0	1,513	144	**1,847**	**4,468**	41.3%
Vanuatu	0	1,530	0	0	147	**1,677**	**9,269**	18.1%
Total Pacific	**33,245**	**154,921**	**29,493**	**138,748**	**129,085**	**485,492**	**548,325**	**88.5%**

Source: Created by the Author; data from World Bank Group 2013

These continuing levels of migration and consistency of destination have resulted in an expanding Pacific diaspora throughout the Pacific region, but particularly in Australia and New Zealand. Recent census figures from both countries show an increase in their respective Pacific Islander populations compared to the previous censuses, with the largest growth in both countries occurring from Polynesia (Tables 3.5 & 3.6).

Table 3.5: Pacific Islanders in Australia 2006 – 2016 censuses

	2006	2011	2016	change 2006 - 2016		
Fiji	19,171	23,769	37,003	17,832		
New Caledonia	246	203	270	24		
Papua New Guinea	12,549	15,459	18,802	6,253		
Solomon Islands	1,118	1,406	1,883	765		
Vanuatu	514	704	956	442		
Other Melanesian	821	1,172	1,195	374	25,690	Melanesia
Kiribati	483	682	871	388		
Nauru	376	416	512	136		
Other Micronesian	248	235	276	28	552	Micronesia
Cook Islands	11,400	16,191	22,228	10,828		
French Polynesia (Tahiti)	685	722	1,311	626		
Hawaii	276	333	473	197		
Niue	2,182	3,142	4,958	2,776		
Pitcairn	-	-	741	741		
Samoa	39,997	55,837	75,753	35,756		
Tokelau	1,139	1,659	2,329	1,190		
Tonga	18,426	25,096	32,695	14,269		
Tuvalu	334	433	703	369		
Other Polynesian	2,175	2,610	3,697	1,522	68,274	Polynesia
Total er	**92,969**	**126,300**	**169,653**			
Australian Population	19,855,288	21,507,717	23,401,892			
ers as % of AU	0.5%	0.6%	0.7%			

Source: Created by the Author; Pacific Islander figures as reported in Batley 2017; Australian population from ABS Census Quickstats n.d.

Table 3.6: Pacific Peoples in New Zealand 2006 – 2018 censuses

	2006	2013	2018	change 2006 - 2018		
Fijian	9,861	14,445	19,722	9,861	9,861	Melanesia
Kiribati	1,116	2,115	3,225	2,109	2,109	Micronesia
Cook Islands Maori	58,008	61,839	80,532	22,524		
Hawaiian	279	333	429	150		
Niuean	22,473	23,880	30,867	8,394		
Samoan	131,103	144,138	182,721	51,618		
Tokelauan	6,822	7,173	8,676	1,854		
Tongan	50,478	60,333	82,389	31,911	116,451	Polynesia
Indigenous Australian	462	453	795	333	333	
Pacific Peoples, not further defined	789	1,029	2,724	1,935	1,935	
Total Pacific Peoples	**265,974**	**295,941**	**381,642**			
NZ Population	3,860,163	4,011,399	4,699,755			
Pacific Peoples as % of NZ	6.9%	7.4%	8.1%			

Source: Created by the Author; data from Stats NZ

Not surprisingly, similar trends are reflected in bilateral remittance data reported by the World Bank Group, which show Australia, New Zealand, and the United States of America consistently in the top five remittance sending country for the Pacific Islands from 2013-2017 (Table 3.7).

Table 3.7: Top 5 remittance sending countries for PICTS 2013-2017 (US$ millions)

Remittance-sending country	2013	2014	2015	2016	2017
United States	623	643	649	585	579
Australia	351	366	420	342	341
French Polynesia	239	278	362	362	319
New Zealand	169	164	181	76	150
New Caledonia	81	83	81	76	70

Source: Created by the Author; data from World Bank Group

Given the dedicated Pacific labour programs implemented by Australia and New Zealand, it follows that as labour migration to Australia and New Zealand increases, so too do remittances and remittance projections to countries more broadly (World Bank Group 2016a). However, although Pacific labour programs are available to Pacific Islanders across the region, the remittance amounts vary greatly among PICTs (Table 3.8).

Table 3.8: Migrant remittance inflows (US$ millions)

PICT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019e	As % of 2019 GDP
Fiji	176	160	191	204	221	251	269	274	285	294	5.5%
French Polynesia	651	722	633	672	660	564	582	582	582	606	not available
Kiribati	16	17	18	17	16	14	16	18	18	19	9.9%
Marshall Islands	22	22	23	25	26	27	28	28	28	30	13.5%
Micronesia, Fed. States	18	19	21	22	23	23	23	23	23	24	6.3%
New Caledonia	492	594	715	724	721	613	621	621	621	636	not available
Palau	2	2	2	2	2	2	2	2	2	2	0.7%
Papua New Guinea	3	17	14	14	10	10	3	4	3	3	0.0%
Samoa	139	160	178	165	141	131	131	138	155	166	18.4%
Solomon Islands	14	17	21	21	16	19	20	16	19	20	1.3%
Tonga	74	84	91	123	119	150	126	159	183	190	38.5%
Tuvalu	4	5	4	4	4	4	4	4	4	4	8.4%
Vanuatu	12	22	22	24	28	24	26	26	26	27	2.9%
TOTAL	1,622	1,842	1,933	2,015	1,989	1,834	1,853	1,896	1,951	2,020	

Source: Created by the Author; data from World Bank Group

It is important to note that, on a global scale, the remittance dollar amounts being received by Pacific Island countries are not representative of the importance of remittances to their respective economies. Rather, it is when remittances are viewed as a percentage of GDP that their importance becomes clear. For example, Tonga and Samoa are consistently ranked in the top 10 of remittance recipient countries worldwide by percent of GDP, and PICTs more broadly comprise the majority of the top 10 countries in East Asia and Pacific by the same measure, despite comparatively low dollar amounts (World Bank Group 2019a) (Figure 3.3).

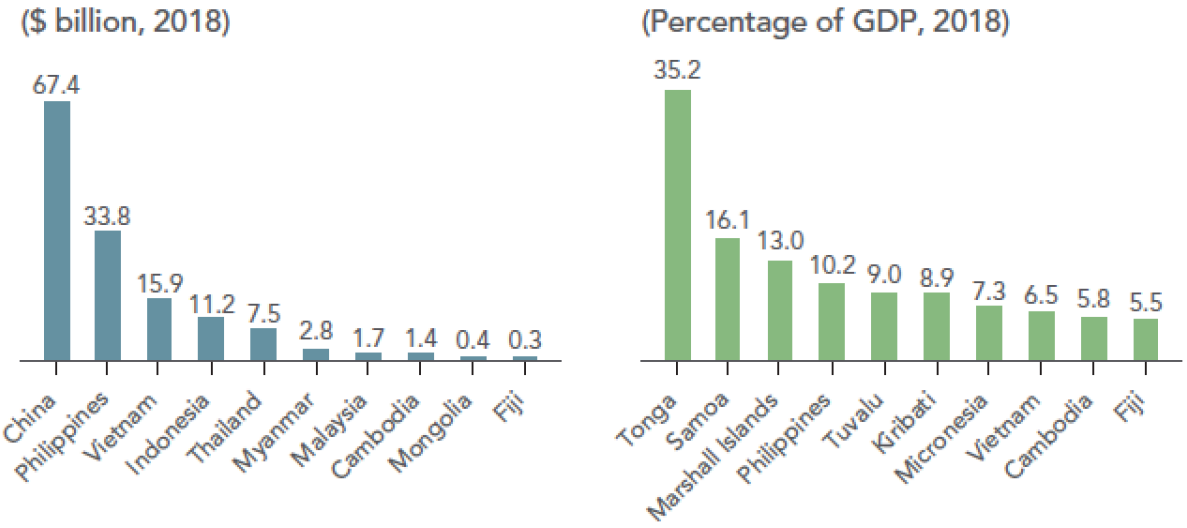

Figure 3.3: Top remittance recipients in East Asia and the Pacific 2018
Source: World Bank Group 2019a, p. 15
Reproduced with permission under OpenAccess Creative Commons by World Bank Group OKR

Similarly, evaluating Pacific emigrant numbers alongside overall population figures provides a fuller context for the impact of migration in the region. The small populations of many PICTs are the result of situations where their emigrant stocks exceed their resident population, as in the cases of Niue and Cook Islands in 2019 (United Nations 2020). Tellingly, despite barely registering in terms of absolute numbers, PICTs consistently comprise the majority of the top ten countries in Asia and the Pacific when their emigrant numbers are expressed as percentages of their respective current populations (Figure 3.4). To illustrate, Niue's almost 6,000 emigrants in 2019 equate to 346.3 percent of its population, while Armenia's almost 1 million emigrants equate to only 32.6 percent of theirs (United Nations 2020, p. 30).

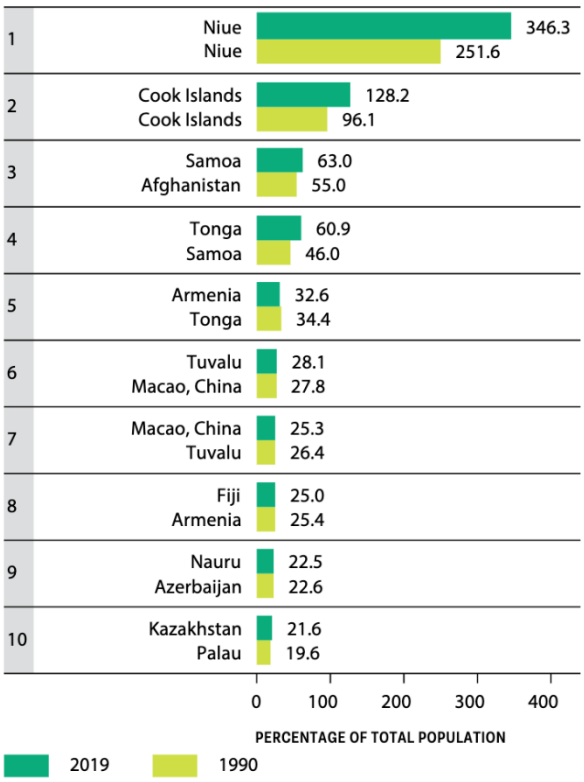

Figure 3.4: Top 10 countries and territories of origin for migration in Asia and the Pacific, 1990 and 2019: As a percentage of the total population
Source: United Nations ESCAP 2020, Asia-Pacific Migration Report 2020, Figure 8, p. 30
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As reflected earlier with regard to diaspora in Australia and New Zealand, when Pacific emigrant numbers are calculated by subregion, Polynesia has an outsized representation in terms of emigrants as a percent of the population (Table 3.9). Further, the data show a steady increase in emigrants across all subregions over the last thirty years. This reinforces Hau'ofa's (1998) idea of an 'expanded Oceania' created by the mobility of Pacific Islanders and comprised of social networks that traverse the Pacific. It also supports Bedford's (2011) proposal of utilising an 'inclusive definition of the region' that takes into account the dispersed nature of Pacific peoples.

Table 3.9: Total number of emigrants by Pacific sub-region (mid-year at 5-year intervals)

	1990	1995	2000	2005	2010	2015	2020	population (2020)	as % of pop. 2020
Melanesia	104,500	123,300	150,400	177,000	204,300	229,800	256,000	11,100,000	2.3%
Micronesia	21,500	29,200	39,000	39,900	39,000	42,000	51,000	554,529	9.2%
Polynesia	146,600	160,600	185,800	190,200	198,600	223,500	258,300	687,922	37.5%
Total	**272,600**	**313,100**	**375,200**	**407,100**	**441,900**	**495,300**	**565,300**	**12,342,451**	**4.6%**

Source: Created by the Author; data from IOM Migration Data Portal

The social networks created through such consistent emigration practices provide a mechanism of support and information Pacific Islanders can utilise to make decisions regarding migration as a solution to economic, environmental, and social pressures. The International Organization for Migration's (IOM) 2018 World Migration Report determined that economic and environmental

challenges were influencing out-migration from PICTs, with 420,000 Pacific-born migrants living in OECD countries. Significant employment shortages, due in part to a high population of youth across the Pacific, has led to high degrees of labour migration, primarily to Australia and New Zealand, both of which, as mentioned previously, have established seasonal labour programs. Other noted factors influencing Pacific migration include environmental change and degradation, including urban overcrowding, incremental sea level rise, saltwater intrusion, and drought (IOM 2018). While it is notoriously difficult to determine a 'reason' people migrate, with push and pull factors frequently working together to influence decision making, the link between climate change and migration in the Pacific has become a significant focus of the global discussion and civic engagement in the last decade (see Bedford & Bedford 2010; Boncour & Burson 2010; Burson & Bedford 2015; Campbell & Warrick 2014; Coelho 2019; Dempster & Ober 2020; ESCAP, ILO & UNDP 2014; Manch 2018). These issues, together and separately, have influenced both the approach and attitude of the larger global community toward the Pacific Islands.

3.3.3 Linking migration and climate change in the Pacific

As discussed previously, the confluence of climate change and migration in the Pacific was first given global attention in 2009 in Copenhagen due to the drastic situations occurring in the Pacific, specifically in Tuvalu and Kiribati, and for SIDS more broadly. Following this, Fiji's long-standing willingness to accept migrants from Tuvalu and Kiribati was extended to 'climate change refugees', a decision grounded in the 'historical ties' and existing diaspora communities in Fiji (Bedford & Bedford 2010; Radio New Zealand 2009). Similarly, in 2017 New Zealand announced consideration of a specific humanitarian visa for Pacific Islanders displaced by climate change, the first of its kind. Although the action garnered significant global praise at the time, it was later abandoned due in part to Pacific Islanders' preference to remain in their respective countries (Dempster & Ober 2020; Manch 2018).

Despite such preferences, it has been noted that 'environmental impacts are irrevocably changing life in these island states – with rising migration just one testament to the region's very real fears for its future' (GEF 2017). These fears are clearly illustrated by reports of Nauru's population decreasing by one-tenth while 15 percent of Tuvalu's population has left (GEF 2017). Some early estimates indicate there may be between 66,000 and 1.75 million climate migrants in the Pacific by the middle of the 21st century when, according to the Pacific Community (SPC), formerly the South Pacific Commission, the total Pacific population is projected to be in excess of 18 million (Campbell 2010). It is perhaps not surprising then, that although environmental or climate change refugees are not currently recognised as such in an international context, the United Nations High Commission for Refugees (UNHCR) nonetheless characterised New Zealand's proposed visa for those impacted by climate change as 'an important example of global burden-sharing in refugee protection' (Harper 2020; UNHCR n.d.).

The rising need for policy-based responses to 'migration stimulated by climate-related factors' in Asia and the Pacific was also the focus of an Asian Development Bank (ADB) project completed in 2012. The project's Final Report is notable for being one of the first to propose policy recommendations focused on how environmental events affect migration at a regional level. It also identified the need to address issues of climate induced migration within the context of a broader development agenda that considers its implication on sustainable economic and social development in the region (ADB 2012). Specifically, it proposes that:

> *to reduce migration compelled by worsening environmental conditions, and to strengthen resilience of at-risk communities, governments should adopt policies and commit financing to social protection, livelihoods development, basic urban infrastructure development, and disaster risk management (2012, p. viii).*

The report also called for 'more targeted, policy-relevant research . . . on the interaction between the environment and migration' and for the facilitation of migrant remittances in order to mitigate financial vulnerability in at risk areas (ADB 2012, p.ix).

Shortly thereafter, from 2013-2016, the Pacific Climate Change and Migration Project was conducted with a view toward improving the capacity of PICTs to plan and manage the impacts of climate change on migration (ILO 2016). The project, funded by the European Union and implemented by two United Nations divisions and the International Labour Organization (ILO), covered the Federated States of Micronesia, Kiribati, Nauru, Republic of Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu, and identified Kiribati, Tuvalu and Nauru as 'target countries' in recognition of their extreme vulnerability to climate change (ILO 2015; Campbell & Warrick 2014). With regard to migration, and consistent with the recommendation included in the ADB report, the project focused primarily on labour migration as an adaptation strategy that would allow for the diversification of household income and reduce resource strain, which would in turn enable populations to remain on their land (ESCAP, ILO & UNDP 2014). As such, the key outcomes related to establishing a region-specific knowledge base on migration and climate change, providing support and assistance to implement new strategies, and promoting regional dialogue and information sharing. Much of this work is now being undertaken by the SPC, which focuses on 'major cross-cutting issues' including climate change, disaster risk management, and employment, with divisions dedicated to Climate Change and Environmental Sustainability (CCES) and Statistics for Development (SDD), among others.

The global political context surrounding the international response to both climate change and migration also continues to evolve at a rapid pace. As acknowledged by the Intergovernmental Panel on Climate Change (IPCC) and elsewhere, 'human migration, whether planned, forced or voluntary, is increasingly gaining attention as a response, particularly where climatic risks are

becoming severe' (IPCC 2018, 4.3.5.6). In December 2018, the Global Compact for Safe, Orderly and Regular Migration (GCM) and the Global Compact for Refugees were endorsed by UN member states. Both Global Compacts acknowledge the role of climate, natural disasters, and environmental degradation in human migration and refugee status, but fall short of identifying them as a direct cause, preferring instead to characterise them as factors that can impact human movements (United Nations 2018a; United Nations 2018b). Despite this, in a case involving a Kiribati citizen and New Zealand, the UN Human Rights Committee determined that individuals facing climate-induced conditions that violate their right to life cannot be deported, further stating that 'both sudden-onset events, such as intense storms and flooding, and slow-onset processes, such as sea level rise, salinization and land degradation, can propel cross-border movement of individuals seeking protection from climate change-related harm' (UNHRC 2020, para 9.11). These statements and the broader 2020 ruling have been interpreted as setting 'new standards' that could be used successfully in subsequent climate change-related asylum claims (OHCHR 2020).

3.3.4 Migration as climate change adaptation

Continuing environmental degradation, climate change and sea level rise have been added to the factors influencing migration decisions in the Pacific, compounding the 'push of limited opportunities on islands combined with the pull of better horizons in foreign lands [that] has long fuelled emigration from islands' (UNEP & UNDESA 2013, p. 26). A recent report released by the United Nations University Institute for Water, Environment and Health (UNU-INWEH) examining the links between water and migration noted that over eighty percent of the Pacific Islands' population depends on subsistence agriculture or fishing, with limited alternative livelihoods available. Further, it found that Pacific SIDS have an 'unusually high out-migration', with the negative net-migration rates of Federated States of Micronesia and Tonga among the lowest in the world (Nagabhatla et al 2020). More broadly, it recommends 'an enhanced focus on migration as an adaptation strategy' with a view toward changing the dominant narrative of migration from one of problems and prevention to contribution toward sustainable development (Nagabhatla et al 2020, p. 5).

Pacific Islanders have demonstrated their resilience and ability to adjust and adapt to changing environmental and social conditions, including through utilising both migration and immobility as adaptive strategies, whether in the short or longer term. It has been suggested that enabling those in climate change impacted areas to migrate, either temporarily or permanently, in order to earn income that could then be sent back to their home countries in the form of remittances may be 'one of the most useful forms of adaptation' in the Pacific (Campbell 2010, p. 43). The argument is that as climate change reduces the livelihood of those who remain, increased labour mobility, and an associated increase in remittances, would have a balancing effect as well as potentially mitigate losses due to cyclones, floods, and other environmental extremes. Barnett and Chamberlain argue that because migration has been shown to benefit not only those who migrate and their families,

but also the communities they depart from and arrive in, migration is a strategy that can aid all of these groups in adapting to climate change (2010, p. 52). However, the value of such an approach is complicated by a number of factors, among them the potential for a reduction in remittances over time, the loss of local populations able to assist during and after an environmental disaster, and, for some, a lack of access to migrant receiving countries (Campbell 2010). As discussed in the previous chapter, there are numerous associations, historical and political, that PICTs maintain with larger developed nations of the Pacific Rim. These associations bring migration opportunities for some but restrict others. Similarly, for those Pacific Island countries and territories for which migration, and labour migration in particular, has become a standard practice, the significant diaspora communities that have developed in receiving countries may influence decision making on individual, community, and national levels.

With regard to climate change, migration as an adaptation strategy can take many forms and further contribute to 'determinates of adaptive capacity [including] financial resources, information, education and health care, social resources, infrastructure, and technology' (Barnett and Chamberlain 2010, p. 54). Barnett and Chamberlain also discuss specific ways in which migration benefits adaptive capacity for migrants' community of origin through remittances, expanded social networks, transmission of goods and services, and, as migrants return, the transfer of new skills and knowledge as well as a broader understanding of climate change risks and potential responses (2010). For Campbell, climate change migration is substantially the same as other forms of voluntary migration in which a migrant's earnings defray costs, in this case due to climate change, at home. To his thinking, 'apart from climate being a key influencing factor, this form of migration is not new; we can learn from experience' (2010, p. 47). Rather, it is community relocation as a response to climate change that is new and requires 'research, planning, negotiations, and the development of appropriate funding mechanisms' in order to 'find the least disruptive solutions' (Campbell 2010, p. 47). Such a view is in part supported by the IPCC's finding that 'there is a small but growing literature on human migration as an adaptation strategy [and] scant literature on the cost-effectiveness of migration.' (IPCC 2018, Table 4.13). However, in the intervening decade since Campbell's statements, it has become clear that the 'key influencing factor' of climate change is in fact changing migration decisions in the Pacific, both for those who migrate and those who remain, on an individual as well as community level and that 'experience' may not be as useful in this new and emerging context (see ADB 2012; Barnett & Chamberlain 2010; Burson 2010; Weir, Dovey & Orcherton 2016). The need for research, planning, and funding now includes broader considerations within the intersection of climate change and migration in the Pacific and an emphasis on national, regional, and international policy solutions.

Developing such policies comes with significant challenges, such as those identified early on by Boncour and Burson, which include:

- understanding the potential scale and patterns of climate change-related migration
- understanding the complexity and multi-causality of climate change-related migration
- managing climate change-related migration
- finding workable definitions and solutions under international law. (2010, p.12)

In this vein, Sakdapolrak et al identified three primary limitations of 'migration as adaptation' in response to environmental stress, among them that it does not sufficiently consider the impact of other forms of migration, is not inclusive of other approaches to managing environmental change, and 'justifies migration policies with neo-liberal tendencies' (2016, p. 81). It is with these challenges and limitation in mind that the Sustainable Development Goals may offer a mechanism through which the Blue Pacific Continent can address the interconnected issues of climate change and migration while building a sustainable future for the region.

3.4 The 2030 Agenda and the Sustainable Development Goals

3.4.1 A global sustainability agenda

In January 2016, the United Nations' Sustainable Development Goals (SDGs), also known as the Global Goals, came into effect. Adopted by 193 countries, the SDGs (Figure 3.5) comprise 17 Goals, 169 Targets, and 231 unique indicators, with twelve indicators repeated under multiple targets. Similar to the Millennium Development Goals that proceeded them, the SDGs are a goal-based initiative. They are also universal in that they are applicable to all countries regardless of development status, and interconnected, meaning that 'often the key to success on one will involve tackling issues more commonly associated with another' (United Nations 2015).

Figure 3.5: Sustainable Development Goals
Source: United Nations, News and Media, Communications materials, 2017
Reproduced with permission under Informational Purposes by United Nations Department of Global Communications

It has been widely acknowledged that the SDGs have built within them the potential to broaden the global sustainability agenda and actively engage members of the global community that have historically sat outside such initiatives, including businesses, individuals, NGOs, students, and community leaders (Sachs 2015a). Furthermore, they have come into effect at a time when alternative forms of collective action are coming to the forefront of multilateral initiatives; a time when partnerships and cooperative networks are being formed that are 'informal, non-binding, purpose-built … coalitions of the interested, willing and capable' (Patrick 2015a). Add to this the rapid evolution of new technologies and a changing global political environment and there is significant potential for increased commercialisation, information and resource sharing, and broader applications of knowledge, support, and expertise than ever before.

Globally, one of the first steps toward achieving the SDGs was for each country to create national sustainable development plans and strategies that address their respective national circumstances and priorities while recognising that achieving the SDGs will require actions across many sectors of society, including government, business, universities and society more broadly (Sachs 2015b). The specific challenges identified for and by individual countries are dependent on a number of factors, among them geography, history of the country, state of development and relationship with world markets and regional economies (Sachs 2015a, 2015b). Similarly, implementing the national plans and strategies is also dependent on a certain level of international and regional cooperation and financing. While there has been some progress toward achieving the SDGs, sustainable development remains a significant challenge globally. The annual Report Card on International Cooperation for 2018-2019 ranked Advancing Development in the top ten of the world's global challenges (CoC 2019). The Report further lists 'supporting sustainable development practice' as the first development priority and states that despite the UN's strategy for accelerating financial support to achieve the SDGs, there is still a $2.5 trillion annual shortfall from what is needed (CoC 2019).

3.4.2 Migration and migrants in the SDGs

While there is not a dedicated SDG focused on migrants or migration, they are considered cross-cutting issues and their importance in achieving the SDGs is clear within the UN Resolution adopting the 2030 Agenda for Sustainable Development (2015). In addition to identifying migrants as a vulnerable population, the opening Declaration of the Resolution acknowledges migrants' positive contribution to inclusive growth and sustainable development. This inclusivity with regard to migration is also reflected in statements related to the provision of quality education and learning opportunities and within the principles outlining data collection, follow-up, and review processes. Further, the Declaration of the Resolution recognises that international migration is a multi-dimensional reality of major relevance for the development of countries of origin, transit and destination (para 29).

The SDGs themselves reference migrants and migration, directly and indirectly, within various Goals and Targets (Table 3.10) as well as relevant Indicators. It has also been argued that, regardless of whether they are directly referenced, the Goals and Targets that are 'for all' cannot be achieved without including migrants (ESCAP 2020). These include eradicating extreme poverty (SDG 1, Target 1.1), ending hunger (SDG 2, Target 2.2), universal health cover (SDG 3, Target 3.8), and access to primary and secondary education (SDG 4, Target 4.1) (ESCAP 2020).

Table 3.10: Selected migration related SDGs and Targets*

Goal	Target(s) - direct | *indirect*
SDG 3. Ensure healthy lives and promote well-being for all at all ages	*3.c substantially increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries, especially in least developed countries and small island developing states.*
SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	*4.b. By 2020, substantially expand globally the number of scholarships available to developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.*
SDG 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.8 protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
SDG 10: reduce inequality within and among countries	10.7 facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies 10.c by 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent
SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	*16.9 by 2030, provide legal identify for all, including birth registration.*
SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	*17.3 mobilize additional financial resources for developing countries from multiple sources* 17.18 by 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing states, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

* does not include migration related targets addressing issues of human trafficking (SDGs 5.2, 8.7, 16.2).

Source: Created by the Author; refer United Nations 2015; ESCAP 2020.

The UNU-INWEH report's recommendation for 'an enhanced focus on migration as an adaptation strategy' mentioned previously was made with a view 'to maximize the interconnectedness with the

Sustainable Development Goals (SDGs)' and move toward 'a perspective emphasizing migration as a contributor towards achieving sustainable development' (Nagabhatla et al 2020, p. 5). In particular, the report emphasises the potential role of migrants in 'strengthening capacities related to water, gender, climate, and institutions' (SDGs 5, 6, 13, and 16) (Nagabhatla et al 2020, p. 5). Given the role of migration, as well as associated remittances, in many Pacific Island countries, focusing on migrants and migration as active, beneficial contributors to achieving the SDGs as opposed to a problematic aspect of international cooperation and development has the potential to reframe the role of PICTs in the region and broadens the definition of adaptive capacity with regard to climate change.

3.4.3 Addressing climate change

During the second phase of the UN General Assembly Open Working Group discussions to develop the SDGs, Pacific Island countries, along with Timor-Leste, were of the view that 'climate change should be addressed in the strongest sense', to include cross-cutting climate change targets and a dedicated SDG (Leone, Offerdahl & Wagner 2014, p. 17). CARICOM (Caribbean Community and Common Market) nations were similarly supportive of 'urgent, transformational action and ambition' on climate change as part of the SDGs, despite concerns from a number of larger nations regarding how a climate change Goal and associated targets would relate to the ongoing UNFCCC negotiations (Leone, Offerdahl & Wagner 2014). The SDSN Leadership Council also noted that for some areas being addressed, including climate change, target setting and implementation monitoring is the clear purview of existing intergovernmental processes and structures and, as such, any relevant SDG should 'emphasize that country-level actions are to be achieved within the framework of the internationals treaties.' (2014, p. 4).

The SDGs that were subsequently adopted do include a dedicated Goal for climate: SDG 13: Climate Action – Take urgent action to combat climate change and its impacts*, which contains the noted caveat (*) of 'acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change' (UN Resolution on SDGs). SDG 13 has five directly associated Targets, the least of all the SDGs except Goal 7: Affordable and clean energy, which also has five. Four of the five Climate Action Targets are primarily focused on increasing 'capacity' for adaptation and planning (13.1, 13.2, 13.3, 13.b), with the one outlier addressing the mobilisation of funding (13.a).

As with migration, the broader Agenda addresses the importance of climate change to the overall achievement of the SDGs, calling it 'one of the greatest challenges of our time' and citing concerns that:

> *its adverse impacts undermine the ability of all countries to achieve sustainable development. Increases in global temperature, sea level rise, ocean acidification and other climate change impacts are seriously affecting coastal areas and low-lying*

> *coastal countries, including many least developed countries and small island developing States. The survival of many societies, and of the biological support systems of the planet, is at risk. (para 14)*

These stated concerns clearly reflect the challenges for SIDS and PICTs set out previously in Section 3.2 of this Chapter. It is these concerns, specifically 'sea level rise, ocean acidification, and other climate change impacts [that] are seriously affecting … small island states' that have informed the focus of the intersection of climate change and the SDGs considered in this research. Two Climate Action Targets in particular provide additional focus and consideration with regard to migration and its potential as an adaptive measure for PICTs. They are:

> **Target 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries; and
>
> **Target 13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

The focus on adaptive capacity and effective climate-change related planning in these two Targets are particularly relevant for PICTs. Increased adaptive capacity can have the effect of reducing the tendency for populations to migrate in response to environmental stress. However, the most recent Sustainable Development Goals Report (2021) considers the world to be 'woefully off track' to meet the Paris Agreement targets limiting global warming and carbon dioxide emissions, which is an issue that has been at the forefront of PICTS' international engagement for some time. The IPPC goes further, clearly stating that changes in the ocean and global sea level, among other changes, are irreversible for centuries to millennia and that 'global surface temperatures will continue to increase until at least the mid-century', while 'global warming of 1.5°C and 2°C will be exceeded during the 21st century' unless there are deep reductions in emissions over the next few decades (IPCC 2021c). Given these findings, PICTs may need to consider new definitions of resilience and adaption and new mechanism for climate change related planning and management than may have been the case even five years ago when the SDGs came into effect.

It is worth noting that SDG 13 Climate Action is one of the Goals in which the Pacific subregion has registered its biggest progress (ESCAP 2021). Despite this, the Pacific subregion is not on track to meet any of the SDGs by 2030 and the larger Asia Pacific region of which it is a part is actually regressing with regard to SDG 13 Climate Action (ESCAP 2021). While this may be due in part to the ongoing impact of the COVID-19 pandemic, the lack of global action and agreement on climate change measures more broadly may also be a factor. This illustrates not only the limitations of PICTs due to their relative size in the region, but also the importance of a cooperative regional approach in addressing these challenges.

3.4.4 A focus on SIDS and partnerships

In recognition of the challenges specific to small island developing States (SIDS), the United Nations Division for Sustainable Development Goals (DSDG) has identified SIDS as a Topic requiring special consideration. As the discussions above regarding climate change and migration make clear, the SDGs address issues of particular significance for SIDS. There are also dedicated resources, reporting, a SIDS portal, and the development of a Multidimensional Vulnerability Index for SIDS. A number of Targets include specific mention of SIDS (Table 3.11), the DSDG also identifies nine SDGs specifically related to SIDS:

SDG 2	Zero Hunger
SDG 5	Gender Equality
SDG 6	Clean Water and Sanitation
SDG 7	Affordable and Clean Energy
SDG12	Responsible Consumption and Production
SDG 13	Climate Action
SDG14	Life Below Water
SDG 15	Life on Land
SDG 17	Partnerships for the Goals.

As of 2019, none of these SDGS was considered to be within five percent of reaching selected Targets by 2030, with half[1] (SDGs 12, 13, 14, and 15) showing a projected negative long-term trend (Independent Group of Scientists 2019). Further, almost two-thirds of the Indicators for SDG 13 Climate Action are considered to be 'under development' with regard to definitions, methodologies, or standards (Independent Group of Scientists 2019, p. 9).

Table 3.11: SDG Targets with references to SIDS

Goal	Target(s)
SDG 3. Ensure healthy lives and promote well-being for all at all ages	3.c substantially increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries, especially in least developed countries and small island developing states.
SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.b. By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries. 4.c. By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states.

[1] SDG 17 Partnership for the Goals was not included in the original analysis as its wide range of indicators could not be captured with the methodology used (GDSR 2019).

SDG 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.b by 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing states and landlocked developing countries, in accordance with their respective programmes of support.
SDG 9. Build resilient infrastructure, promote inclusive and sustainable Industrialization and foster innovation	9.a facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African Countries, least developed countries, landlocked developing countries and small Island developing states.
SDG 10: reduce inequality within and among countries	10.b encourage official development assistance and financial flows, including foreign direct investment, to states where the need is greatest, in particular least developed countries, African countries, small island developing states and landlocked developing countries, in accordance with their national plans and programmes.
SDG 13. Take urgent action to combat climate change and its impacts*	13.b promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing states, including focusing on women, youth and local and marginalized communities.
SDG 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	14.7 by 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism 14.a increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the intergovernmental oceanographic commission criteria and guidelines on the transfer of marine technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing states and least developed countries.
SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	17.18 by 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing states, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.

Source: Created by the Author; refer United Nations 2015.

The recognition given to the special case of SIDS within the SDGs provides an opportunity for broader global engagement on the specific challenges they face. According to Jeffrey Sachs, Director of the UN Sustainable Development Solution Network (SDSN) and Professor of Sustainable Development, goal-based initiatives such as the SDGs can succeed on a global level due in part to the following:

- Goals are critical for social mobilisation in that they enable participants (individuals, organizations, and governments) to agree on the direction;
- Goals make participants, particularly governments, susceptible to peer pressure;
- Goals are effective in mobilising epistemic communities and stakeholder networks (2015).

However, as much as the SDGs may provide a direction, one of the primary challenges is that they do not offer a concrete roadmap or specific objective to achieve; rather they are best viewed as a framework of aspirations - a strategy statement rather than operational plan. Where the SDGs have potential to become particularly useful is in the mobilisation of networks and coalitions, both traditional and non-traditional, that utilise the SDGs as a focal point for what they are attempting to achieve. This is particularly true when the Targets are used as a focus rather than the Goals themselves. In other words, the SDGs can provide 'new impetus, new power, new social mobilization, new resources, and new political will . . . they can create a new global energy and atmosphere of problem-solving' (Sachs 2015a, p. 484).

In a Pacific context, such an 'atmosphere of problem-solving' requires collaboration and partnerships. With regard to development initiatives in the Pacific, 'collaboration can be understood as a process to engage multiple parties to come together to address a defined purpose that could not be achieved by working alone. Partnership may be a more formal arrangement. Often resources from each party are shared (co-mingling) to achieve shared objectives. Within a partnership, shared benefits can be realised but risks are also shared by all the parties' (RDI 2018, p. 6). With regard to the SDGs in particular, during the Open Working Group discussion leading to their development, Pacific Island countries and small island developing States expressed the view that a global partnership for sustainable development would be the determining factor in the success of the SDGs more broadly (Leone, Offerdahl & Wagner 2014). Other countries clearly agreed, and the SDGs do include a dedicated Goal to address the role of partnerships. The intention of SDG 17 Partnerships for the Goals is to 'strengthen the means of implementation and revitalize the global partnership for sustainable development' (United Nations 2015). Within it, there are Targets and Indicators that include specific mention of small island developing states, migratory status, and remittances.

3.5 Summary

As the previous section has shown, the SDGs have a stated focus on SIDS and migration as well as dedicated Goals related to climate change and the need for partnerships and cooperation, all of which are relevant and important to PICTs. In total, there is a 15-year timeframe on them, over a third of which have already passed, with the SDGs 'ending' in 2030. This timeline coincides with the need to take urgent action globally on climate change within the next 10 years (IPCC 2018; IPCC 2021). As such, it gives rise to the question underlying the focus of this research, which is: can the SDGs be utilised to address the connected issues of climate change and migration in the Pacific within the next decade and build a foundation for a sustainable future in the region?

To answer such a question, two primary factors need to be considered: 1) the increasing inability of individual Pacific Islands to sustain their population due to the effects of environmental change, and 2) an historical and social reliance on emigration as an economic and population 'safety valve'

in the region. It is worth reiterating that the internal impacts of population growth in many Pacific states have been managed in large part through high levels of emigration (Connell 2006a; Connell 2006b; Ware 2005). In a region already accustomed to relying on emigration as a solution to economic and development issues, it is likely that migration as a solution to alleviating pressures associated with climate change and environmental degradation will be viewed as a viable alternative. However, additional factors such as high remittances levels and the greater education and employment opportunities available overseas may offer alternative adaptation strategies that have yet to be fully explored.

Whether rising sea levels and extreme weather events result in permanent, temporary, or cyclical relocation for Pacific Islanders is highly dependent on their particular island or territory. Regardless, there is a need for a better understanding of how climate change, migration, and the SDGs intersect in specific Pacific contexts, with consideration for increasing the capacity to manage any such relocation within the region. As this chapter has shown, the intersection of migration and climate change in the Pacific context is about more than disenfranchisement and relocation. Migration as an adaptation strategy to manage the impact of climate change can take many forms and be of benefit to those who choose to remain in, or return to, their home country. Linking these adaptive strategies to the larger framework of the Sustainable Development Goals may encourage broader engagement within the region and enable the development of new strategies tailored to the Pacific, and specific Pacific Island, contexts.

3.6 Conclusion

This chapter has discussed how the intersection of climate change, migration, and the Sustainable Development Goals are manifesting in the Blue Pacific Continent. By providing specific examples for each global priority relevant to the Pacific context, it has been possible to see how each of the three priorities overlap and to identify the nexus in which the case studies conducted as part of this research will sit (Figure 3.6).

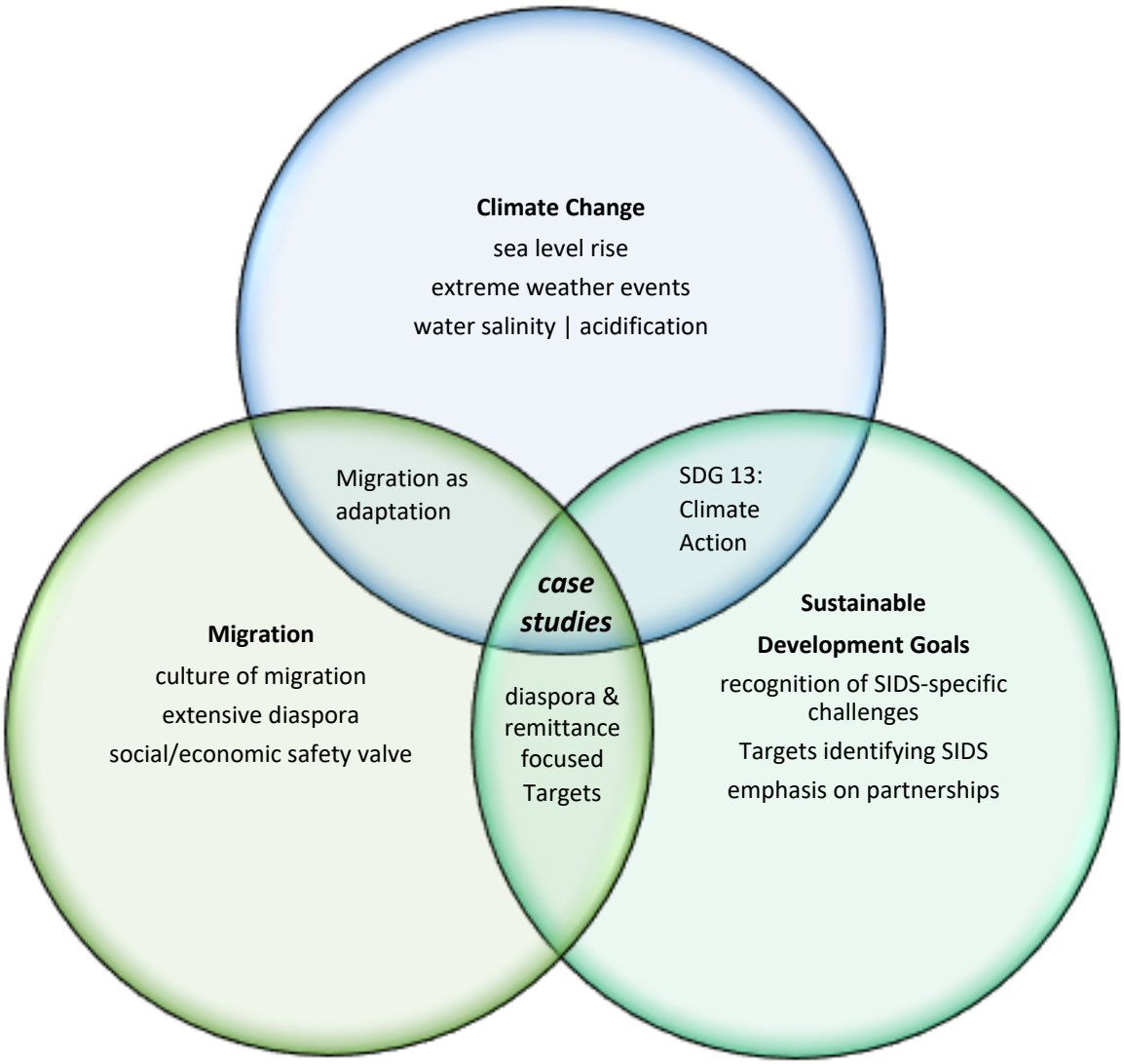

Figure 3.6: Illustrative diagram – Intersecting Global Priorities in the Blue Pacific Continent
Source: Created by the Author based on literature review

As such, this chapter has contributed to each of the five objectives set forth previously through the identification of climate change adaptation and migration initiatives (Objectives 1 and 2) and discussion of the role of relevant partnerships and networks in this context (Objectives 3, 4, and 5). The next chapter will detail the criteria and selection process of the two case studies and discuss in further detail the research approach, methodology and subsequent design of the project.

CHAPTER 4 RESEARCH DESIGN

This chapter details the research approaches and methods that informed the final research design and presents the five criteria used to select the case study locations. It also addresses the scope and limitations of the study, including the challenges of addressing multiple complex global issues simultaneously and the rapidly evolving nature of these issues over the course of the project. Also noted are the circumstantial constraints presented by COVID-19 and Cyclone Harold in the Pacific region and the resulting impact on the methods used to conduct the research. Process diagrams are presented throughout to illustrate various aspects of the research design.

4.1 Research approach

4.1.1 Preliminary suppositions and implications

As stated previously, there is a need for a better understanding of how climate change, migration, and the Sustainable Development Goals (SDGs) intersect in specific Pacific contexts. The literature examined in Chapter 2 and Chapter 3 discussed this in relation to the wider Blue Pacific Continent, enabling the following high-level conclusions:

a. climate change is disproportionately impacting Pacific Island countries;
b. migration plays a significant role in cultures and economies of the Pacific;
c. 'migration as adaptation' may play a vital role in Pacific communities' response to climate change; and
d. SDG 13 Climate Action, SDG 17 Partnerships for the Goals, and the attention the 2030 Agenda gives to migration and the challenges specific to small island developing states (SIDS) may act as a catalyst for action on these issues.

These and other findings within the literature, including the acknowledged lack of significant progress in the area of climate change adaptation and associated migration support in the region despite almost three decades having passed since the 1992 Earth Summit, led to the following suppositions:

- An integrated regional approach will be more effective than reliance on international engagement and the in/action of individual countries;
- New partnership structures and transnational cooperation mechanisms are needed;
- The current global political environment necessitates consideration of 'new multilateralism' and 'coalitions of the capable';
- Experimental forms of and nimble approaches to international cooperation, including likeminded informal alliances will be needed; and
- Transnational social movements and traditional knowledge structures will play a significant role in promoting climate change adaptation initiatives.

These ideas developed into five preliminary objectives that formed the initial focus of this research, namely to:

1. Identify recent and/or forthcoming initiatives at the local level related to climate change adaptation and planning, including sustainable development best practice;
2. Identify and evaluate emerging trends in new forms of stakeholder engagement, both local and international, on climate change related initiatives within the region, including social movements, migration impacts and online actions;
3. Illustrate how local and regional networks, relationships, and practices can be utilised to create enabling environments and knowledge communities for effective climate change planning in the region;
4. Explain how the policies and practices of key governmental and regional bodies can best aid and integrate into local efforts to plan for and mitigate the effects of climate change; and
5. Compare stakeholder views on the role that partnership structures, including microlateral and minilateral initiatives, can play in increasing the capacity to adapt to the impact of climate change and achieving the Sustainable Development Goals.

Given the diversity inherent in the Blue Pacific Continent, achieving these objectives required limiting the scope of the research to specific geographical contexts in order to effectively consider the local context. This was important not only in order to ensure the project was manageable, but also to allow sufficient space to evaluate how the three global issues of climate change, migration, and the SDGs were converging in different situations.

With regard to sustainable development more broadly, Sachs (2015a) identifies four complex interacting systems that are involved: a global economy; social interactions and social support networks; earth systems, including climate and ecosystems; and governance. Arguably, these same interacting systems are also involved in the issues of climate change and migration. Sachs goes on to argue that ‘complex systems require a certain complexity of thinking’, highlighting the need for a ‘differential diagnosis’ based on the particular circumstances being evaluated. Effective sustainable development then, requires the practitioner ‘to be a complex-systems expert in the same way, acknowledging the complexity of the issues and looking to make a specific diagnosis of each specific case’ (Sachs 2015a, p. 8). He explicitly cites the need to ‘make a diagnosis that is accurate and effective for the conditions, history, geography, culture, and economic structure of the country in question’ (2015a, p. 103).

Although he was discussing sustainable development, Sachs’ description of the needed diagnosis is also applicable to the complex intersection of climate change, migration, and the SDGs that this research is examining. In this context, the specific considerations were more clearly defined as: the conditions created by climate change; a history of post-colonial affiliations and engagement; the geography of Pacific Island states and territories; a culture of migration; and the unique economic

structures that support island populations. Given the complexity of these considerations, it was determined that an adapted form of the research approach and question structure described by Robinson (2018) would be effective in managing and addressing the multiple dimensions of this research.

As part of an examination of a previous study's 'novel, meta-paradigmatic approach' to answering specific research questions relating to SIDS adaptation to climate change, Robinson (2018) presents a structure of two Primary Research Questions and eight Research Sub-Questions that work together to investigate 'climate change adaptation in complex geographies' (p. 172). In her analysis of the approach, Robinson characterises the Research Sub-Questions as being 'based on insights from the existing academic literature combined with answers to the first primary research question' and that 'together, they answer the second primary research question' (p. 175). She argues that this structure and approach is useful in 'highlighting lessons from and for climate change adaptation in SIDS in different regions' and allows for a robust examination of multiple and combined case studies.

While the focus, intent and objectives of the study described by Robinson (2018) differ from that of this research, the approach and structure provided a useful framework that could be adapted to address the concerns of this project. In keeping with the research structure presented by Robinson (2018), a total of ten research sub-questions were developed based on insights from the literature presented in Chapters 2 and 3. These sub-questions were grouped according to the intersecting global priorities of climate change, migration, and the SDGs (Box 1). The sub-questions provided the basis of analysis for each of the selected case studies (see Section 4.1.2) presented in Chapter 5, which in turn formed the foundation of the discussion of the primary research question, achievement of the research objectives, and associated recommendations set out in Chapters 6 and 7.

Box 1: List of research questions

Primary research question:

Can the SDGs be utilised to address the connected issues of climate change and migration in the Pacific within the next decade and build a foundation for a sustainable future in the region?

Research sub-questions:

Global Priority 1: Climate change

- What are the key climate changes impacting the country?
- What effect are these changes having on human populations?
- What are the national priorities with regard to climate change?

Global Priority 2: Migration

- What are the recent migration patterns and trends?
- What impact does migration have on economic and social structures?

Global Priority 3: Sustainable Development Goals (SDGs):

- Which SDGs have been identified as priorities?
- How much progress has been made toward achieving the SDGs?

Intersection analysis:

- What could migration as a climate change adaptation strategy entail for Pacific island countries with a culture of migration?
- What is the role of Pacific migrants and diaspora in achieving the SDGs?
- Have the SDGs enabled effective climate change adaptation and planning in Pacific island countries?

Source: Author, presentation structure adapted from Robinson 2018 (see above)

4.1.2 Case study approach and selection

Considering these questions led to the development of a case study approach utilising two specific Pacific Island countries that would illustrate, through the comparison of the two, the different ways in which the issues of climate change and migration intersect in Pacific contexts and how prioritising the achievement of the SDGs may benefit both individual PICTs and the region as a whole.

As part of a discussion on Robert Yin's approach to case studies, Moss (n.d.) identifies a number of criteria that indicate a case study would be particularly useful, among them that the research will:

- investigate a contemporary problem, intervention, or event;
- investigate the problem in context and will study the context in detail, including setting, circumstances, and relationships; and
- utilise and integrate multiple sources of evidence to characterise the problem and context.

These characteristics aligned with the intention, objectives, and questions that informed this research, as did the benefits that Moss associated with multiple-case designs, including robustness and comparisons. Applying these benefits meant that the selection of two PICTs as case studies provided relative certainty that the conclusions and subsequent recommendations would not be based on any particular uniqueness of a single location, which was important given

the diversity of the Blue Pacific Continent. It also allowed the opportunity to develop new insights into the complexity of the Pacific region as a result of analysing discrepancies between the two case study locations, thus generating new avenues for further research.

The selection criteria established to determine which PICTs would be the focus of this research considered the impact of climate change, current and historical migration practices, contemporary population patterns, sovereignty, and national affiliation. The criteria were then grouped into similarity factors (vulnerability to climate change, a practice of migration, level of sovereignty), with the resulting list further refined by contrasting factors (population characteristics and national affiliation). In keeping with Pacific research principles, which are discussed later in this chapter, Pacific Community (SPC) data was used in the selection process wherever possible.

4.1.2.1 Similarity criteria

First, the three criteria for which the two case study locations would be similar were applied to all PICTs that comprise the Blue Pacific Continent according to the inclusion lists of the Pacific Community (SPC). As discussed in Chapter 2, the SPC is the principal scientific and technical organisation in the Pacific whose aim is to support evidence-based decision making in the region.

As the criteria of 'vulnerability to climate change' and 'practice of migration' are complex within themselves, primary and secondary proxy measures for each were designated to aid in the selection process. For vulnerability to climate change, the primary measure was extreme or severe susceptibility to sea level rise. A secondary measure of relative physical exposure to storms was also noted in the event that the remaining selection criteria did not allow for a clear determination of inclusion. The use of these two measures was in response to the findings presented in Chapter 3 with regard to sea level rise and increasing natural disasters having the largest negative impact on PICTs (IPCC 2014; Nurse et al 2014; Steele 2019).

With regard to which of the two measures would have primacy, susceptibility to sea level rise has been identified as having significant impact on migration needs and decisions for SIDS populations more broadly as well as contributing to broader flow-on impacts related to potable water, sustainable agriculture and the continued use of coastal environments, among others (CSIRO 2012; IPCC 1998; IPCC 2014; Mann 2019; UNDESA 2010; UNEP & UNDESA 2013). With regard to the Pacific, a study by Becker, Karpytchev & Papa (2019) found that almost all of the islands in the western tropical Pacific 'are subject to pronounced absolute sea level rise' and that some may experience 'rapid coastal submergence in the future' (p. 239).

As with the susceptibility to sea level rise data presented in Chapter 3, the ranking approach set out by Pernetta (1990) and presented by Woodward et al (1998) was used, which gave equal weighting to altitude, island numbers, total land area and island type. In the main, these factors have remained largely unchanged in the last 25 years, enabling the original ranking to provide a

useful guide to comparative susceptibility in the Pacific region. It should be noted that the data source for the secondary measure (Nurse et al 2014; presented previously in Figure 2) only provided figures for PICTs that were among the top ten in the Asia-Pacific region, which included one third of all PICTs. As this measure was intended as confirmation of the primary measure, the lack of data for those not identified as being in the top ten for the region was not viewed as problematic.

With regard to practice of migration, as discussed in the previous chapter, a significant number of Pacific countries and territories have an historical and contemporary reliance on migration as a social and/or economic safety net, as well as a vehicle for individual advancement. Although it is not a direct measure of such reliance, negative net migration rate was used as a proxy for this selection criterion as a relevant comparative measure. As the majority of PICTs report negative net migration rates, the lowest half were considered to have met the threshold for the primary measure. The secondary measure considered was number of emigrants as percentage of the resident population, which, as also discussed in the previous chapter, presents a starkly different view of migration from PICTs than the number of migrants alone.

The final similarity criteria, level of sovereignty, identifies PICTs that have attained, or retained, independence. The similarity measures were examined concurrently (Table 4.1) to develop a truncated list that was then evaluated based on the contrasting factors of population characteristics and regional affiliation. While later application of the secondary measures yielded three potential case study locations (Cook Islands, Niue, Tonga), all PICTs which initially met the primary criteria were evaluated further.

Table 4.1: Comparison of PICTs using similarity criteria (met criteria in bold)

Pacific island country or territory	Susceptibility to sea level rise	Crude net migration rate	National status
Cook Islands	**Severe**	**-7.30**	**Independent; Free Association - NZ**
Federated States of Micronesia	**Severe**	**-15.60**	**Independent; Free Association -US**
Marshall Islands	**Extreme**	**-18.20**	**Independent; Free Association -US**
Nauru	**Severe**	**-11.00**	**Independent**
Niue	**Severe**	**-12.80**	**Independent; Free Association - NZ**
Tonga	**Severe**	**-18.70**	**Independent**
Tuvalu	**Extreme**	**-11.60**	**Independent**
American Samoa	Moderate	**-14.80**	Territory - United States
Fiji Islands	Moderate	-6.00	**Independent**
French Polynesia	**Severe**	-4.30	Overseas Collectivity - France
Guam	Modest	-4.00	Territory - United States
Kiribati	**Extreme**	n.a.	**Independent**
New Caledonia	Moderate	3.70	Overseas Collectivity - France
Northern Mariana Islands	Moderate	-4.40	Territory - United States
Palau	**Severe**	-2.80	**Independent; Free Association -US**
Papua New Guinea	Modest	0.00	**Independent**
Pitcairn Islands	**Severe**	n.a.	Territory - United Kingdom
Samoa	Modest	**-15.50**	**Independent**
Solomon Islands	Moderate	-2.50	**Independent**
Tokelau	**Extreme**	**-10.40**	Territory - New Zealand
Vanuatu	Modest	-0.40	**Independent**
Wallis and Futuna	Modest	**-14.80**	Overseas Collectivity - France

Source: Created by the Author; for data refer CIA World Factbook n.d.; SPC 2018; Woodward, Hale & Weinstein 1998.

4.1.2.2 Contrasting criteria

The seven PICTs which met the similarity criteria were further evaluated according to the contrasting criteria of population characteristics and national affiliation. Three population characteristics were selected as measures for determining which two PICTs would have broadly contrasting populations: population age and growth structure, urban population, and median age. Population structure was intended as a potential indication of the extent of development, which is relevant both in terms of what public services may be needed, i.e., education, health care, homes, (Boucher 2016) and more broadly with regard to prioritisation of specific SDGs. Urban population

was selected as a measure based on two broader findings presented in Chapter 3, namely: 1) urban populations are impacted by climate change differently than are rural population; and 2) internal migration from rural to urban areas has been increasing. Median age was highlighted as a potential indicator for the population's engagement with issues of climate change and migration, as younger populations tend to be more active with regard to climate change and more likely to migrate that older age groups (AOSIS 2019; Clark & Azzopardi 2019; Hugo 2011; UNDESA 2010; UNEP & UNDESA 2013). The final measure, population at last census, was used as a final point of difference between PICTs that otherwise satisfied the contrasting criteria.

For each measure, excepting population structure which separated PICTs by primary type, the PICTs were grouped into the highest three and lowest four to illustrate contrasting patterns (Table 4.2). The subsequent evaluation found that the two PICTs with columnal populations structures, Cook Islands and Niue, both reported, where available, urban population percentages and median ages in the higher grouping and population at last census in the lower grouping. Tonga was the only PICT that differed from these in every measure.

Table 4.2: Selected population characteristics of PICTs which meet similarity criteria (contrast groupings in bold)

Pacific island country or territory	Population structure	Urban Population (%)	Median Age	Mid-year population estimate (2018)
Cook Islands	**column**	**74**	**31.3**	15,200
Niue	**column**	n.a.	**36.1**	1,520
Federated States of Micronesia	pyramid	22	**24.0**	**105,300**
Marshall Islands	pyramid	**74**	20.1	**55,500**
Nauru	pyramid	**100**	20.5	11,000
Tonga	pyramid	23	22.9	**100,300**
Tuvalu	pyramid	57	22.9	10,200

Source: Created by the Author; refer SPC 2018.

Applying the second contrasting criterion, international affiliation, yielded similar results, with Cook Islands and Niue both in Free Association with New Zealand and Tonga an independent nation with no such affiliated status (refer Table 4.1). International affiliation was included in the overall criteria as an indicator of the level of support and engagement, particularly with regard to migration, an individual PICT may expect from a developed nation in line with historical and/or colonial influences, as discussed in Chapter 2.

The final selection of Cook Islands over Niue as a comparative case study for Tonga was due to the greater difference of GDP per capita between Cook Islands and Tonga, reported as US$19,183 and US$4,024 respectively; Niue's GDP per capita was US$15,586 (SPC 2018). While this is in part a reflection of Niue's extremely small population, even by PICT standards, it was

selected as an elimination measure due to its relevance with regard to climate change in terms of potential financial adaptive capacity and to migration as a reflection of economic opportunity. Additionally, countries with extremely small populations, such as Niue, have unique economic and development challenges even among small states. Only two other PICTs, Pitcairn and Tokalau, have smaller populations (49 and 1,400 respectively) and both are territories of larger, developed countries. As such, any broader conclusions drawn from a case study of Niue arguably may have limited utility in the broader context of this research. As a result of this process, the selected case study locations are Tonga and Cook Islands.

4.2 Research framework and methods

4.2.1 Conceptual framework

The initial research approach proposed for this project included conducting semi-structured interviews with local executive professionals, project managers, and government representatives working in-country on initiatives related to climate change adaptation and planning, including sustainable development best practice. The intended purpose of these interviews was to ascertain the effectiveness of partnership practices and initiatives that have occurred in Pacific Island countries in an effort to address issues of climate change. However, further investigation into Pacific research methods and the types of projects and partnerships that had already been conducted, or were ongoing at the time the research began, led to the decision to design a research approach that was unobtrusive and could incorporate a broader range of experiences than would have been possible to gain through a limited number of interviews. Additionally, utilising unobtrusive methods provided the opportunity to ensure an equitable and systematic comparison of two selected Pacific Island countries with regard to regional engagement, support, and opportunities. Although subsequent circumstances prevented the full range of intended observations in each selected country to occur, the research design was robust enough to allow for effective analysis and supported conclusions.

4.2.1.1 Pacific research principles

In 2011, the University of Otago released a guide to Pacific research protocols that outlined the role of Pacific research and suggested practices for conducting research involving the people and islands of the Pacific. Similar documents and guidelines were compiled and released by the University of the South Pacific with a view toward ensuring Pacific participation and engagement in research relevant to Pacific Islands and Pacific peoples. Further investigation into Pacific research principles yielded additional documents from New Zealand-based universities, the Research for Development Impact Network (a collaboration between the Australian Council for International Development and Australian universities) and a variety of writings by Pacific academics addressing location-specific approaches to Pacific research. Together, these documents informed the Author's understanding of Pacific research principles and their application to this research.

One widely known and frequently referenced type of Pacific research is that of *talanoa,* which is the process of sharing ideas and experiences through conversation, discussion, and/or storytelling. The form such engagement takes however, can vary depending on the people involved, the topic, the culture, and the location. Tongan researcher Timote M. Vaioleti describes *talanoa* simply as 'a personal encounter where people story their issues, their realities and aspirations' (2006, p. 23). Other studies indicate that 'informal, genuine conversations – either semi-structured or unstructured – are the preferred research methods used in [many parts of the pacific]' (RDI 2018, p. 31).

The Pacific preference for this type of engagement supported the inclusion of in-country fieldwork into the research design despite indications of its diminishing practice in the social sciences (Bedford 2011, p. 126). Further supporting its inclusion, and the observational component thereof, was the argument that 'source material for Pacific research will usually be derived from Pacific peoples *and their environment*, and from *within Pacific realities*, whether these be in the past, the present or the future' (University of Otago 2011, p. 9; emphasis added by the Author).

Beyond the inclusion of in-country observation and engagement, it was important that the research design reflect Pacific research principles more broadly. Figure 4.1 identifies a number of indicators of Pacific relevance, partnership, and governance that were utilised to ensure that a broad representation of Pacific research principles was integrated into the research at various stages. The highlighted indicators are those included in the overall research design. Some unhighlighted indicators, such as those relating to Pacific participants and Pacific dissemination, were anticipated, however due to circumstantial constraints (see Section 4.2.3) were not realised.

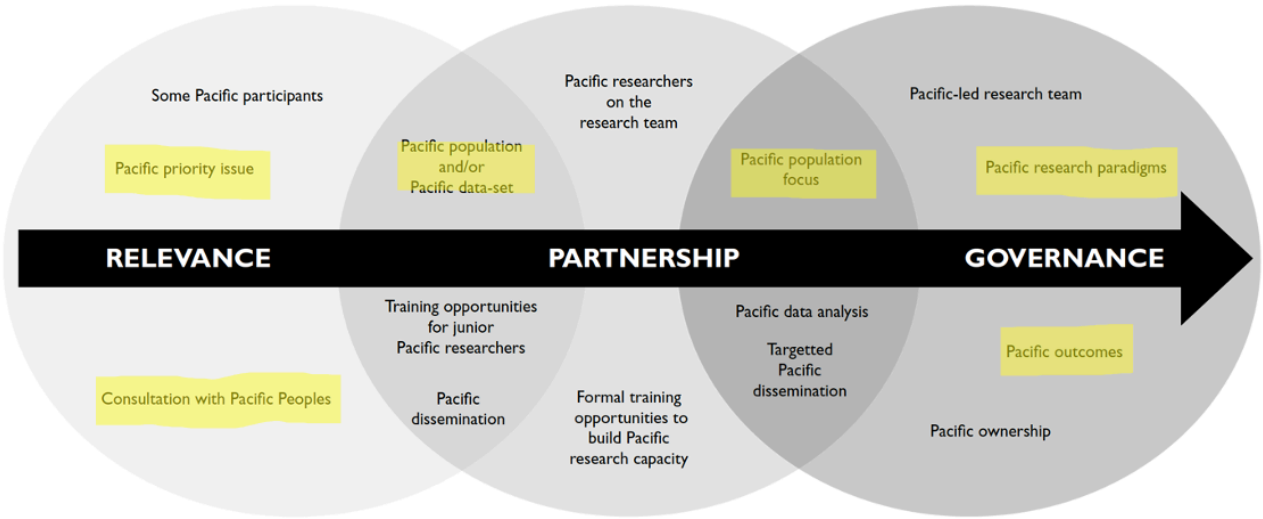

Figure 4.1: Indicators of Pacific relevance, Pacific partnership and Pacific governance
Source: University of Otago 2011, p. 10; adapted from *The Health Research Council of New Zealand, Guidelines on Pacific Health Research, May 2005;* highlights by the Author
Reproduced with permission, noting adaptations

With regard to relevance indicators, Chapter 3 details how climate change, migration, and the SDGs are not only global priority issues, but also Pacific ones. Consultation with Pacific peoples was designed to take the form of in-country engagement, informal conversation, and, where possible, semi-structured interviews. When available, data were sourced from the relevant Tongan or Cook Island government departments or ministries and from the Pacific Community in order to ensure the focus on Pacific populations and the use of Pacific data sets. Further, in an effort to 'be responsive to changing Pacific contexts, whether social or environmental' (University of Otago 2011, p. 9), this research intentionally centres the experience and situation of the islands themselves and attempts to present the perspective of those nations rather than that of more dominant regional voices.

Due to their small size, economic constraints, and historically limited research capacity, most PICTs have not had the capacity to undertake and/or publish a significant amount of data and research on the topics of migration and climate change without external assistance. Historically and currently, such assistance has come from international organisations, both governmental and non-governmental. Consequently, there is significant reliance within this research on data and reports from international bodies that have funded, advised, collaborated, or otherwise participated in Pacific research that directly engages Pacific Island countries and people, to include the United Nations, United Nations Universities, International Migration Organization, International Labor Organization, Intergovernmental Panel on Climate Change, Asian Development Bank, and World Bank Group.

4.2.1.2 Unobtrusive research

Examining Pacific research principles and considering how they would be integrated into the overall research design led to the adoption of unobtrusive research practices as an integral aspect of this research. Unobtrusive research can take many forms, including library and archival work, analysis of photography, film, and music, observation of a particular environment, including objects, settings, and traces, and non-participant observation (Kellehear 1993). Vaioleti (2006) has argued that Pacific peoples can find western approaches to research, such as surveys or structured question-and-answer formats, 'boring' and of little use, and that their inclusion as participants has been at times 'wasted effort' (p. 22). In contrast to this, unobtrusive methods are considered non-disruptive and non-reactive. Further, given the lack of concrete assurance with regard to the appropriate type of dialogue or approach in Tonga and Cook Islands, unobtrusive methods allowed the opportunity for investigation into the culturally appropriate and preferred method of engagement without unduly imposing assumed understanding on the potential participants and research as a whole. Other notable advantages of using unobtrusive methods include safety, repeatability, easy accessibility, and the provision of longitudinal data (Kellehear 1993).

Re-examining the preliminary suppositions and objectives of this research through the lens of both Pacific research principles and unobtrusive research methods led to a closer evaluation of what information might already be available that would reflect Pacific views and experiences. As discussed in the previous two Chapters, the issues of climate change, migration, and the SDGs were of already of great significance to PICTs. Multiple projects and initiatives were already underway, many funded by institutions or governments that required reporting, updates and thorough documentation. Many of these reports were based on, and at times included, Pacific input received as part of consultations, interviews, systematic reviews, literature reviews, and in-country participation. There were also public forums, interviews, and conferences, many recorded and digitised, that were accessed and utilised to answer the research questions outlined above.

Given that unobtrusive research practices consider the merit of analysing existing sources, conducting a period of observation, and undertaking desk-based research, and in so doing can uncover 'rewarding social insights, contribute to policy formulation . . . and generate fertile theories or hypotheses for further testing or debate' (Kellehear 1993, p. viii), incorporating this approach into the overall research design was attractive for a number of reasons, among them:

- It was not overly reliant on gaining access to specific individuals and 'relevant' stakeholders;
- It was readily reproducible and findable;
- It utilised data and information that was available and accessible, a point that is particularly salient given that:
    - broader access to information, findings, and data is imperative in developing policies that are effective and engage the broader population;
    - open access to information is key within all of the SDGs and is one of the consistent themes that links them together; and
    - utilising information in this way allowed the research to present the potential impact of broader access to information to develop a new understanding of how three very complex issues intersect, thus supporting any information-based solutions or recommendations that might arise;

Framing the research in this way enabled it to sit at the intersection of Pacific research principles and unobtrusive research methods. The former, which fundamentally involves engaging Pacific people, ensured that any 'benefit' reflected Pacific views, allowing their voices and experiences to be at the forefront, while the latter actively and intentionally sought to utilise 'written and audio-visual records, material culture, simple observation, and hardware techniques (camera, video, etc.)' as significant data sources (Kellehear 1993, pg. 5).

To ensure a level of consistency across the case study locations with regard to in-country observations and engagement, documentation templates were developed that together formed a

consolidated field report for each case study location. Included in the consolidated report are a daily activity trip report, field report, physical observation report, and a conversation summary report. The content and value of each of the documents is detailed further in Chapter 5 within the relevant case study findings.

4.2.2 Mixed methods and data sources

The necessity of analysing significant amount of quantitative data related to population characteristics, migration practice, and economic profile in combination with the qualitative aspects of the research described above indicated that a mixed methods approach was necessary. The study of migration in particular lends itself toward the use of mixed methods in that it can provide a fuller and more accurate context for the quantitative information as well as stronger indications of future impacts and population movements. A similar argument can be made with regard to climate change and the intersection of scientific data and impacts on populations and communities.

The use of mixed methods can be challenging, due in part to its flexibility at the various stages of design (Maxwell 2013; Robson 2002). However, it was precisely this flexibility that was needed in order to sufficiently examine the complexities of climate change and migration, the relationship between them, and their intersections with the SDGs in the Pacific. Further, mixed methods are crucial if one of the desired outcomes is 'future-proofing' or long-term planning, both of which are reflected in the stated objectives for this research. Another advantage of a mixed methods approach was that it added a robustness to the overall dataset that could potentially address any statistical data gaps and/or inconsistencies, which is a recognised challenge with regard to Pacific research. This issue and its impacts on this research are discussed in greater detail in Chapter 5.

While there are a number of typologies and designs for mixed methods (see Creswell et al 2003; Creswell 2013; Creswell & Plano Clark 2017; Leech & Onwugbusie 2009; Teddlie & Tashakori 2003), for consistency Creswell's process of convergent parallel design (Figure 4.2) was used as the methods structure for each case study, followed by an additional discussion of convergence/divergence focused on the results and interpretations from both.

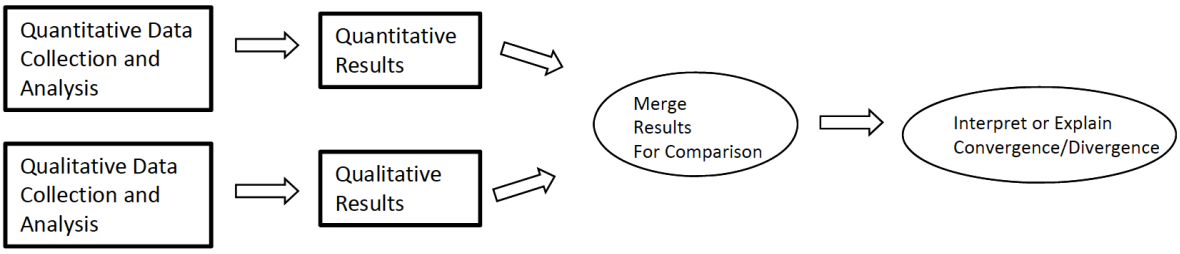

Figure 4.2: Convergent parallel design diagram
Source: Creswell 2013, p. 40
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The quantitative portion of this research utilised secondary data sourced from existing databases and knowledge portals. These data comprised migration patterns and trends, demographic and population statistics, aid distribution, soft support mechanisms, economic costs associated with climate change, and remittance levels. Statistical data was accessed via the Australian Bureau of Statistics, Statistics New Zealand, Pacific Community (SPC) Statistics for Development Division, United Nations Statistical Commission, and World Bank Group as well as relevant government and intergovernmental reports.

Various knowledge portals provided a combination of quantitative and qualitative data. Selection of relevant knowledge portals was based on two factors: 1) direct relevance to one or more of the intersecting priorities of climate change, migration, and the SDGs; and 2) inclusion of at least one case study location. Knowledge portals were also evaluated based on their primary data sources, stated methodology, purpose, and accessibility.

In addition to the qualitative sources outlined above in the context of developing a conceptual framework, policy documents, public statements by official government representatives, and project reports for government sanctioned projects all formed part of the desk-based research and subsequent analysis. As many of the projects were funded by the United Nations, the Asian Development Bank, or the World Bank Group, relevant reports and releases of these organisations were also reviewed. National and international strategy and development reports were consulted with a view toward establishing current and recent trends in addressing issues and challenges specific to the area.

Some information, such as how much progress relevant individual countries have made toward achieving the SDGs (Section 4.1.1, Box 1, Global Priority 3), was not available due to the specific pre-determined reporting periods and review timelines for the various SDGs. Where possible, annual reports submitted by relevant governments and UN level reviews were used as progress indicators.

4.2.3 Circumstantial constraints

As discussed previously, one aspect of the research design involved consultation with Pacific peoples in the form of in-country engagement, informal conversation, and, where possible, semi-structured interviews. As a result of the global restrictions enacted due to the COVID-19 pandemic, although the in-country engagement aspect of the data collection had commenced, it could not be completed as originally intended. The potential for online or telephonic engagement was further complicated by Cyclone Harold, a category 5 tropical storm, which hit the Pacific 2-9 April 2020. Tonga was among the PICTs hardest hit and suffered significant infrastructure damage, including nine schools, coastal structures and wharfs, and downed telecommunications systems, creating a further state of emergency. The focus in the Pacific, rightly, was on disaster recovery and COVID-19.

As a result of these unanticipated circumstances, it was necessary to review the objectives of the research, the research design, and the selection criteria to ensure the project was sufficient without the full observational and potential interview component. It was at this point that the secondary selection criteria related to vulnerability to climate change and practice of migration was reviewed and updated with data released in the intervening timeframe. This process confirmed the selection of Cook Islands and Tonga as appropriate case study locations and suggested additional avenues of inquiry that could add to the robustness of the research.

The most obvious impact of COVID-19 on this research was the inability to complete the fieldwork in Tonga and Cook Islands, which included physical observation of the landscape, infrastructure, and adaptation measures as well as engagement with the local population. While some physical observation and informal engagement occurred in Tonga prior to the border closures, travel to Cook Islands was necessarily cancelled. Similarly, ongoing lockdowns, the impact of Cyclone Harold, and expensive and unreliable communications technology forced a deeper examination of how to ensure that the views of the Pacific peoples were represented in line with Pacific research principles despite an inability to be 'present'. While Pacific views were reflected in grey literature, project reports, annual reports, and funding proposals, these documents by their very nature are written to reflect or address a specific purpose, i.e., funding acquittal or project closure, and may not sufficiently include the views of the impacted communities. As such, there was concern that they would not adequately incorporate or reflect the Pacific research principles discussed previously and on which the structure of this research's methods and methodology was based.

In an effort to partially address this challenge, the potential semi-structured interviews were replaced with existing survey data, deeper analysis of demographic trends and impacts, and relevant studies of community-based adaptation (CBA) and/or community perception. A new set of criteria was established for the inclusion of survey data and CBA and community perception studies, to include an analysis of the methodology and selection/participation parameters to ascertain to what extend they reflected the Pacific research principles, particularly those around inclusion (gender, youth, disenfranchised) and open dialogue. Many of the studies thus identified were supported by international organisations, both governmental and non-governmental, with the full participation of Pacific Island governments and/or Pacific Island people. These analyses became part of the overall findings and as such are discussed in further detail in the relevant sections of Chapter 5.

As a result of these changes, the initial objectives as set forth above (Section 4.1.1) were refined as follows:

Table 4.3: Research objective revision – pre & post COVID-19 restrictions

Objective Number	Initial Objectives (pre-COVID)	Revised Objective (post-COVID)
1	Identify recent and/or forthcoming initiatives at the local level related to climate change adaptation and planning, including sustainable development best practice	Identify initiatives at the local level related to climate change adaptation and planning, including sustainable development best practice and consideration for traditional knowledge.
2	Identify and evaluate emerging trends in new forms of stakeholder engagement, both local and international, on climate change related initiatives within the region, including social movements, migration impacts and online actions	Identify and evaluate emerging trends in new forms of engagement on climate change and migration related initiatives within the region, including relevant regionally focused initiatives of Australia and New Zealand.
3	Illustrate how local and regional networks, relationships, and practices can be utilised to create enabling environments and knowledge communities for effective climate change planning in the region.	Illustrate how local and regional networks, relationships, and practices can be utilised to create enabling environments and knowledge communities for effective climate change planning in the region, including the role of Pacific diaspora and migrants.
4	Explain how the policies and practices of key governmental and regional bodies can best aid and integrate into local efforts to plan for and mitigate the effects of climate change	Consider the role of relevant established, high-level partnership structures currently in place within the region in addressing the interrelated issues of climate change, migration and the achievement of the Sustainable Development Goals.
5	Compare stakeholder views on the role that partnership structures, including microlateral and minilateral initiatives, can play in increasing the capacity to adapt to the impact of climate change and achieving the Sustainable Development Goals	Evaluate the role that partnership structures, including microlateral and minilateral initiatives, can play in increasing the capacity to adapt to the impact of climate change and achieving the Sustainable Development Goals.

Source: Author

One final note with regard to the impact of the COVID-19 situation is a reflection on its correlation to all three of the intersecting issues being examined in this research. With regard to climate change, COVID-19 has increased awareness not only of the dangers and risks regarding ecosystem decline but also of what it may be possible to do to mitigate it. Added to that is what appears to be a larger social and political will to act with regard to climate change - a motivation that the SDGs, for all their publicity, has not done. The COVID-19 situation has also highlighted issues of migration through the sudden limits to travel and the associated impact on Pacific economies, particularly those of Tonga and Cook Islands. Lastly, the SDGs, which now seem both less achievable in some areas as the world struggles to recover from the pandemic and more achievable as there begins to be a broader understanding that what is set out in the 2030 Agenda may be the necessary roadmap to recovery and a sustainable global future.

4.3 Conclusion

As presented in the illustrative diagram (Figure 3.6) at the conclusion of Chapter 3, this research examines the space in which climate change, migration and the Sustainable Development Goals (SDGs) intersect in the context of the Blue Pacific Continent. Limiting the scope to two case study locations allowed for appropriate depth of research and provided an opportunity to examine how these issues are manifesting and intersecting in particular contexts. The selection of two PICTs was accomplished by identifying five relevant criteria for inclusion that would also provide the foundational topics for a detailed and in-depth analysis of each case study location.

The research utilises a mixed method approach with a convergent parallel design comprising three aspects: 1) secondary data analysis including regional monetary aid distribution, soft support mechanisms, internal and external migration trends, financial capacities of aid, financial remittance levels, in-country resource capacity and the economic costs of the impacts of climate change; 2) evaluation of government policies and partnership agreements related to climate change, migration, and Pacific regional engagement; and 3) a substantial narrative review and analysis of scientific literature, grey literature, and international report and project findings relevant to the topic. The analysis of these aspects was synthesized for each case study location to form an assessment of how climate change, migration, and the SDGs are manifesting in specific contexts. The subsequent comparison of these assessments informed a discussion of how new forms of regional engagement can be utilised to increase the capacity of South Pacific SIDS to effectively plan for and manage the impacts of climate change in line with the stated objectives of the SDGs. Figure 4.3 below provides a visual representation of the research design outlined in this chapter and demonstrates how each aspect informs and connects to the others.

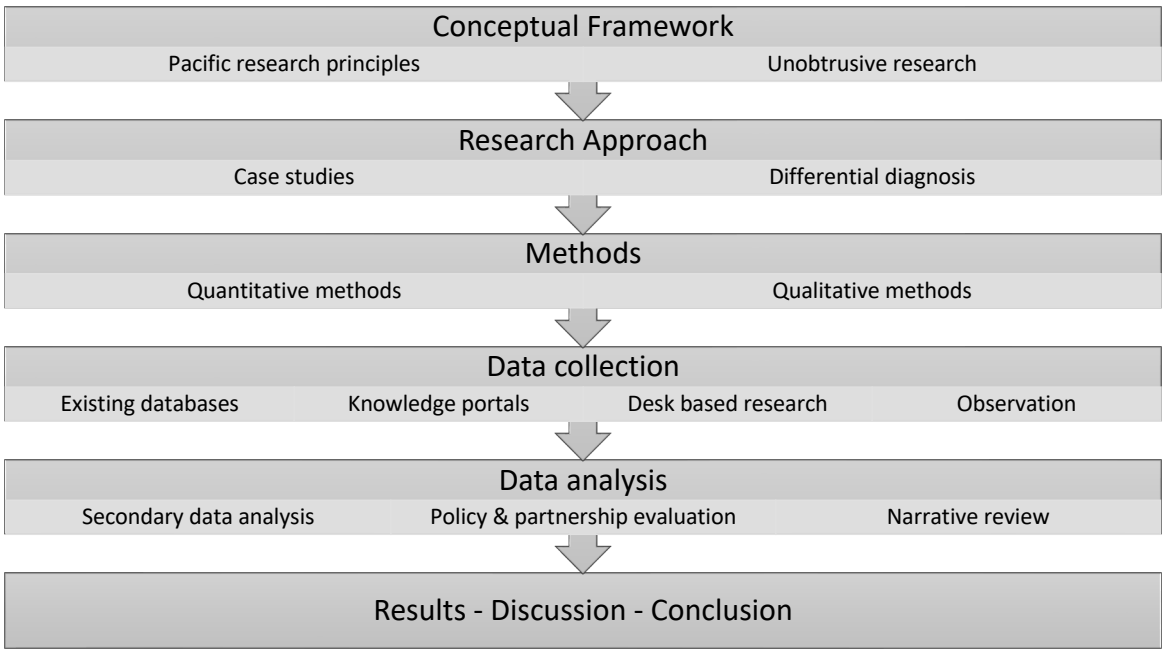


Figure 4.3: Research design diagram
Source: Author; presentation structure adapted from Robinson 2018

CHAPTER 5 EXAMINING SPECIFIC CONTEXTS: TWO CASE STUDIES

This chapter presents two case studies, one of the Kingdom of Tonga and the other of the Cook Islands. It examines the issues of climate change and migration for each country and identifies the specific challenges that occur when the two issues intersect in the local context. It also highlights the relevant Sustainable Development Goals each country has prioritised over the last five years as well as others that may have particular relevance in light of this research. As such, this chapter substantially addresses Objectives of this research (1, 2, and 4) by identifying relevant local-level initiatives and emerging engagement trends as well as examining partnerships and collaborations that are addressing issues of climate change, migration, and sustainable development. It also contributes to Objective 5 by presenting examples of partnerships, collaborations, and other forms of cooperative engagement, which in turn inform a discussion of the roles and forms of partnership structures in Chapter 6.

5.1 Introduction

The diagram presented at the end of Chapter 3 as Figure 3.4 illustrated how climate change, migration, and the Sustainable Development Goals (SDGs) overlap in the broader Pacific context and identified the intersection of the three as representing the nexus in which the case studies of this research would sit. As discussed in Chapter 4, the selection of the Kingdom of Tonga (Tonga) and the Cook Islands as the case study locations was based on similarity with regard to level of vulnerability to sea level rise, practice of migration, and independent sovereignty status in combination with contrasting population characteristics and structural international affiliation. A summary of the criteria measures that led to these identifications is presented at Table 5.1.

Table 5.1: Criteria measures by case study location

Criteria measures	Cook Islands	Tonga
Similarity measures		
Susceptibility to sea level rise	Severe	Severe
Crude net migration rate (%)	-7.30	-18.70
National status	Independent	Independent
Contrasting measures		
Population structure	Column (even age distribution)	Pyramid (larger youth cohorts)
Urban population (%)	74	23
Median age	31.3	22.9
Mid-year population (est. 2018)	15,200	100,300
International affiliation	Free association – NZ	None
GDP per capita	19,183 (USD)	4,024 (USD)

Source: created by the Author; refer SPC 2018

The relevance of these measures, their connection to other related factors, and the impact they have on the issues of climate change, migration, and the SDGs in the local context are examined in more detail as part of each case study.

Within the United Nations Sustainable Development Goals framework, both Tonga and Cook Islands are classified as small island developing States (SIDS) and have been actively involved in a number of initiatives focused on, and for, SIDS, although Cook Islands is not a full UN member, (United Nations n.d.). It is useful therefore, to revisit some of the environmental and socio-economic issues facing SIDS that were reported as part of the 2013 UNEP-UNDESA hosted expert workshop discussed in Chapter 3. These include:

- Recognition of the disproportionate impact of climate change and sea level rise as an ongoing issue undermining water and food security, impacting revenue streams, and causing land loss;
- Climate and environmental change driving population displacement due to loss of land and economic opportunities;
- Risk of losing local, indigenous, and inter-generational knowledge related to disaster preparedness, land use, and construction;
- Concerns that climate change adaptation strategies derived only from external agendas can lack a SIDS-specific focus
- Environmental degradation, climate change and sea level rise have become additional push factors fuelling emigration.
- Prospect of islands becoming uninhabitable and resulting in even greater emigration is increasingly likely.

The enduring nature of such concerns was reflected in 2019 as part of the Global Sustainable Development Report created by a group of independent scientists appointed by the Secretary-General of the United Nations, which stated that in addition to the economic difficulties due to limited resource bases and remote locations, among the most common challenges for SIDS are:

- Climate variability and sea-level rise
- Little resilience to natural hazards
- Quality and quantity of freshwater
- Fragile natural environments (Independent Group of Scientists 2019, p. 14)

The report also highlighted the lack of high-quality, disaggregated data as a difficulty for SIDS, further noting that ‘[e]ven when the data exist, the small size of their populations often makes it difficult to use standard data metrics to track progress on a variety of Sustainable Development Goals indicators’ (p. 14). The issue of available and appropriate data and its implications is discussed throughout the following case studies.

The following analysis of Tonga's and Cook Islands' vulnerability to climate change is based on a review of scientific literature and government reports as well as analysis of sea level monitoring data and reports of increased climatic events in the region. National and international strategy and development reports are consulted with a view toward establishing current trends in addressing issues and challenges specific to the area. Where available, migration data are analysed to ascertain any trends and patterns specific to the respective case study. This includes international migration, labour migration, and internal migration as well as in-migration and visitors. The national sustainable development plans for each case study location are examined to ascertain their respective priorities with regard to the SDGs. These plans and their associated strategies are intended to address each country's respective national circumstances and priorities while recognising that achieving the Goals will require actions across many sectors of society, including government, business, universities and society more broadly (Sachs 2015a). The specific challenges identified for and by individual countries will depend on a number of factors, among them geography, history of the country, state of development and relationship with world markets and regional economies (Sachs 2015a, 2015b). Where relevant, these factors are also examined for each case study location in the context of their impact, or potential impact, on climate change and migration. Voluntary National Reviews (VNRs), which are encouraged in the 2030 Agenda for Sustainable Development, have been completed with the assistance of the Pacific Community (SPC) and are utilised to examine the PICs respective progress toward the SDGs and ascertain any changes in priority and/or challenges that have arisen.

5.2 Case Study 1: Kingdom of Tonga

5.2.1 Economic and demographic overview

The Kingdom of Tonga comprises four island groups, with a total of 169 islands, a land area of 749 km^2 and an exclusive economic zone (EEZ) of 664,853 km^2 (SPC n.d.; World Bank Group 2017). Its population is dispersed across 36 low-lying islands, with 71 percent of the population residing on Tongatapu, the largest of the islands and the home of Tonga's capital, Nuku'alofa (Figure 5.1).

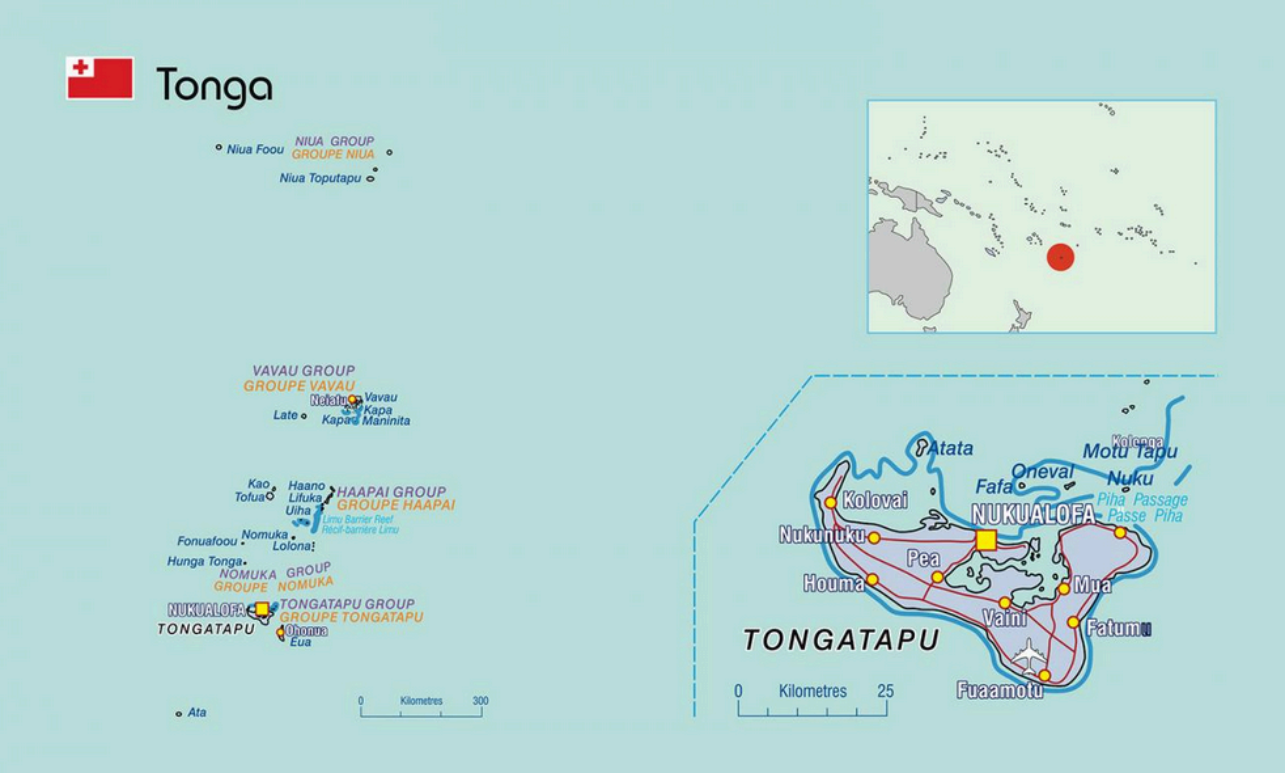


Figure 5.1: Map of Tonga
Source: SPC n.d., Statistics for Development Division, Country Profiles – Tonga
Reproduced with permission under Educational and Research Purposes by SPC

In terms of development, Tonga has a high adult literacy rate (99%), a high gross enrolment rate in primary and secondary school (78%), and high life expectancy (71 years) (World Bank Group n.d.). Alongside this is a population profile that, based on 2016 demographic indicators, includes a crude net migration rate of -18.7%, the lowest in the Pacific, a negative annual growth rate and projections of continuing decline to 2050, a relatively large youth population with a median age of 22.6, and, at 23%, one of lowest urban population percentages in the region (SPC, Prism 2016). Tonga's GDP per capita fluctuated from 2005 to 2015, but has been steadily rising each year since, to a reported US$5,081 for 2019 (Pacific Data Hub). For 2019, Tonga was in the 'high human development category' with a Human Development Index (HDI) value of 0.725 and rank of 104 out of 189 countries (UNDP 2020).

More recent population projections compiled by the Statistics for Development Division and published by the Secretariat of the Pacific Community (SPC) indicate a slightly greater population decline to 2050 from a baseline of the last census in 2016 (Figure 5.2), possibly reflecting an updated, lower total fertility rate of 3.5 and crude net migration rate of -20 (SPC-SDD 2020b).

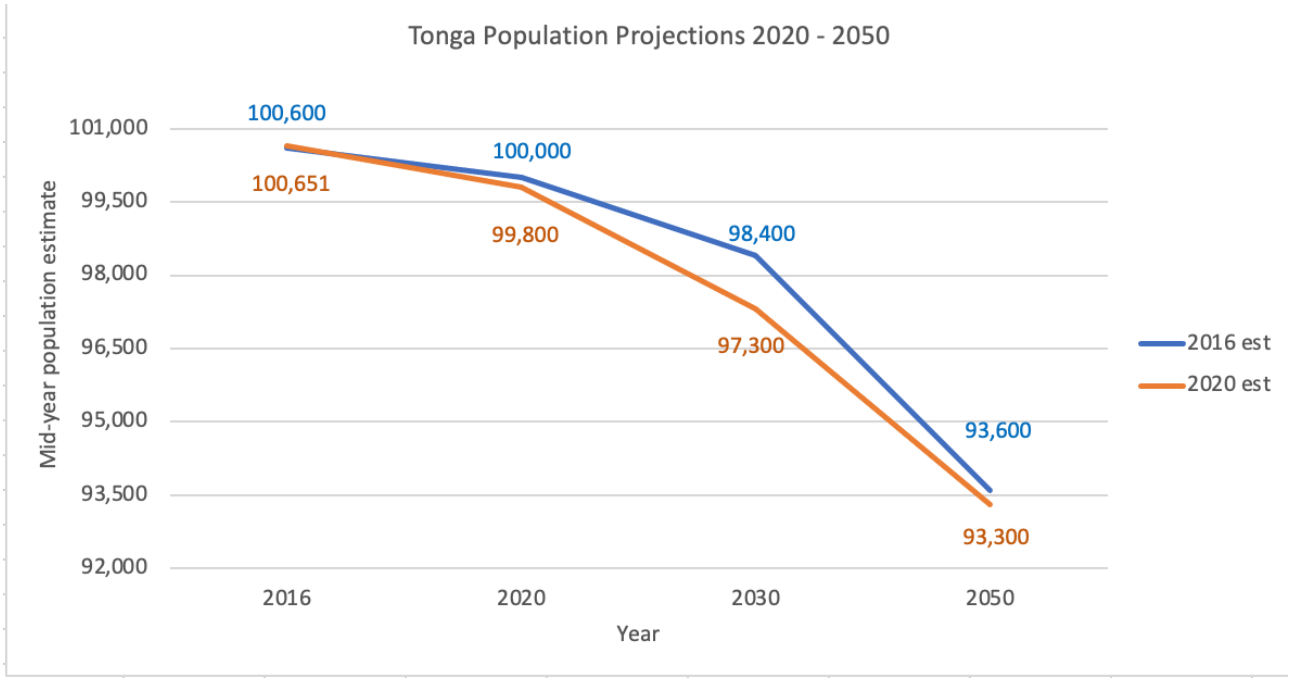


Figure 5.2: Tonga 2016 and 2020 mid-year population projections for 2020, 2030, 2050
Source: created by the Author, data from Pacific Community Statistics for Development Division (SPC-SDD 2020b)

An analysis of Tonga's 2016 Population and Housing Census, focused on the situation of young people found that the total and relative size of Tonga's youth population, defined in Tonga as people aged 15-34[2], is shrinking despite its high fertility rate, with a significant decline in total numbers between the 2011 and 2016 censuses (Tonga Statistics Department 2019).

The combination of high but declining fertility, resulting in children under 14 years of age comprising 35.3% of the population, and young people leaving to study or work overseas is reflected in Figure 5.3, which highlights the decline in population numbers between youth age groupings, particularly for males (SPC-SDD 2016; Tonga Statistics Department 2019).

[2] The international definition of youth is people aged 15-24

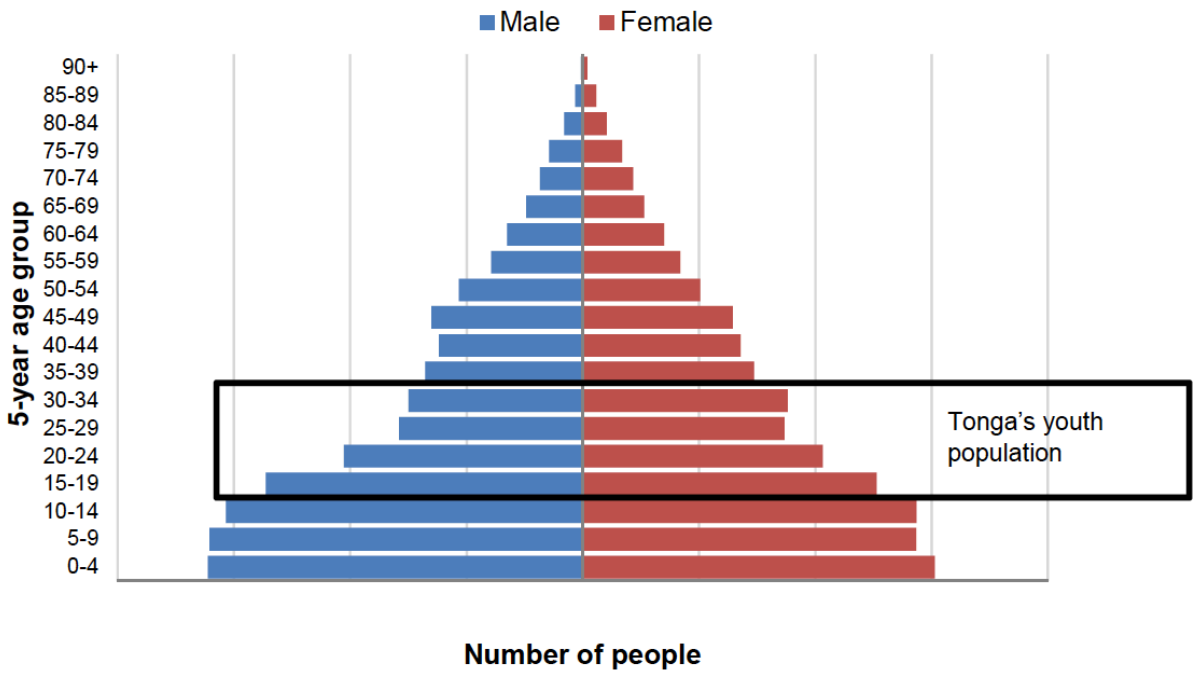


Figure 5.3: Population pyramid for Tonga, 2016 highlighting youth population
Source: Tonga Statistics Department 2019, *Tonga's youth: Analysis of the situation of young people based on the 2016 Population and Housing census,* p. 10.
Reproduced with permission under Monitoring and Evaluation by Tonga Statistics Department

Even with a significant portion of its population overseas, Tonga has been noted as having a very high unemployment rate, particularly among its youth, leading the Tongan Government to put strategies in place to protect its labour market by limiting immigration for work (Bedford, Burson & Bedford 2014; Tonga Statistics Department 2019). Tonga's relatively high proportion of young people 'Not in Employment, Education, or Training' (also known as the youth NEET rate) has been attributed to high rates of subsistence production and unpaid work and is considered an important factor in Tonga's future development. For young women, who are more likely to have domestic and caring responsibilities, the NEET rate is higher: 44.5% as compared to 34.5% of young men. It should be noted that the use of such measures can be problematic for policy makers given debates on the potential benefits of work in the informal sector for youth and the broader economy (see Chen & Carre 2020; Cieslik, Barford & Vira 2021; Malik 1996; Sparks & Barnett 2010).

These labour divisions are also reflected in the broader population. Currently, the labour force participation rate for men in Tonga is above 70%, although it should be noted that this may be inflated due to the inclusion of subsistence workers (Pacific Islands Forum Secretariat 2020). The gender participation index (GPI) for Tonga is very low, at 0.63 (Pacific Islands Forum Secretariat 2020). With regard to women in paid employment, which accounts for 30% of the female population, Tonga is unique in that a majority (59%) are employed in the manufacturing sector; for most PICTs, women are employed in low paid service positions or agriculture (Pacific Islands Forum Secretariat 2020).

This may be due in part to the Tongan economy's reliance on remittances. Although historically dependent on agriculture and fisheries as the primary sources of income, over the last fifty years remittances have become increasingly significant, resulting in an economy reliant on its population's continued labour mobility (Department of Climate Change 2018). Over time, Tonga's declining fertility rate and continued high levels of emigration are projected to change its population structure from the expansive structure of a young and growing population typical of developing countries to a more stationary structure of relatively equal age cohorts that is characteristic of developed nations (see Boucher 2016) (Figure 5.4).

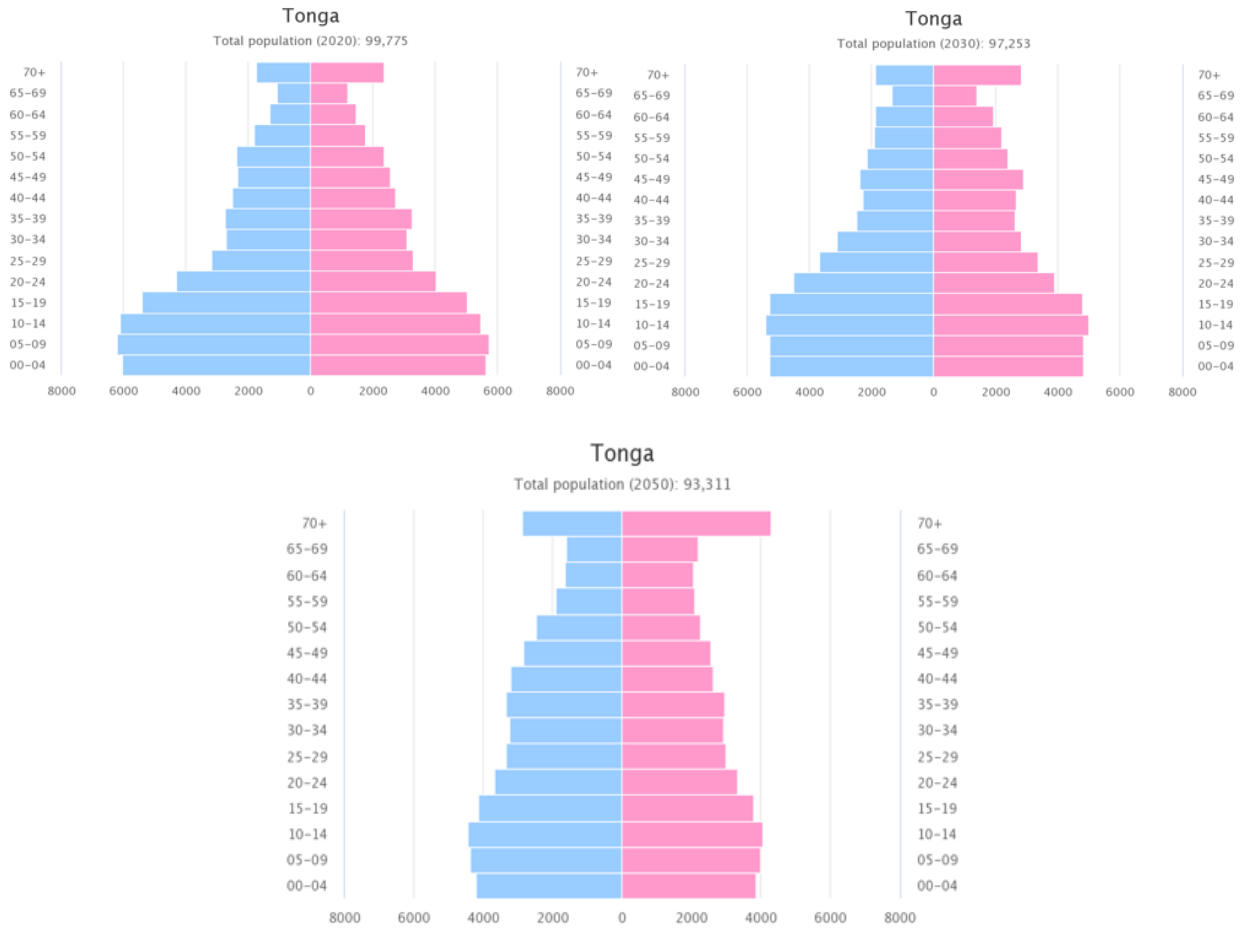


Figure 5.4: Tonga population pyramids 2020, 2030, 2050
Source: SPC n.d, Statistics for Development Division, Country Profiles
Reproduced with permission under Educational and Research Purposes by SPC

This is not to say that traditional sectors have declined in importance due to increasing labour migration. Agriculture remains an integral part of Tonga's economy as well as its culture, contributing 16% to GDP (SPC n.d.c). Tonga has one of the highest subsistence food production rates of countries, with agriculture and fisheries as the primary source of livelihood for the 75% of its population that live in rural areas (SPC n.d.c). Tonga also maintains an agriculture export market that, along with forestry, accounts for 44% of exports (SPC n.d.c.). Similarly, fisheries and marine resources are important aspects of Tonga's economy, culture, and way of life.

Tonga also receives significant official development assistance, foreign direct investment, grants, and loans from overseas governments as well as international funding bodies. In the decade between 2009-2019, the top donors of overseas development aid (ODA) and other official flows (OOF) in the form of grants and loans to Tonga were primarily larger nations in the region (Figure 5.5).

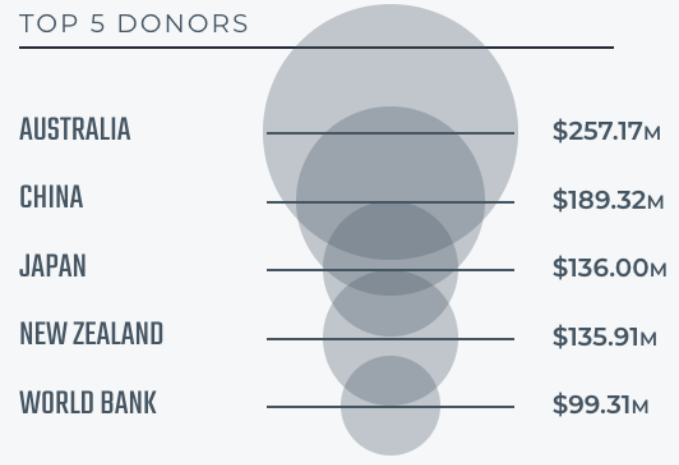


Figure 5.5: Tonga's Top 5 Aid Donors, cumulative ODA and OOF 2009-2019
Source: Lowy Institute 2020, Pacific Aid Map
Reproduced with permission from Lowy Institute

For that same period, more than half of the total aid has been spent in four sectors: transport (16.9%), government and civil society (13.3%), energy (11.4%), and industry, mining, and construction (9.4%), with an additional 13.8% spent on multisector or cross-cutting initiatives; less than five percent of aid funding was spent on each of the three sectors of water and sanitation; communication; and agriculture, forestry, and fishing (Lowy Institute 2020). While Australia has committed the most in terms of overall funds, ranging from an annual high of US $42.5M in 2012 to a low of US $11.11M in 2011, the top three projects have been funded by China (Figure 5.6) (Lowy Institute 2020).

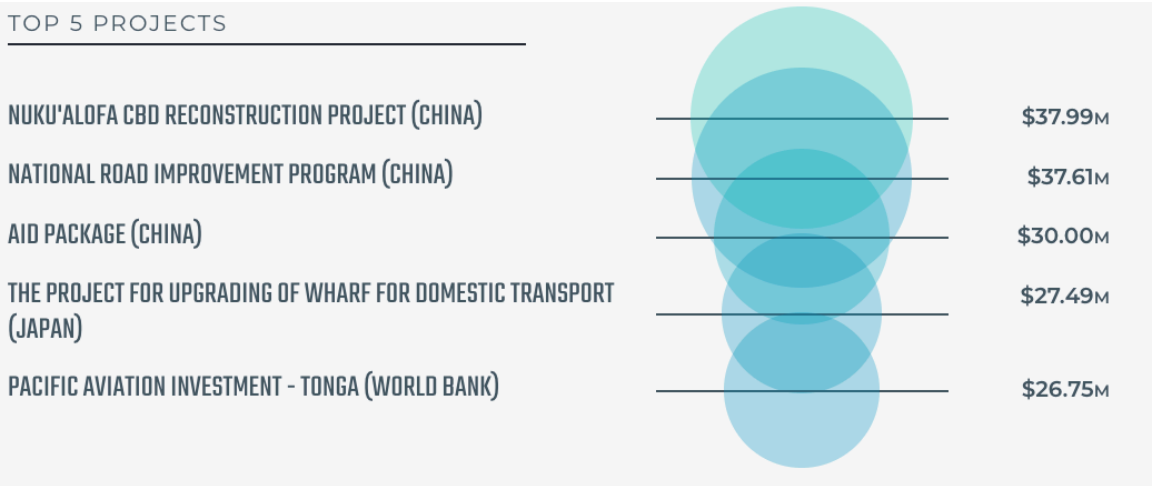


Figure 5.6: Tonga's Top 5 ODA and OOF Projects, cumulative 2009-2019
Source: Lowy Institute 2020, Pacific Aid Map
Reproduced with permission from Lowy Institute

It should be noted that during this time period, as of 2017, Tonga, along with Samoa, was able to access grant-only financing from multilateral institutions due to a re-assessment that determined they were at high risk of debt distress due to their vulnerability to disaster risk (Webb & Tinio 2021). As a result, from 2018-2020 the Asian Development Bank and the World Bank Group approved project funding totalling $137.4 million and $130.1 million, respectively, allowing Tonga to reduce its debt while making significant progress toward improving infrastructure, strengthening resilience to climate change, supporting skills and employment, and providing renewable energy, among other initiatives (Webb & Tinio 2021).

With Tonga's level of public sector debt steadily decreasing, from 42.2% of GDP in 2014 to 33.6% in 2018, there are indications that there may be some scope to borrow additional funds to finance emergency operations should it be necessary (SPC-SDD 2020a). That said, special circumstances will also elicit regional aid, with additional funding sources activated in the event of natural disasters. Such was the case in 2018 when the Pacific Catastrophe Risk Insurance Company (PCRIC) and the Disaster Relief Program (DRP) provided US$3.75 million and US$7 million, respectively, to Tonga following Tropical Cyclone Gita (Pacific Islands Forum Secretariat 2020).

5.2.2 Climate change in Tonga

Tonga's economy is highly dependent on climate sensitive sectors such agriculture, fisheries and tourism and has a limited resource base that is sensitive to external shocks (Department of Climate Change 2018). Based on its physical characteristics alone (rock-type, shape, maximum elevation, and area) an analysis of Tonga's susceptibility to climate change determined that 46% of the 124 Tongan islands measured had 'high' or 'very high' indicative susceptibility (Kumar et al 2018). Add to this its geographical isolation and socio-economic characteristics, and the multiple effects of climate change pose significant threats to Tonga's food production and land and marine resources, as well as negatively impacting infrastructure, water resources, and human health.

This increasing vulnerability is broadly recognised and is reflected in the consistent ranking of Tonga as among the countries most at risk with regard to climate change. One such measure, the World Risk Index, and its associated World Risk Report, which has been published each year since 2011, calculates risk based on four factors: exposure, susceptibility, coping, and adaptation (Figure 5.7).

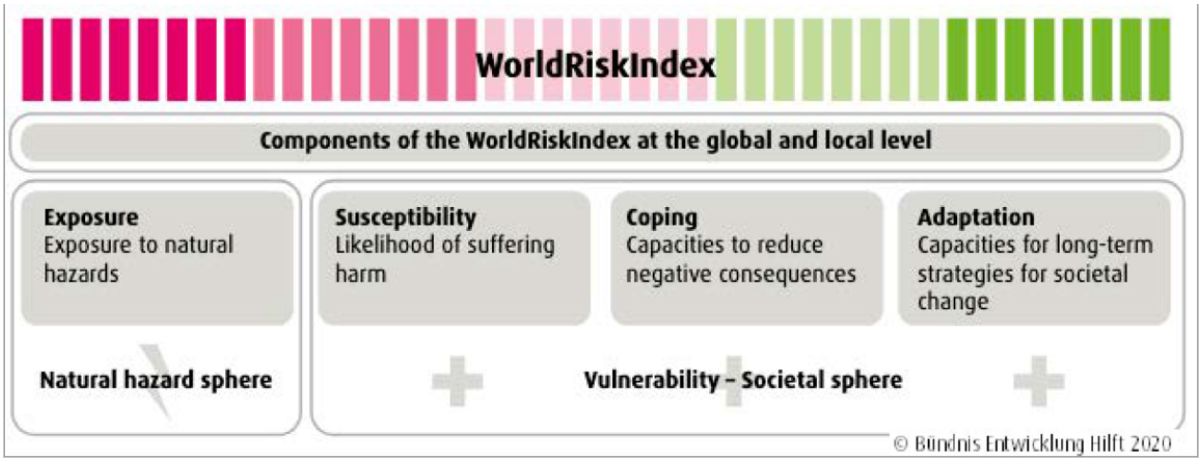
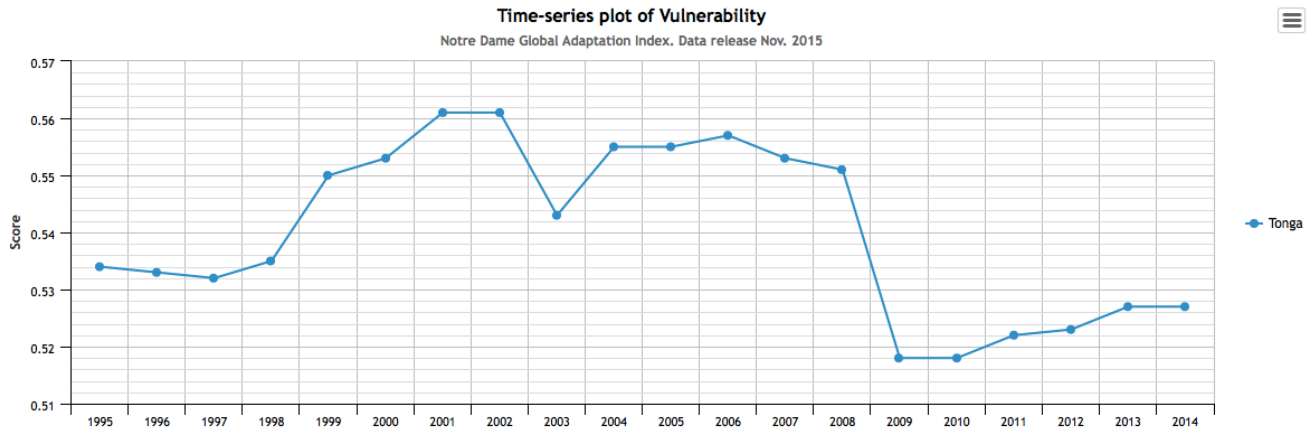


Figure 5.7: Calculated components of the World Risk Index
Source: Behlert et al 2020, World Risk Report 2020, p. 70
Reproduced with permission from Bündnis Entwicklung Hilft

For 2020, Tonga was considered to be at 'very high' risk overall, ranking 2nd globally, and in terms of exposure, in which it ranked 4th (Behlert et al 2020). Tonga's vulnerability, susceptibility, and lack of adaptive capacities were deemed 'high', while its lack of coping capacities was 'medium'. This is a shift from 2016, when Tonga ranked 2nd ('very high') for both overall risk and exposure, but with susceptibility at 'medium' and lack of coping capacities 'high' (Comes et al 2016).

The potential causes for these shifts can be examined through the longitudinal data provided by the Notre Dame Global Adaptation Initiative (ND-GAIN), which enables its users to gauge the vulnerability and readiness of countries and cities based on environmental, economic, and social sector information. Its Country Index, used below, provides rankings for 181 countries as well as the twenty years of underlying data across 45 indicators (see ND-GAIN Methodological indicators and technical documents). Using these measures, Tonga has a high vulnerability score and a high readiness score and is considered to be 'on the road to responding effectively to climate change, but [its] adaptation needs and urgency to act are greater' (ND-GAIN Country Profile – Tonga).

Tonga's vulnerability score, which measures a country's exposure, sensitivity, and ability to adapt to the negative impact of climate change, has fluctuated over time but has been gradually and steadily increasing since 2009 (Figure 5.7). Its readiness score, which reflects aspects of a country's economy, governance, and society that may impact adaptation, shows a steady increase since 2003, allowing for a small dip between 2005 and 2006 (Figure 5.8).



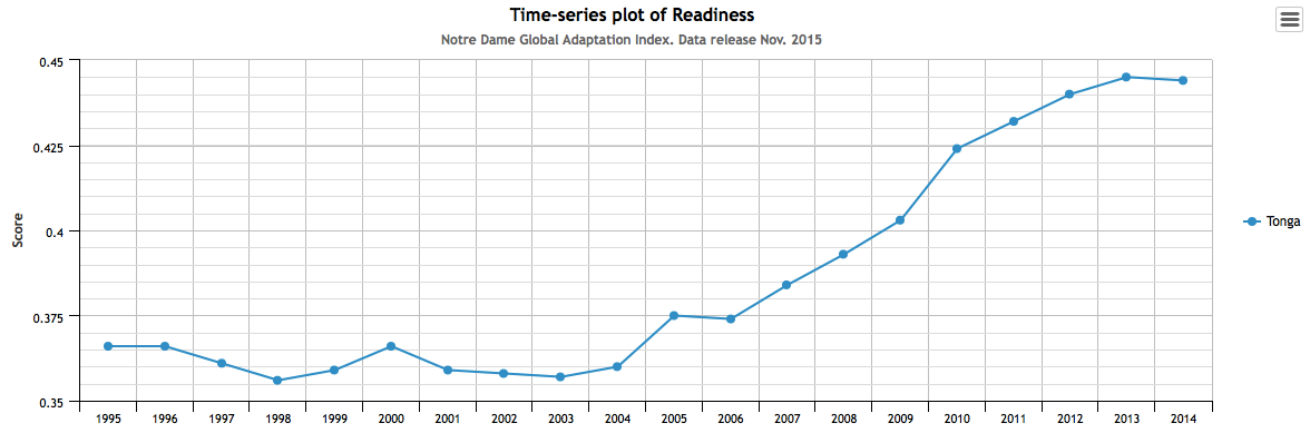


Figure 5.8: Tonga's vulnerability and readiness to adapt to the negative impacts of climate change 1995-2014
Source: ND-GAIN Index analysis and visualization tool
Nb: vertical axis scales differ between graphs; higher scores denote increased vulnerability and increased readiness, respectively.
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The ND-GAIN Index measures six different areas on a scale of 0 to 1 to determine which aspects of the physical and social environment are most vulnerable; the average of these scores is used to calculate the sensitivity aspect of the overall vulnerability score. The areas measured are food, water, health, ecosystems, habitat, and infrastructure. The higher the score, the more vulnerable the area is to the impacts of climate change. Tonga's scores for each area are presented in Figure 5.9, which indicates that the top three areas of vulnerability are food, ecosystems, and infrastructure.

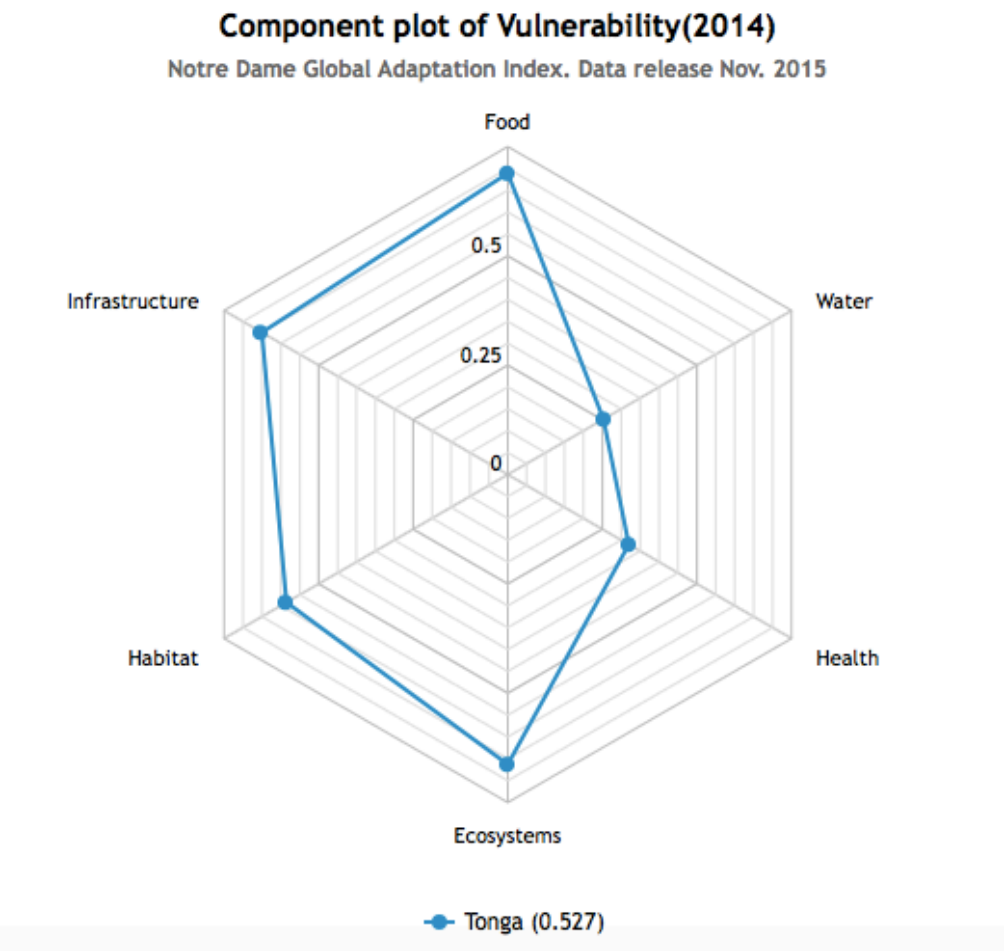

Figure 5.9: Components of Tonga's vulnerability 2014
Source: ND-GAIN Index analysis and visualization tool
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A similar calculation is used to determine the exposure aspect of the overall vulnerability score, but with twice as many components. Figure 5.10 shows Tonga's score for each of the twelve exposure components, indicating that Tonga's highest exposure to the impacts of climate change is due to the projected change of sea level rise impacts, followed by marine biodiversity, cereal yields, and annual groundwater recharge.

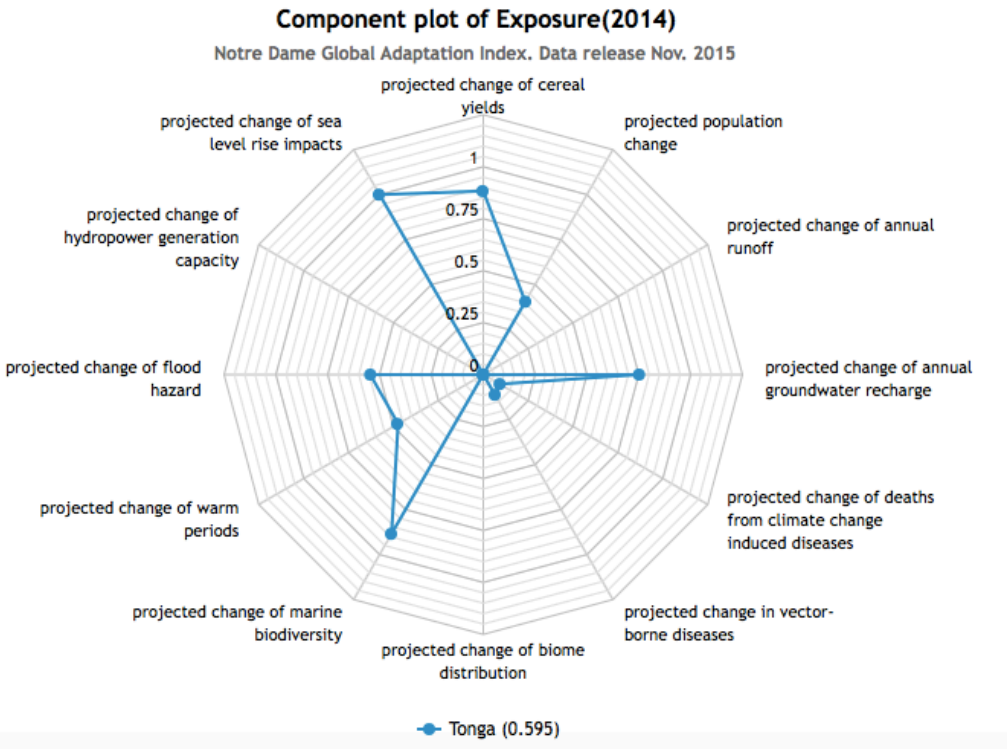

Figure 5.10: Exposure risk assessment for Tonga 2014
Source: ND-GAIN Index analysis and visualization tool
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Despite its high fertility rate, projected population change is not among the top exposure considerations for Tonga. This may be due in part to the relative stability of its population due to migration.

5.2.2.1 Key climate change impacts

The vulnerability and exposure points identified by ND-GAIN coincide with a number of other external assessments of Tonga's position in relation to the impacts of climate change. Its combined susceptibility to natural hazards, tropical cyclones, extreme rainfall events, storm surge, coastal erosion, heat waves, drought, ocean acidification, and sea level rise result in a particular vulnerability that can, and does, manifest in a number of ways (DFAT 2018; World Bank Group Climate Change Knowledge Portal). This intersection of climate factors and impacts was the focus of Tonga's Department of Climate Change which, in 2018, presented a summary of climate change and disaster risk projections for Tonga as part of its *Joint National Action Plan 2 on Climate Change and Disaster Risk Management*. Although the Action Plan addresses the decade between 2018 and 2028, it can be presumed that many of the projections may have longer term impacts. In addition to highlighting the type of event or factor and its associated trend, it also identified the sector(s) that would be impacted and what that impact was likely to be. The factors for which there is a known trend and their anticipated impacts are presented at Table 5.2.

Table 5.2: Projected climate change and disaster risks for Tonga

Climate Factor	Climate and Disaster Events Trend	Impacted Sector	Likely Impact
Tropical Cyclones	Increase in intensity with associated higher storm surge. May decrease in overall number of cyclones.	All sectors	❖ Flood and inundation of low lying areas ❖ Infrastructure losses, all sectors ❖ Power outages ❖ Damage to communication networks ❖ Damage to roads ❖ Transportation disruptions and increased cost of provision and maintenance ❖ Ecosystem/ biodiversity losses, long term and permanent ❖ Water pollution and salt water intrusion into groundwater ❖ Agriculture diversity and productivity losses ❖ Loss of human life or causalities
Temperature	Air and sea surface temperatures increasing	Health Agriculture Fisheries	❖ Heat stress on people and ecosystem ❖ Reduced fisheries catches ❖ Coral bleaching ❖ Loss of habitat ❖ Soil properties damage
Rainfall	Decrease in dry season rainfall (May- October) and increase in wet season rainfall (November- April) consistent with intensification of the South Pacific Convergence Zone (SPCZ)	Agriculture Health Import/Export Sector Infrastructure Transportation and Communication	❖ Drier in dry seasons (drought) impacting on agriculture and forestry ❖ Wetter in the wet seasons causing flood damage, and increasing mosquito breeding areas thus increases of dengue fever cases ❖ Damage to infrastructures including roads and communication networks ❖ Saltwater intrusion and other associated damages and possible benefits.
Sea level rise	Continue to rise	All sectors	❖ Flood and inundation damage ❖ Saltwater damage ❖ Water Pollution ❖ Coastal erosion ❖ Infrastructure damage ❖ Beach degradation
Ocean Acidification	Continue to Increase	Fisheries Marine Biodiversity	❖ Damage to coral reefs ❖ Reduction of reef fishes ❖ Reduction of shellfish ❖ Combined with other stressors will cause other impacts

Source: Department of Climate Change 2018, JNAP 2, p. 17-18.

For Tongans, the impact of climate change is closely associated with the increased severity of storms and tropical cyclones. With Tonga ranked among the top 10 countries affected by storms in

the Asia-Pacific region when measured by % of population, the damage to livelihoods and life is extensive (Nurse et al 2014). Analysis reported in the annual Global Climate Risk Index released by Germanwatch, which looks at weather-related loss events each year to determine which countries are most impacted by extreme weather events, ranked Tonga 15th for 2018, up from 17th in 2014 (Eckstein et al 2020). While 2014 saw minimal deaths reported, economic losses as measured by purchasing power parity and per unit of gross domestic product were significant at US$12.8 million and 2.9% per unit, respectively (Kreft et al 2016, p. 30). In contrast, 2018 was the year of Cyclone Gita, a Category 5 storm that caused significant damage to Tonga, primarily on Tongatapu and Eua, resulting in higher fatalities than four years previous and an estimated $164 million in damage (Eckstein et al 2020; Webb 2020). Although reconstruction began in 2019, the damage was further exacerbated, and construction delayed, due to Cyclone Sarai in December 2019, Cyclone Tino in January 2020, and Cyclone Harold in April 2020, the last of which resulted in an additional $24.8 million in damages (Webb 2020).

Agricultural production has also been severely impacted by tropical cyclones in the last decade, with the total cost of damage to the agriculture sector increasing with each event. Measured in local currency (TOP), Cyclone Renee in 2011 cost the agriculture sector TOP$19.4 million, Cyclone Ian in 2014 TOP$20.6 million, and Cyclone Gita in 2018 over TOP$300 million (Department of Climate Change 2018). Sector-specific damages from Cyclone Harold in 2020 are still being assessed, a situation complicated by the compounding factors of the COVID-19 pandemic outbreak in the same year.

Along with tropical cyclones, sea level rise is also considered to be a climate factor that will impact all sectors in Tonga, causing flooding, saltwater damage, water pollution, coastal erosion, infrastructure damage, and beach degradation. Based on monthly mean sea level readings of Nuku'alofa's tide gauge, Tonga's Department of Climate Change (2018), utilising IPCC data, reported that, as of December 2015, 'the net sea level trend in Tonga was +7.3mm per year in comparison with the global average sea level rise between 1993 and 2010 of just 3.2mm/year' (p. 4). This has implications not only for the 84% of the population living within 1 kilometre of the low-lying coast (Pacific Data Hub), but for agriculture more broadly.

Both sea level rise and drought are affecting the availability of safe drinking water and negatively impacting the agriculture sector. Severe droughts in 1983, 1998, 2006, and 2015 resulted in drastically reduced crop yields, while sea level rise is estimated to have resulted in the loss of coastal agricultural land situated between 0 and 5 metres above mean sea level, that amounts to around 8% of the total land area of Tonga (Department of Climate Change 2018). Both factors are also contributing to increased salinity of water supplies as saltwater increasingly contaminates groundwater used for drinking and irrigation (Department of Climate Change 2018). Access to reliable drinking water in particular has been steadily declining in Tonga since 2004 (Figure 5.11).

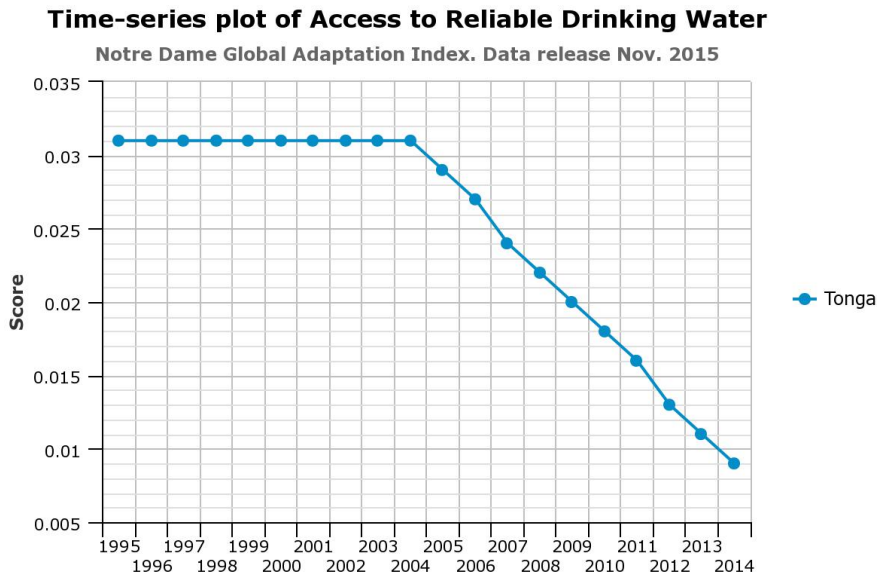

Figure 5.11: Access to reliable drinking water in Tonga, 1995-2014
Source: ND-GAIN Index analysis and visualization tool
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Related to this are evidence and model simulations indicating that El Nino weather patterns may become more frequent, resulting in an increase in drought conditions and in the intensity of tropical cyclones in the Pacific region (World Bank Group 2016a). This confluence of factors has led to the Government of Tonga becoming increasingly concerned that 'climate change will enhance the spread of pests, disease and weeds, placing pressure on crop production' (Department of Climate Change 2018, p. 10).

Also worrying for Tonga is the impact of climate change on fisheries, marine life, and ocean biodiversity. Although global recognition of the importance of the ocean and ocean health is increasing, the factors contributing to its decline, including climate change, are notoriously intractable due in part to the 'global commons' nature of the ocean itself (Hoegh-Guldburg et al 2015). This is despite the high confidence with which the IPCC stated, in 2014, that by mid-century 'global marine species redistribution and marine biodiversity reduction in sensitive regions will challenge the sustained provision of fisheries productivity and other ecosystem services' (p. 13). Such a situation will only exacerbate problems for Tonga, where several fisheries have collapsed, or are near to, as a result of overfishing and no enforcement of limits as well as a lack of conservation strategies (SPC-FAME 2018). Despite this, the fisheries sector is considered to be 'one of the most promising avenues for economic growth' for Tonga, resulting in recent efforts to improve fisheries governance, protect Tongan communities' access, and ensure sustainable use of fish stocks in Tongan waters (World Bank Group 2019b). These efforts will also benefit Tonga's growing tourism sector, estimated at 7.7% of Tonga's annual GDP, to which fisheries, marine biodiversity and coral reefs are critical (World Bank Group 2019b).

Similar to agriculture, marine life is a matter of subsistence, culture, and income in Tonga. Currently, combined agriculture and fish exports make up two-thirds of Tonga's total exports. At the household level, approximately 13% of Tongan households are engaged in fishing, with uses including household consumption and social obligations as well as income production (Table 5.3).

Table 5.3: Tongan household purposes of fishing

Region	Total no. of households	No. fishing	Yes, for home consumption and social obligations	Yes, for sale	Yes, mainly for home consumption but some for sale	Yes, mainly for sale but some for home consumption
Tongatapu	12,953	11,865	647	73	189	179
Vava'u	2,715	2,177	388	16	93	41
Ha'apai	1,179	712	309	39	65	54
'Eua	885	776	60	1	22	26
Ongo Niua	273	174	82	0	13	4
TOTAL	18,005	15,704	1,486	129	382	304
%		87.2%	8.25%	0.7%	2.1%	1.7%

Source: Tonga Statistics Department, 2017:227–231

Source: SPC-FAME 2018, Gender and fisheries in Tonga: Summary of key issues, p. 2
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Given that most fishing is for home consumption or to fulfil traditional obligations, it is worth noting that in Tonga responsibility for these activities lies primarily with women, as does responsibility for most or all post-harvest processing (SPC-FAME 2018). This is important because climate change and disasters have been shown to disproportionally impact women and children in a range of areas, including global statistics indicating that these groups are 14 times more likely to die from natural disasters than men (Department of Climate Change 2018; Kanyoro 2013; Petherick 2013). In Tonga, for example, 70% of those who died in the 2009 tsunami were female (Department of Climate Change 2018). Further, according to Tonga's Department of Climate Change (2018), women make up 42.3% of the formal labour force in Tonga and are 'very active in the informal sector, constituting the majority of entrepreneurs who are managing small and micro enterprises' (p. 7). Tongan women's active contribution to household incomes by way of cash crops sales, utilisation of coastal fisheries, and weaving and handicraft production gives them a 'particular vulnerability' to natural disasters, which impact strongly on agriculture, and climate change impacts that result in the loss of nature-based weaving material (Department of Climate Change 2018). This combination of vulnerabilities is particularly challenging in some of the outer islands, where handicrafts, weaving in particular, make up at least half of household income, a sector reliance that increases as cyclones and drought impact agriculture production (Department of Climate Change 2018).

Recognising the different social, environmental, and economic situations faced by women, the Department of Climate Change has made gender inclusivity a guiding principle of the current *Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management* (JNAP2). In

doing so it intends to consider gender issues 'in all planning and implementation processes' and promote 'a better understanding of the vulnerabilities and capabilities of different gender groups to deal with climate change and disasters' (Department of Climate Change 2018, p. 27).

5.2.2.2 Policy response and regional engagement

Historically, disaster risk management and climate change adaptation policy frameworks have been, and in many cases still are, approached separately, with little coordination between the two. Internationally, the *Hyogo Framework for Action: Building the Resilience of Nations and Communities to Disasters: 2005-2015* is distinct from the *United Nations Framework Convention on Climate Change* while in the Pacific the *Pacific Islands Disaster Risk Reduction and Disaster Management Framework for Action 2005-2015* is separate from the *Pacific Framework for Action on Climate Change.* This division is also present at the community level in the Pacific, resulting in 'a separation of policy, institutional arrangement, financial and technical assistance, methods, and tools' (Hay 2013, p. 3). However, there is an increasing recognition that the impacts of climate change are manifesting, in large part, as disasters in the form of cyclones and droughts. As such, Pacific Island countries have begun taking an integrated approach to disaster risk management and climate change adaptation that is not only effective, but also maximises limited resources and capacity and encourages cooperation among government ministries and departments (Department of Climate Change 2018; Hay 2013).

Tonga was among the first in the Pacific region to take an integrated approach to addressing climate change and natural disasters, developing its *Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management (JNAP 1)* in 2010. JNAP 1 was considered highly successful in attracting donor support for projects aimed at building resilience in response to climate change and natural disasters (Department of Climate Change 2018). Building on this, Tonga began developing a revised climate change policy, which was approved and released in 2016. The Tonga Climate Change Policy aims for 'a resilient Tonga by 2035' while recognising that achieving such a goal will 'involve billions of dollars' even without the consideration of loss and damage (Department of Climate Change 2016, p. 4). The policy intentionally takes a cooperative and inclusive approach to resilience that encompasses adaptation, disaster risk reduction, and mitigation and is 'multi-faceted, cross-sectoral, gender inclusive, equitable, and with a strong emphasis on community ownership' (p. 7).

The Tonga Climate Change Policy also notes key points from the IPCC Fifth Assessment Report considered to be 'of high relevance' to the policy. These include identifying current and future climate-related drivers of risk for small island states (sea level rise, cyclones, increasing temperatures, changing rainfall patterns), recognising sea level rise as a climate change threat to low-lying coastal areas on islands and atolls, confirming the high vulnerability of small islands to multiple climate and non-climate stressors, and noting the increasing recognition of the negative

impact on small islands of transboundary processes. The Policy also included the following 'final point . . . in full because of its cautionary message':

> *The ability of small islands to undertake adaptation and mitigation programs, and their effectiveness, can be substantially strengthened through appropriate assistance from the international community (medium confidence). However, caution is needed to ensure such assistance is not driving the climate change agenda in small islands, as there is risk that critical challenges confronting island governments and communities may not be addressed. Opportunities for effective adaption can be found by, for example, empowering communities and optimizing the benefits of local practices that have proven to be efficacious through time, and working synergistically to progress development agendas. (Department of Climate Change 2016, p. 22)*

The inclusion of such a statement echoes criticisms regarding the expenditure of climate funding on large projects such as sea walls, dams, or irrigation systems that can commit small island countries to inflexible adaptation measures that may not be appropriate or beneficial given the uncertainty of future climate challenges and specific locational needs (Lutz, Muttarak & Striessnig 2014; Steele 2019; UNEP & UNDESA 2013). Tonga has described its future as one that will involve multiple stresses from changing global weather patterns, drought frequency, ocean acidification and sea level rise as well as pre-existing environmental, social, and economic stresses (Department of Climate Change 2016). In terms of cost, natural disasters from both climate and geological hazards are highlighted as a major concern, with the Pacific Catastrophe Risk Assessment and Financing Initiative's Tonga Country Risk Profile concluding that:

> *Tonga is expected to incur, on average, 15.5 million USD per year in losses due to earthquakes and tropical cyclones. In the next 50 years Tonga has a 50 percent change of experiencing a loss exceeding 175 million USD and casualties larger than 440 people, and a 10 percent change of experiencing a loss exceeding 430 million USD and casualties exceeding 1700 people (Department of Climate Change 2016, p. 23).*

In an effort to drive achievement of a 'Resilient Tonga by 2035', the Tonga Climate Change Policy identifies twenty targets that underpin the policy's five-year lifespan and focus. It also recognises the importance of, and the relationship between, the environment, the society, and the economy in achieving resilience for Tonga. As such, the targets are spread across all three areas, comprising eleven environmental targets (green), six social targets (yellow), and three economic targets (tan) (Table 5.4).

Table 5.4: Targets for a Resilient Tonga

1.	Every coastal community has a special management area and protected coastal environment
2.	Redesigned, resilient, roads, coastal areas, buildings, and other infrastructure
3.	Resilient homes, schools, and community halls (i.e. incorporating design for Category 5 cyclones, a minimum of 30,000 litre water storage capacity for homes, solar power and hot water, bio-digesters for biogas production, organic gardens, food preservation)
4.	A transport system that is not reliant on fossil fuels
5.	100 percent renewable energy
6.	Resilient low chemical input or organic farming systems
7.	30 percent of land in Tonga utilised for agro-forestry or forestry
8.	Native biodiversity is fully protected and enhanced
9.	The capacity for food self-sufficiency in times of crisis, and significantly reduced reliance on imported food
10.	Well managed water resources and sufficient water for all in times of shortage
11.	Development and full implementation of a zero waste policy
12.	All families and communities understand climate change and the need for disaster preparedness and have taken action to be resilient
13.	Strengthened parliamentary and institutional capacities working towards achieving resilience targets
14.	Resilience measures are mainstreamed into applicable laws and are integral to all public and private sector policies, plans and development programmes and projects
15.	Resilient agriculture with enhanced crop production and food security
16.	Education for resilience is incorporated into curricula at all levels of primary, secondary and tertiary education
17.	A gender responsive and equitable society
18.	An innovative and proactive private sector that is a model for resilience
19.	An economy that works harmoniously with the needs for a resilient environment and society
20.	Sustainable funding for climate change and resilience building needs

Source: Department of Climate Change 2016, Tonga climate change policy: A resilient Tonga by 2035, pp. 12-13.

To continue its efforts to achieve a Resilient Tonga by 2035, in 2018 the Government of Tonga revised its 2010 *JNAP 1* with a view toward achieving the goals set out in the Tonga Climate Change Policy (Department of Climate Change 2018). This was done in recognition of Tonga's rankings as one of the most at-risk countries in the world and with the acknowledgement that Tonga was already being impacted by sea level rise, changes in climate, and the increasing intensity of extreme weather events. The resulting policy objectives included in 2018's *Joint National Action Plan 2 on Climate Change and Disaster Risk Management (JNAP 2) 2018-2028* were developed with an approach that aligns strongly with the Framework for Resilient Development in the Pacific and a number of international agreements, including the Paris Agreement under the United National Framework Convention on Climate Change (UNFCCC), the SAMOA Pathway, and the Sustainable Development Goals (Department of Climate Change 2018). In addition to objectives focused on data and information, finance, and regional and international cooperation, among others, the objective of 'resilience-building response capacity' includes a sub-objective to 'upgrade climate resilience skills through climate change scholarship, short-term professional training, attachments in areas of Climate Change and Disaster Risk Management' (Department of Climate Change 2018, p. 63).

In line with this approach, Tonga has actively pursued and participated in a number of regional initiatives that align with its objectives for climate change and disaster resilience. Regional coordination of emergency response efforts in particular has come to the fore in recent years. Regional organisations such as the Pacific Community (SPC) and the Pacific Islands Forum Secretariat have engaged with the Pacific Islands Emergency Management Alliance (PIEMA) project to develop a Regional Strategic Roadmap for Emergency Management (SREM) that 'will shape a plan for how the Pacific can best use the regional expertise, assets and people at its disposal to support national responses' (Pacific Islands Forum Secretariat 2020, p. 31). The Project is grounded in the recognition that 'collectively, there is a vast range of capacity that exists within the region' and that 'the cultural benefits and experiences of providing emergency response' to other Pacific Island countries are significant (SPC n.d.b.).

Tonga has developed its own national SREM in collaboration with PIEMA and is a strong supporter of such an approach, highlighting the ease and familiarity Tongan soldiers felt when aiding local communities in Fiji and Vanuatu following Cyclones Winston and Pam (Loop Pacific 2020a; SPC n.d.b.). This inherent cultural understanding between and among the countries has been credited with making such operations more effective in that those assisting do not need to be trained on the culture, needs, or expectations of the local communities. As such, the Director National Emergency Office in Tonga has indicated his intention to prioritise Pacific assistance and take a triage approach disaster response needs, stating that 'what I don't have at the national level I will seek the assistance at the regional level and if it is not available at the regional level then this is when we can request support from our regional partners to seek assistance outside the Pacific' (SPC

n.d.b). His statement underscores the increasing self-reliant approach of Tonga and the Pacific more broadly in addressing issues of climate change, climate security, and disaster management, with the PIEMA project providing a 'framework for . . . the Pacific helping itself in support of localisation and regionalism (SPC n.d.b.).

Tonga, along with Papua New Guinea, Solomon Islands, Fiji, and Kiribati, is also participating in the Pacific Regional Disaster Risk Management Project funded by the Government of Australia. The project utilises collaborative strategies, including government partnerships, expertise clusters, technical working groups, and human and financial resource sharing, to build capacity within government ministries, non-government organisations, and communities. A primary focus of the Project is on engaging stakeholders in sharing information, experience, expertise, and training related to disaster risk management (Tonga Community Development Trust, n.d.).

Tonga has also actively pursued a number of partnerships to ensure the financing necessary to upgrade its infrastructure and to develop the skills and educational opportunities its population will need in the future. Regional collaborations and cooperation comprise the majority of these initiatives, including those such as the Pacific Resilience Program supported by international climate change funding through the World Bank Group (Pacific Islands Forum Secretariat 2020). Japan has also been a significant source of support for Tonga. In 2018, Japan provided grant aid for the upgrading of Tonga's main domestic transport wharf in Nuku'alofa 'as a token of friendship and cooperation between Japan and the Kingdom of Tonga' (Author, *Consolidated Field Report - Tonga*). Japan has also provided support for the upgrading of Tonga's Institute of Science and Technology, which provides technical training in seafaring and marine engineering; agriculture, hospitality and tourism; and construction and engineering (Bedford, Burson & Bedford 2014).

More recently, Tonga has begun engaging more widely around issues of climate change, looking to strengthen south-south cooperation with nations of a similar mindset. Recent cooperation agreements between Tonga and the Kingdom of Morocco (2020) focus on capacity building through education and training and contain a strong emphasis on the key sectors of sustainable development, climate change, and biodiversity conservation. The strengthening of south-south cooperation in addressing 'global challenges such as global warming and rising sea levels, climate change and its disastrous impact' recognises that dealing with these issues 'will require collective effort – working together, sharing their limited resources and expertise' (Loop Pacific 2020b; Office of the Prime Minister 2020).

5.2.3 Tonga's culture of migration

Tonga has long been identified as a MIRAB economy, i.e. one based on Migration, Remittances, Aid, and Bureaucracy, with few resources that could provide an alternative income stream to remittances. When measured as a share of GDP, Tonga is consistently one of the top remittance-

receiving countries in the world, with remittances accounting for 35-40% of GDP annually for the last five years (Figure 5.12) (Department of Climate Change 2018; World Bank Group 2019).

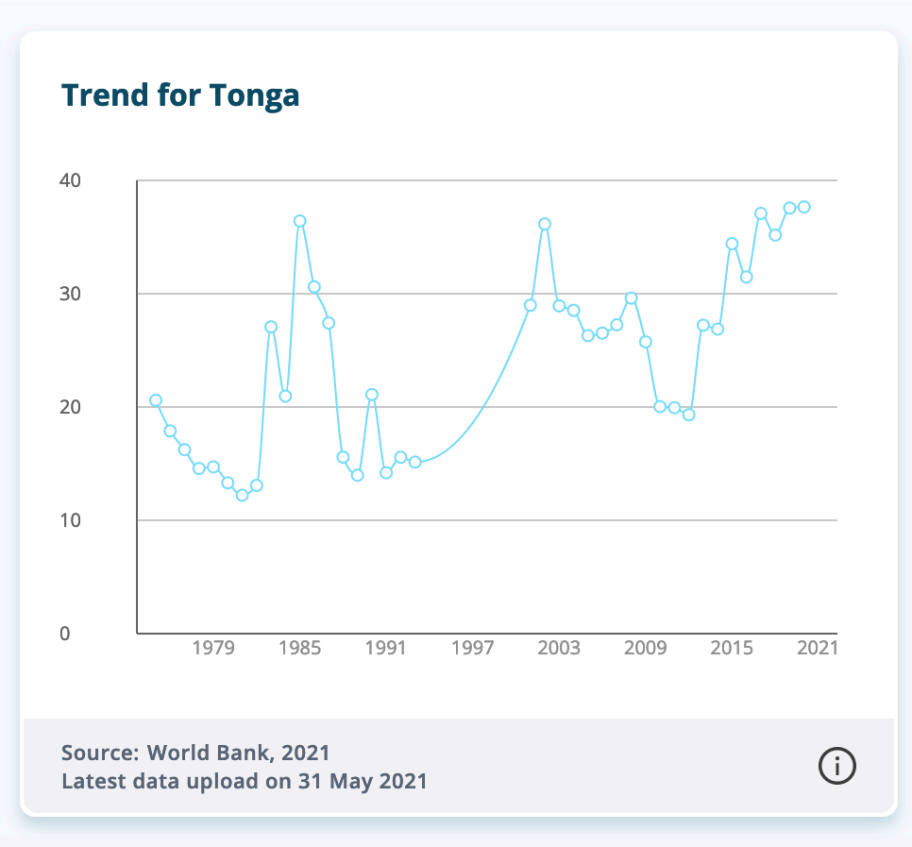


Figure 5.12: Personal remittances as percent of GDP, Tonga 1975-2021
Source: International Organization for Migration, Migration Data Portal
Reproduced with permission under non-commercial by Migration Data Portal

Not only do remittances provide family and household income, but they are also considered to be an important source of foreign exchange reserves and a safeguard against external events, such as heavy fluctuations in the global economy or natural disasters (Pacific Islands Forum Secretariat 2020). In such cases, as during the Global Financial Crisis of 2008, remittance inflows have increased as the diaspora have sent additional funds to assist families and communities at home (Pacific Island Forum Secretariat 2020). Regional labour programs have also contributed to the steady increase in remittances to Tonga, with both Australia and New Zealand commencing or restructuring Pacific labour programs in 2012. As a result, the Tongan diaspora in each country increased by more than 30% in a five-year period, averaging 6.1% and 7.3% annually in Australia and New Zealand, respectively, indicating that the Tongan diaspora is growing faster in New Zealand (Table 5.5). This is likely due to New Zealand's flexible migration policies and multiple pathways with respect to Pacific Island countries (see Chapter 6, Section 6.3.2). Tonga remains one of the main countries of origin for both countries' labour migration programs, together receiving almost 60% of Tonga's emigrants (ESCAP 2020).

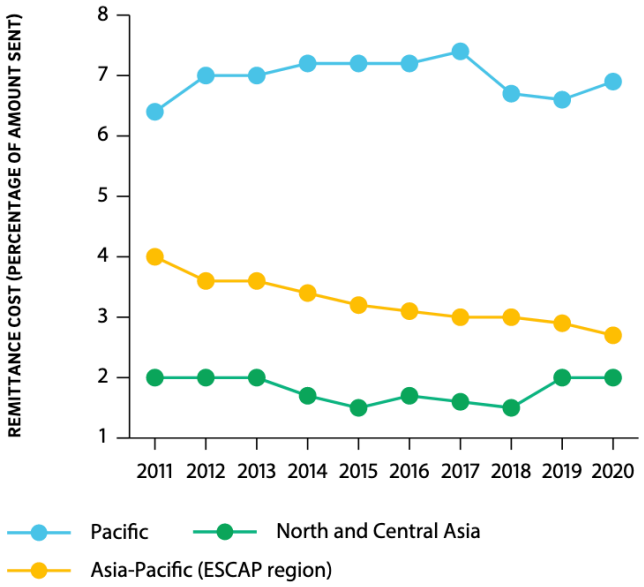
Table 5.5: Tongan diaspora in Australia (2011-2016) and New Zealand (2013-2018)

	Census 2011 |2013	Census 2016 | 2018	Absolute increase	% increase per year
Australia	25,096	32,695	7,599	6.1
New Zealand	60,333	82,389	22,056	7.3

Source: Created by the Author; refer data Batley 2017 (AU) & Stats NZ (NZ)

Over time, this has resulted in Tonga's economy becoming increasingly dependent on its population's labour mobility and reliant on the continued viability of migration-remittance model, including the support and engagement of the Tongan diaspora. With an understanding of migration as a collective rather than individual decision, the assumption has been that 'transnational corporations of kin' would continue to provide support and opportunities to family and kinship groups despite geographical distance, thus ensuring both the continuing flow of new migrants and their remittances (Bertram & Watters 1985; Lee 2006; Munro 1990). However, there is increasing recognition that Tongans in the diaspora are unlikely to provide more than a low-level of economic support, if any, particularly as the number of Tongans born overseas outnumbers those born in Tonga (Lee 2006; Maclellan & Mares 2006; Small 1997). In contrast to previous generations, many second-generation Tongans in the diaspora do not feel the same sense of obligation and responsibility to Tonga as their parents and are reluctant to take on financial obligations to Tonga's economy in the form of remittances (Lee 2006).

However, this does not appear to be of concern to the Tongan Government or external organisations such as the Asian Development Bank and the World Bank Group, all of which expect remittances to continue and, in some cases, to increase (Lee 2006; Maclellan & Mares 2006). With Tonga's negative net migration projected to continue over the next decade, this may occur as anticipated. However, given the views of the growing Tongan diaspora, increased migration should not be considered a guarantee of an associated rise in remittances. The Pacific Islands Forum Secretariat (2020) recently cited a number of concerns regarding the continuation of remittance inflows to Pacific Island countries and territories. These include the slow-down of the global economy due to COVID-19, the continued high cost of remittances in the Pacific that remains above the global target (Figure 5.13), and financial institutions and money transfer operators increasingly terminating or restricting customer relationships as part of 'de-risking' initiatives.



SOURCE: ESCAP calculations based on World Bank (2020b).

Figure 5.13: Median cost of sending $200 to Asia-Pacific countries and selected subregions
Source: United Nations ESCAP 2020, Asia-Pacific Migration Report 2020, p. 41.
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Remittance costs to the Pacific Islands average in the double digits, particularly for transfers from Australian and New Zealand banks. A World Bank Group (2017b) report on Australia's Seasonal Worker Programme for Pacific Island nationals found that nearly all workers in the program relied on Western Union to remit, despite large cost differences between it and the lowest cost option; for example, there was found to be an 11.5 percentage point difference in remitting A$500 using Western Union or KlickEx in Tonga.

Regardless of the amount being remitted, it is clear that there is a significant difference in remittance costs for Pacific Islanders working in Australia and New Zealand. This raises concerns regarding the Tonga's future economic situation if the vulnerability of its reliance on remittances, both in terms of national economy and individual subsistence, is not considered. A reduction in remittances, whether due to decreased mobility as in the case of COVID-19, increasing costs and limited transfer options, or to the diaspora's reticence to send money home, has the potential to lead to the contraction of other sectors, such as construction, tourism, and transport, as well as undermining Tonga's social stability (Author, *Consolidated Field Report – Tonga*; Campbell 1992; Lee 2006).

Despite such concerns, there are significant benefits for Tonga in having such a large diaspora. The knowledge of a Tongan community overseas often encourages others to migrate, either for work or for study, as strong social and cultural expectations of support in-country softens the transition to a new environment and enables migrants to adapt to their new situation more quickly (Author, *Consolidated Field Report - Tonga*). There is also the added benefit of having 'on-the-

ground' and 'real-time' information about programs, employers, schools, and opportunities in the host country from such a vast collection of kin (Author, *Consolidated Field Report - Tonga*).

There is a further economic benefit for Tonga in having a large diaspora in addition to potential remittances. International visitors, including 'a considerable number of overseas-based Pacific Islanders visiting friends and relatives in their home countries' contribute to Pacific Island economies directly and indirectly across a number of sectors (Lal 2020). In Tonga, this trend is reflected in the number of overseas visitor arrivals that has been steadily increasing since 2012, coinciding with the commencement of Pacific regional labour migration schemes discussed previously (Figure 5.14).

Figure 5.14: Overseas visitor arrival to Tonga, 2010-2020
Source: SPC, Statistics for Development Division, Overseas Visitor Arrival Dataset
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Although overseas visitors declined by 10.7% in 2018 as a result of Cyclone Gita, the following year saw a strong recovery. The sharp decline in 2020 reflects the impact of COVID-19 on Tonga, and the tourism industry more broadly, as cruise ships were denied entry early in year, followed by the complete closure of borders and cancelation of flights in March 2020 (Author, *Consolidated Field Report – Tonga*). The first six months of 2020 saw a 62.7% drop in visitors to Tonga compared to the same period in 2019, with no arrivals after April 2020 (Table 5.6).

Table 5.6: Performance of visitor arrivals to Tonga: January to June 2020 relative to 2019

Country	Period	Per cent Δ
Tonga	January to June 2020 compared to the same period 2019	-62.7
	- of which January to March 2020 compared to the same period 2019	*-20.8*
	- of which April to June 2020 compared to the same period 2019	*-100.0*

Source: Lal 2020, SPC-SDD, extracted from Table 1 by the Author
Reproduced with permission from Lal, SPC

Complicating matters for the tourism sector is the destruction of three hotels in the coastal areas of Tongatopu by storm surges from Cyclone Harold in 2020 (Webb 2020). This has raised concerns that the economic impacts of the lack of visitors would have 'adverse socio-economic effects on individuals and families leading to more inequality and possibly a deterioration in social conditions' (Lal 2020). Further, there is anecdotal evidence that informal activities and subsistence fishing and crop growth are increasing in response to the lack of employment opportunities in Tonga's tourism sector and the impact of border closures and lockdowns overseas (Author, *Consolidated Field Report – Tonga*; Lal 2020).

5.2.3.1 Recent migration patterns and trends

Over the last five years, there has been a number of arguments put forth for the expansion of regional migration schemes and the development of new programs between Pacific Island countries and Australia and New Zealand for both employment and permanent relocation (World Bank Group 2017). There is also the view that such opportunities should be expanded to include migration to such countries as Korea and the United States (World Bank Group 2017). However, such propositions to expand labour mobility options appear based on the benefits in terms of development and revenue, with less, if any, attention paid to the social ramifications of such schemes. With the majority of migrants comprising 'able bodied men', those left behind may struggle to grow food for themselves or generate local income, adding additional labour to the social and emotional burden already present for women in households left behind by male migrants (Chattier 2019; Department of Climate Change 2018). This absence also affects the local community's ability to evacuate children or the elderly in the event of storms or flooding, as well as hindering rebuilding efforts at the household and community level (Author, *Consolidated Field Report - Tonga*).

Cyclone Gita, as the most recent visible representation of climate change for many Tongans in early 2020, was frequently cited as an example of the problems that arise when climate change

and labour migration intersect (Author, *Consolidated Field Report - Tonga*). The general view is that the severity of cyclones is increasing, compounding damage to households, crops, land holdings, and cultural sites as well as public roads and buildings. Due to the cost and labour involved in addressing such damage, repairs cannot always be completed properly or in a timely manner. As a result, even smaller storms or heavy rains cause further damage, resulting in additional cost, time, and labour to rebuild or repair (Author, *Consolidated Field Report – Tonga*). Many view the practice of labour migration as exacerbating the problem, as, even when they have the finances to undertake repairs, most of the those able to work are overseas, sending remittances home. While the benefit of additional funds from remittances can outweigh difficulties associated with a reduced labour force, of greater concern, particularly for women, is the lack of available assistance in the event of a cyclone or severe storm. Particularly in the outer islands and smaller communities, where populations are declining, there is no one to aid the elderly, the young, and those with a disability to find shelter in the midst of an adverse event or to provide support in its aftermath (Author, *Consolidated Field Report - Tonga*). This situation is likely to deteriorate further due to health issues in Tonga, which are expected to cause a loss of 18.5% of the effective labour force by 2040 (Webb 2020; World Bank Group 2016b).

Although the lack of able-bodied assistance, particularly in the outer islands, may be anecdotally attributed to overseas labour migration, it is also a reflection of Tonga's increasing rural-urban migration. An examination of census records over the last fifteen years, taking into consideration the impact of out-migration, shows the populations of the outer islands decreasing as the population of Tongatopu, home to the urban centre of Nuku'alofa, increases (Table 5.7).

Table 5.7: Census population by island divisions 2006, 2011, 2016

Years	Divisions	Total number by divisions	No. of Population Change in 10 years (1996-2006) and 5 years (2006-2011 & 2011-2016)	Population Change (%)
2006	**Tonga**	**101991**	**4207**	**4.3**
	Tongatapu	72045	5066	7.6
	Vava'u	15505	-210	-1.3
	Ha'apai	7570	-568	-7.0
	'Eua	5206	-272	5.5
	Two Niuas	1665	-353	17.5
2011	**Tonga**	**103252**	**1261**	**1.2**
	Tongatapu	75416	3371	4.7
	Vava'u	14922	-583	-3.8
	Ha'apai	6616	-954	-12.6
	'Eua	5016	-190	-3.6
	Two Niuas	1282	-383	-23.0
2016	**Tonga**	**100651**	**-2601**	**-2.5**
	Tongatapu	74611	-805	-1.1
	Vava'u	13738	-1184	-7.9
	Ha'apai	6125	-491	-7.4
	'Eua	4945	-71	-1.4
	Two Niuas	1232	-50	-3.9

Source: *Census 2016, Statistics Department.*

Source: Department of Climate Change 2018, JNAP 2, p. 5
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While the net negative overall migration of recent years has been attributed to overseas migration, it is not enough to ameliorate the environmental impacts of an increasing urban population in a low-lying, flood prone area (Department of Climate Change 2018).

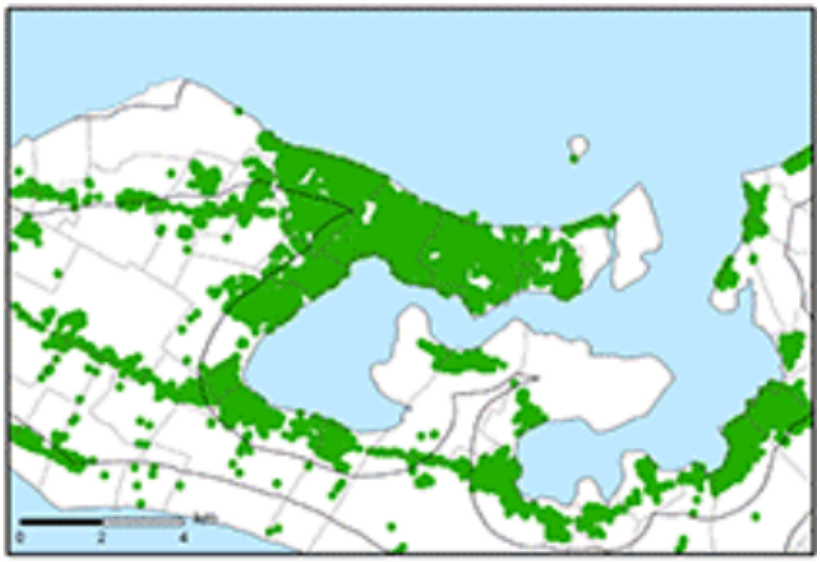
As detailed previously in the context of key climate change impacts, Tonga is increasingly concerned with water issues related to drought, flooding, and the increased salinity of groundwater. These concerns are further heightened by the trend of rural-urban migration presented above. With three-quarters of Tonga's total population now living in Tongatapu, the reported consequences of this internal migration include:

- Increased human settlement on marginal, low-lying and flood-prone lands;
- Reclamation of environmentally sensitive areas;
- Increased fishing pressure adjacent to urban areas;

- Removal of coastal vegetation and mangroves causing soil loss and coastal erosion;
- General long-term loss of terrestrial and marine habitats and species (Department of Climate Change 2018).

One such example is that of Fanga'uta Lagoon (Figure 5.15), where urban migration has resulted extensive land reclamation projects and residential development that have caused severe coastal degradation, extensive removal of mangrove forests, reduction in marine and coastal habitats, increased pollution, and irreversible loss of biodiversity (Author, *Consolidated Field Report – Tonga*; Department of Climate Change 2018).

Figure 5.15: Tonga population grid surrounding Fanga'uta Lagoon based on household locations (in green)



Source: SPC Statistics for Development Division, Mapping (Coastal), Tonga Census 2016
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Such internal rural-urban migration is exacerbating the impacts of climate change on an already fragile ecosystem and environment. Most of Nuku'alofa consists of low-lying and flood prone areas. As such, settlement surrounding the urban centre 'are highly vulnerable to flooding and soil loss caused by sea level rise, storm surge, heavy and frequent rainfall and intense tropical cyclones' (Department of Climate Change 2018, p. 6).

In 2020, the United Nations University's Institute for Water, Environment and Health (UNU-INWEH) released a report on the connection between water and migration. One of the trends the report identifies is an increase in rural-urban migration linked to the climate change and water crises. This supports earlier United Nations reports that found that globally, most climate induced migration has occurred within countries, with movement from rural to urban areas anticipated to increase (UNDESA 2010). The 2020 UNU-INWEH report (Nagabhatla et al 2020) further notes that current concerns regarding environmental drivers of migration focus mostly on 'response mechanisms'

and states that migration ‘forms part of a solution’ and should be ‘formally recognized as an adaptation strategy for water and climate crises’.

Although it is difficult to say whether the driving factor for the rural-urban migration trend in Tonga is related to climate change specifically, the effect has been a reshaping of ‘modern Tonga, its culture, economy and relationship to nature’ (Department of Climate Change 2018, p. 5). The compounding effects of Tonga’s rural-urban internal migration trend, the existence of a single urban centre highly vulnerable to the impacts of climate change, and a culture and economy reliant on overseas remittances may result in migration, both internal and international, becoming an adaptation strategy that forms ‘part of a solution’ for Tonga. However, it will also contribute significantly to its challenges in planning for and adapting to climate change.

5.2.4 Progress toward the Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) were developed with a view toward addressing interconnected, complex global challenges. As such, the SDGs have significant potential as a mechanism and motivation for the development of policies and partnerships focusing on issues of climate change and migration in the Pacific. As discussed in Chapter 3, SDG 13: Climate Action (*Take urgent action to combat climate change and its impacts),* contains two targets in particular that provide additional focus and consideration with regard to migration and its potential as an adaptive measure. They are:

> **Target 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries; and
>
> **Target 13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

Related to Target 13.1 is Target 13.2, which calls for countries to ‘integrate climate change measures into national policies, strategies and planning’. The indicators for these two targets, four in all, focus primarily on establishing, implementing, and operationalising integrated national and local strategies for disaster risk reduction and climate change adaptation and resilience. As discussed previously, Tonga has made substantial progress in this area, including efforts to integrate climate change measures and resilience into a broad range of initiatives. This is reflected in recent presentations of Tonga’s progress toward the SDGs, which indicate full achievement of three targets, among them Target 13.1 which is to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters (Figure 5.16).

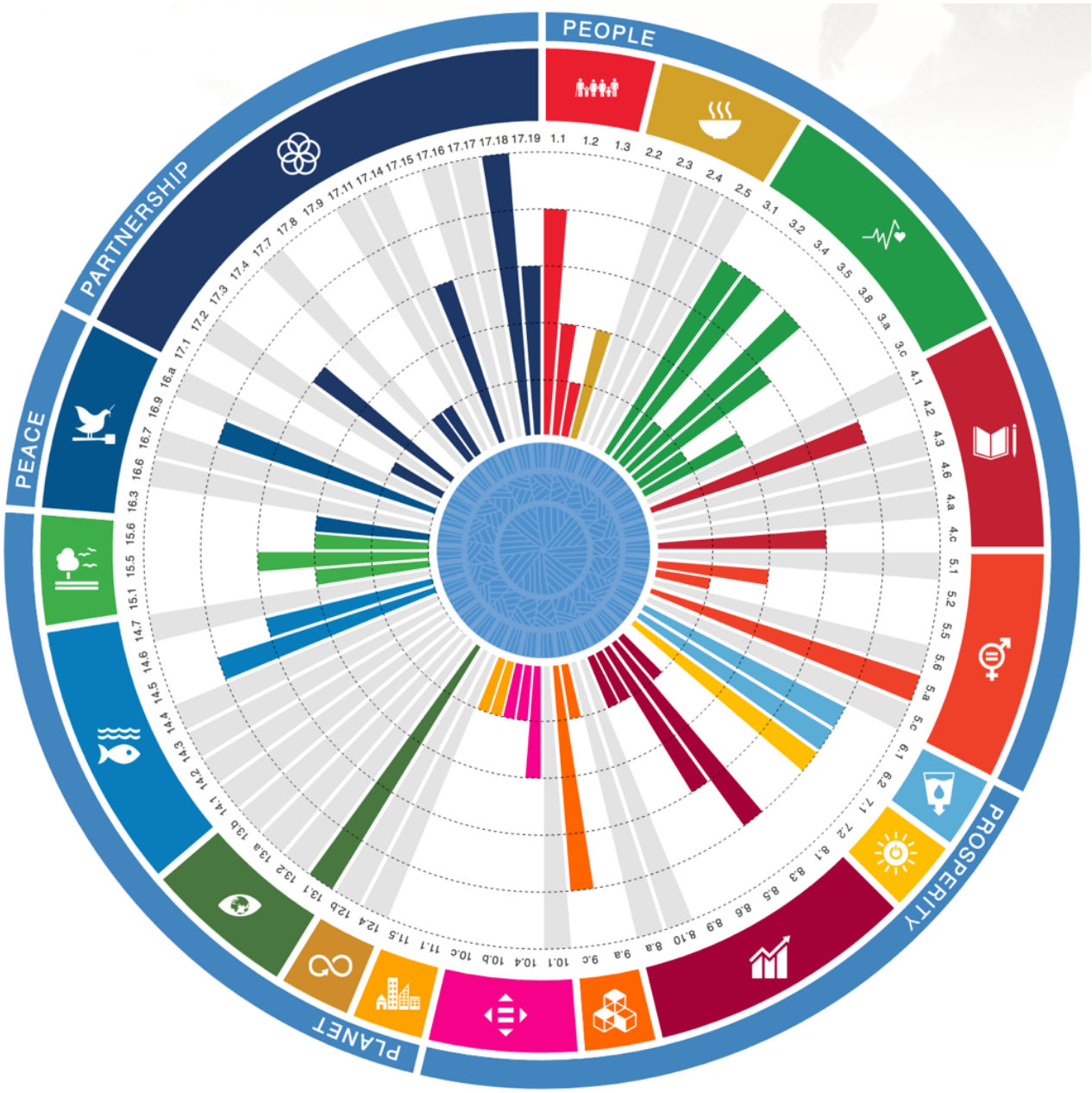

Figure 5.16: SDG Progress Wheel for Tonga, 2021
Source: Pacific Data Hub, Sustainable Development Goals in the Pacific Dashboard, 2021
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While Tonga's progress toward Target 13.2, is not indicated due to a lack of established methodology, evidence of Tonga's commitment achieving Target 13.2 can be seen in the JNAPs of 2010 and 2018, the Tonga Climate Change Policy, Tonga's Strategic Development Policy, the submission of its Nationally Determined Contributions under the Paris Agreement in 2015 and 2020, and the integration of the 'Resilient Tonga by 2035' initiative into numerous plans and policies. A similar situation occurs with regard to Target 13.b referenced above, with indications of Tonga's commitment to inclusive climate change-related planning addressing the unique situations women, youth, and vulnerable groups set out in the Tonga Climate Change Policy (2016). External assessments of Tonga's Climate Change Policy and its implementation determined that Tonga has made 'good progress' with regard to natural disaster and climate change preparation, but needs to

implement its strategic plans more consistently while at the same time giving greater consideration to 'the long-term, extreme events, and possible "transformational" responses' (Daniel et al 2020, p.7).Suggested transformational responses include relocating major infrastructure and supporting migration from at-risk areas, including Nuku'alofa, as well as taking steps to manage the financial risk associated with natural disasters (Daniel et al 2020).

In addition to their inclusion in Target 13.b, both youth and women receive special mention throughout the 2030 Agenda and the SDGs, acknowledging their vulnerability across a number of areas and 'promoting youth employment and women's economic empowerment, in particular' (paragraph 27). Recognising that children and youth comprise a relatively large proportion of Tonga' population, the Tonga Strategic Development Framework includes a number of priorities related to young people, including identification of disaster risk management as a basic life skill that needs to be encouraged. Similarly, the Tonga National Youth Strategy and Action Plan (2014) emphasises the creation of employment and skills development as among the key issues for Tongan young people. These priorities intersected with the SDGs in a 2019 report on Tonga's youth by the Tonga Statistics Department in which it highlighted the need to update the National Youth Policy and identified priority SDG Indicators for youth as those focused on education (Indicators 4.3.1, 4.4.1, and 4.6.1), work (Indicators 8.5.2 and 8.6.1), and climate change (Indicator 13.b.1).

The Tonga Climate Change Policy (2016) further highlighted the need to fully align the National Youth Policy and the Tonga National Youth Strategy and Action Plan with the Resilient Tonga by 2035 initiative.

With regard to women, SDG 5 Gender Equality (Achieve gender equality and empower all women and girls) is one of the three SDGs in which Tonga has fully achieved one of the associated Targets, specifically:

> **Target 5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

Tonga has also made some achievement toward the elimination of violence against women and girls (Target 5.2), but only minimal achievement toward ensuring women's participation, leadership, and decision-making opportunities in political, economic and public life (Target 5.5). As of 2020, Tonga was the only one of the fourteen independent PICs that had not made a commitment to the Committee on the Elimination of Discrimination Against Women (CEDAW) although they have 'developed specific policy direction on women in the economy within their gender policies' (Pacific Islands Forum Secretariat 2020, p. 54-55). Tonga is also taking steps to ensure that legislation, policies, and plans focusing on women, such as the Family Protection Act,

the National Policy on Gender and Development, and the Strategic Plan, are aligned with the Resilient Tonga initiative that is the goal of the Tonga Climate Change Policy (2016). This is a positive sign, given the disproportionate impact of climate change on women as well as their lack relative of representation in both paid employment and migration opportunities.

According to Jeffrey Sachs (2018), the framework of goal-based development that forms the SDGs and the global visibility and universal national responsibility that goes with them provide new opportunities to encourage regional action and cooperation by diverse stakeholders aimed at mitigating, adapting to and managing the impacts of climate change. The Government of Tonga expressed a similar sentiment in its 2019 Voluntary National Review (VNR) report[3] noting that 'forming durable partnerships' would play an integral role in implementing the 'ongoing reforms needed to fully implement the national development and SDG agenda' (Kingdom of Tonga 2019, p. 11). It also highlighted the key messages regarding the 'serious threats' posed by climate change to Tonga's environment and people as well as the importance of further partnerships 'in the areas of finance, appropriate technology, technical support, capacity building and statistics (Kingdom of Tonga 2019, p. 7).

The necessity of effective partnership in achieving the SDGs is referenced throughout the 2030 Agenda and specifically as SDG 17 Partnerships for the Goals (Strengthen the means of implementation and revitalize the global partnership for sustainable development). Of the many associated Targets, Target 17.3, which identifies the need for additional financial resources for developing countries and includes an achievement Indicator measuring the volume of remittances as a proportion of total GDP (17.3.2), is of particular relevance to Tonga. While Tonga is considered to have made average progress in this area, the cost of remittances remains high in the Pacific. This is despite an SDG Target (SDG 10.c) seeking to reduce migrant remittance transaction costs to less than three percent and eliminate corridors with costs higher than five percent by 2030 (World Bank Group 2018b). Additional financial indicators for Target 17.3 include foreign direct investments, official development assistance, and South-South Cooperation as a proportion of total domestic budget (17.3.2), all of which are important avenues of support to Tonga. The financial focus of these partnership-related Targets is highly relevant for Tonga, but not completely within their control. A holistic view of the economic realities for Tonga includes remittances, taxation, aid, and expenditure requirements and priorities, all of which have a significant impact on the Tongan government's ability to feasibly and realistically plan for and achieve any goals or changes related to climate change adaptation and planning as required in SDG 13 Climate Action.

[3] VNRs are part of the follow-up and review mechanisms of the 2030 Agenda for Sustainable Development.

5.2.5 Planning for adaptation

An interesting facet of the research that emerges as part of the Tonga case study is the evaluation of the potential impact of climate change adaptation policies and capacity building initiatives in a country where a significant portion of their population lives overseas and provides a level of remittance income that substantially contributes to the country's economy. In this context, the relationship between climate change and migration is not just that the former may influence the latter, but also that the remittances received from overseas migrants is a source of funding and support for climate change adaptation measures. The nexus of these factors is a particularly important consideration for countries assessed as being at high risk with regard to the negative impacts of climate change, with its associated impacts, as in Tonga, on infrastructure, health, and environment-reliant employment and subsistence sectors such as agriculture, fisheries, and tourism. In Tonga, this means that policies must be considered not only in terms of the onshore population but also in light of any impacts it may have on the diaspora providing remittance revenue, including the potential of policies to impact future migration decisions both internally, as in the case of increasing urbanisation, and externally, as with overseas labour migration programs.

All of this combines into a unique situation in which Tonga, being severely vulnerable to the impacts of climate change, having a significant history and practice of migration, and being highly reliant on remittances, must evaluate plans to manage and adapt to climate change with equal consideration of how any resulting policies and/or actions will affect the interconnected issues of migration, remittances, and available workforce. Potential approaches and policy recommendations for this are addressed in Chapter 6 and Chapter 7.

5.3 Case Study 2: Cook Islands

5.3.1 Economic and demographic overview

The Cook Islands comprises fifteen islands, a land area of 236 km^2 and an exclusive economic zone (EEZ) of 1,960,027 km^2 (SPC n.d.a; CIA n.d.a). The majority of its population resides in the southern group of nine islands, including the capital island of Rarotonga. The northern group of islands are sparsely populated low-lying atolls (Figure 5.17).

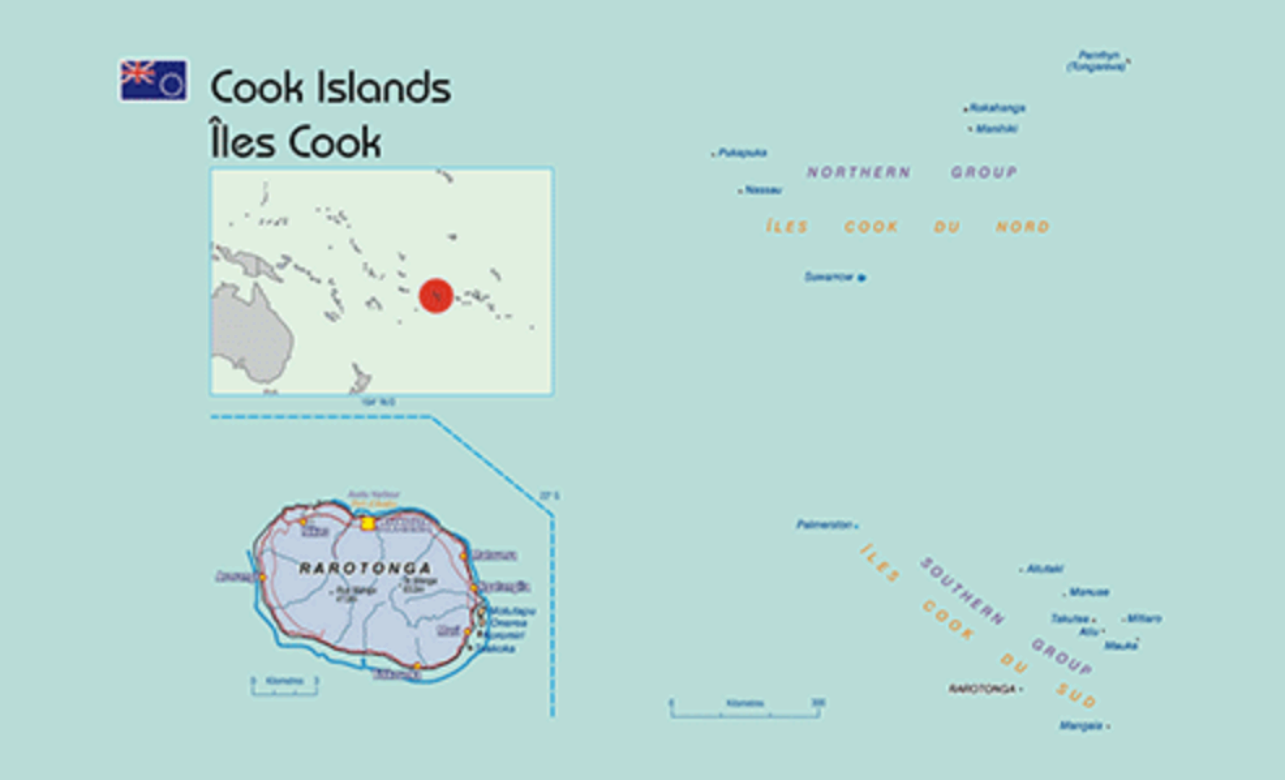


Figure 5.17: Map of Cook Islands
Source: SPC n.d., Statistics for Development Division, Country Profiles – Cook Islands
Reproduced with permission under Educational and Research Purposes by SPC

Since 1965, the Cook Islands has been a self-governing state in Free Association with New Zealand. The terms of this arrangement allow Cook Islanders to hold New Zealand citizenship with the right of free access to New Zealand. New Zealand is also Cook Islands foremost development partner and the primary source market for Cook Islands tourism sector (Homasi & Webb 2020).

Population patterns in the Cook Islands appear at odds with that of many nations, with data indicating consistent population decrease from 1995 to 2016, during which time all other Pacific SIDS except three showed a population increase (CIA World Factbook n.d.a; SPC-SDD n.d.; World Bank Group n.d.;). Current population projections indicate a relatively steady state or slight decrease into 2050 (SPC, Prism 2016). Its population structure to 2050 is also projected to remain substantially stable, with a slight contraction in the youth population and an expanding elderly cohort aged 70+ (Figure 5.18) that is consistent with countries with higher levels of social and economic development (see Boucher 2016).

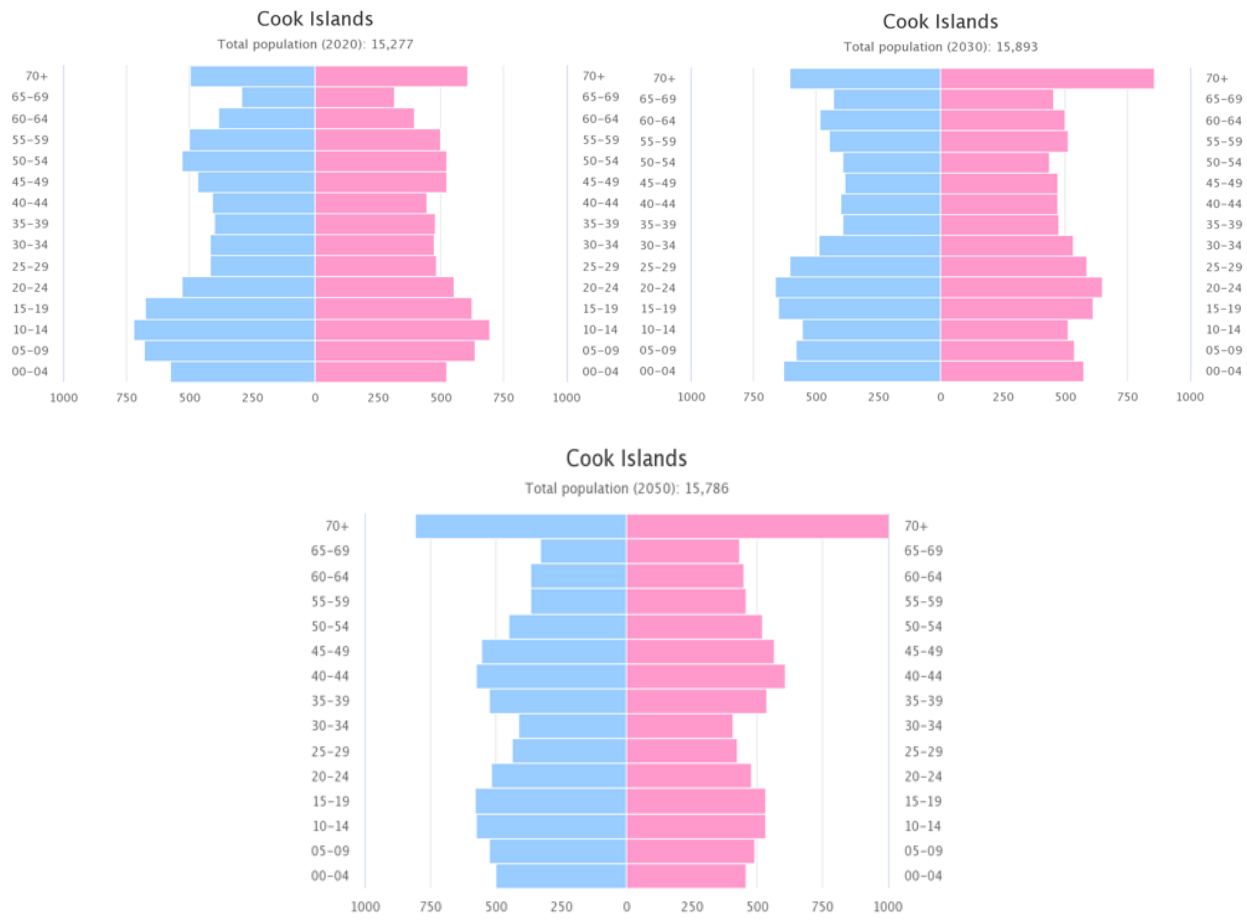


Figure 5.18: Cook Islands population pyramids 2020, 2030, 2050
Source: SPC n.d, Statistics for Development Division, Country Profiles
Reproduced with permission under Educational and Research Purposes by SPC

It is worth noting that the combination of Cook Islands' highly mobile resident population and its relatively large number of visitors can make it difficult to determine the 'true size and mix' of its population (ADB 2008, p. 213). This has been attributed to the difficulty of distinguishing between residents and non-residents as well as the transition of visitors to residents and vice-versa, resulting in a probably undercount of residents (ADB 2008). An example of the divergence between population and resident population for Cook Islands can be seen in Figure 5.19.

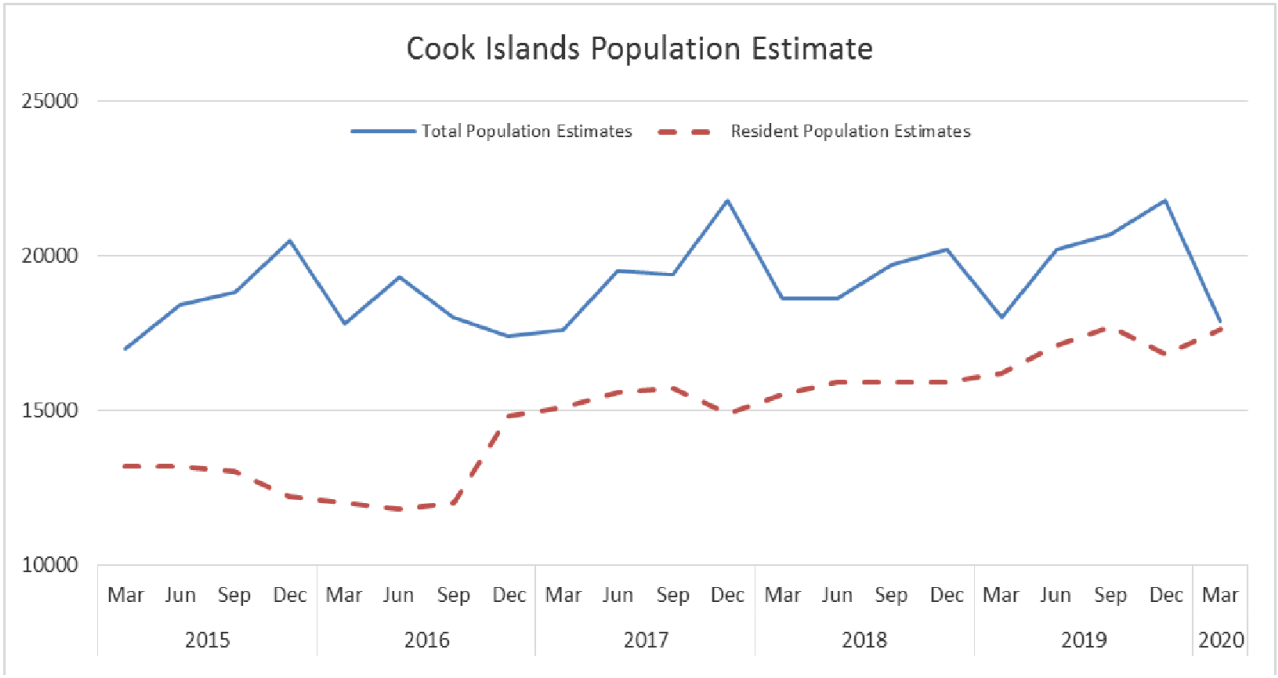
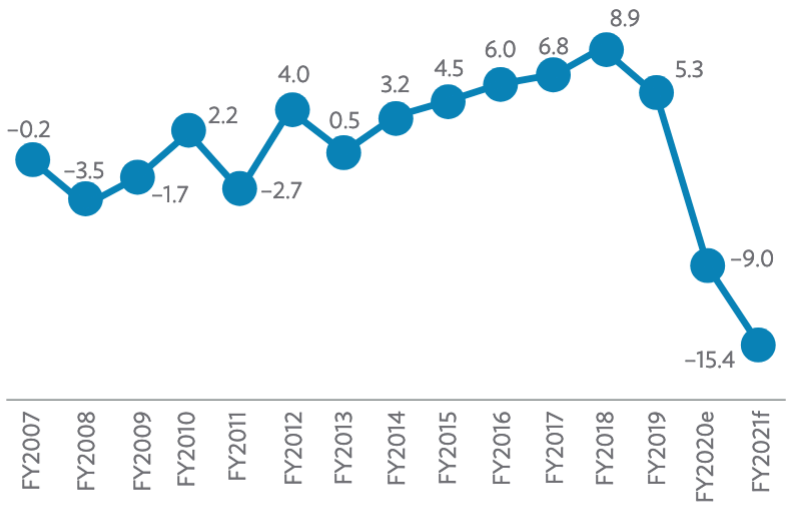


Figure 5.19: Comparison of Cook Islands Total Population and Resident Population Estimates
Source: Cook Islands Statistics Office, Vital Statistics and Population Estimates – June Quarter 2020
Reproduced with permission by Ministry of Finance & Economic Management

Cook Islands' economy comprises three broad sectors: agriculture, industry, and services, with the service sector accounting for 84% of all employment (Government of the Cook Islands 2015). From 2005 to 2020, Cook Islands' GDP per capita increased significantly: from US$9,262 to US$24,913 (Pacific Data Hub). The labour force participation rate for both men and women in Cook Islands is above 70%, which for women is one of the higher rates for Pacific Island countries (Pacific Islands Forum Secretariat 2020). Cook Islands also has a relatively high proportion of women in paid employment (59%), although women in Cook Islands hold 93% of all low paid service positions (Pacific Islands Forum Secretariat 2020). Foreigners residing in Cook Islands comprise around 16% of the labour force, with the majority from New Zealand (Government of the Cook Islands 2015).

In contrast to Tonga, and despite Cook Islanders' ease of migration to New Zealand, and subsequently Australia, it is tourism, not remittances, that is the economic foundation of Cook Islands. In 2019, receipts from tourism were equivalent to 61.4% of GDP (Homasi & Webb 2020). Visitors increased at an average of 6% from 1990 to 2019, and from 2012 to 2019 Cook Islands experienced steady economic growth (Figure 5.20) (Homasi & Webb 2020).



e = estimate, f = forecast, FY = fiscal year, GDP = gross domestic product.
Source: Asian Development Bank estimates.

Figure 5.20: Cook Islands' real GDP growth (annual percentage change)
Source: Homasi & Webb 2020, ADB Pacific Economic Monitor – July 2020, p. 5
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This contributed significantly to Cook Islands becoming the first Pacific Island country to gain high-income status in 2019 (APPF 2020; Homasi & Webb 2020). However, in early 2020 border closure due to COVID-19 caused a complete collapse of the tourism sector in Cook Islands, resulting in the Asian Development Bank estimating GDP growth contraction of 9% and 15.4% for the next two fiscal years (Homasi and Webb 2020).

These estimates were later updated to reflect a realised contraction of 5.2% for the fiscal year ending 30 June 2020 and a greater estimated contraction in economic activity of 26% for the 2021 fiscal year (Homasi, Rabanal & Webb 2021). Although the government implemented an Economic Response Plan in order to mitigate the impact on the economy and livelihoods, Cook Islands is considered to be 'one of the hardest hit economies in the Pacific because of the COVID-19 pandemic' and is facing 'unprecedented economic challenges from the collapse of tourism' (Homasi, Rabanal & Webb 2021, p. 6).

Cook Islands' reliance on tourism is clearly significant, with estimates of three percentage points in lost GDP for each month in which there are no visitors and a loss of 1,556 jobs, or 20.9% of the working population, due to hospitality sector shutdown (Government of the Cook Islands 2018; Homasi & Webb 2020). This, combined with its ongoing challenges related to geography, low population, and high cost of doing business have led to suggestions that Cook Islands would benefit from better public sector management and reforms supporting alternative revenue streams to tourism (Homasi & Webb 2020). That said, Cook Islands' economy is expected to experience a strong recovery in the 2022 fiscal year as international travel and tourism reopen (Homasi, Rabanal & Webb 2021).

In addition to being the primary source market for tourism, New Zealand also provides the majority of aid to Cook Islands. Prior to its re-classification in 2019, which subsequently restricted access to certain types of aid, Cook Islands received official development assistance (ODA), foreign direct investment, grants, and loans from overseas governments as well as international funding bodies. In the decade between 2009-2019, New Zealand provided over $100 million more in ODA and other official flows (OOF) to Cook Islands than any other donor, followed by relatively similar amounts of aid from China, Australia, and the Asian Development Bank (Figure 5.21).

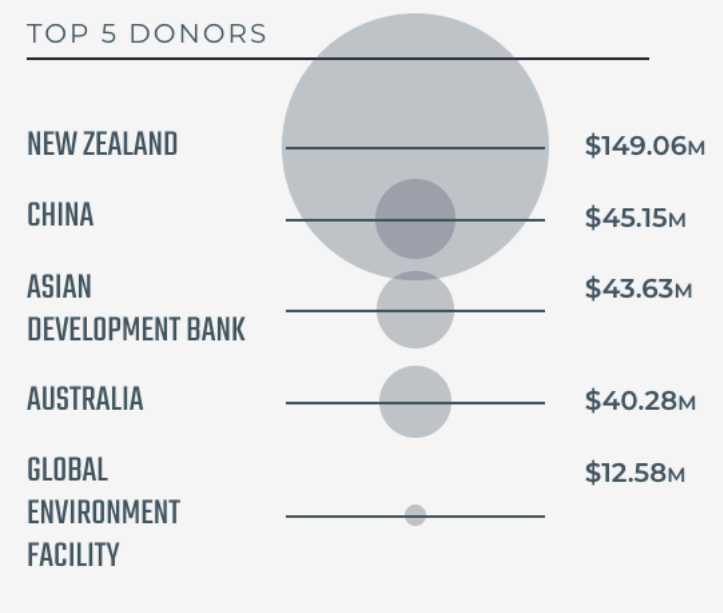

Figure 5.21: Cook Islands' Top 5 Aid Donors, cumulative ODA and OOF 2009-2019
Source: Lowy Institute 2020, Pacific Aid Map
Reproduced with permission from Lowy Institute

Over the same period, New Zealand, as Cook Islands foremost development partner, also provided the majority of specific project funding with a focus on improving public services and core sector support (Figure 5.22), with the latter aimed at 'enhanced economic self-reliance in the Cook Islands' (Bartle et al 2018, p. 3).

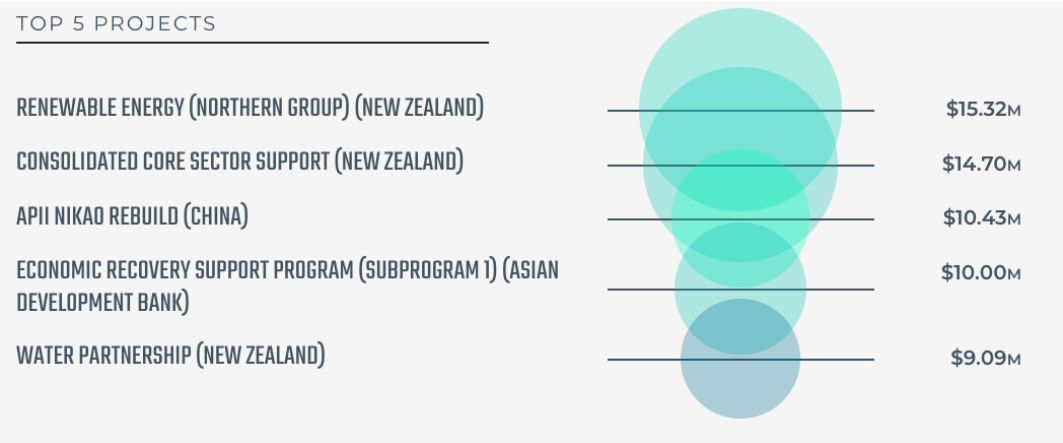

Figure 5.22: Cook Islands' Top 5 Projects, 2009-2019
Source: Lowy Institute 2020, Pacific Aid Map
Reproduced with permission from Lowy Institute

From 2014 to 2019, Cook Islands public sector debt levels steadily decreased from 26.0% to 17.0%, due in large part to the success of the tourism sector (Homasi & Webb 2020; SPC-SDD 2020). This is beneficial in that having such a low debt level allows the government to take on additional borrowing to finance emergency operations. However, public debt is now projected to rise to 34.8% of GDP for 2021 as a result of government policy measures in response to COVID-19 border closures and associated loss of tourism revenue (Homasi & Webb 2020).

The potential for such a situation and related concerns regarding Cook Islands loss of 'developing' status (due in part to high GDP per capita), and consequent lack of access to particular types of aid and funding, were points of discussion even before the COVID-19 border closures (APPF 2020). At that time, Parliamentary focus was on managing issues of adaptation and development given Cook Islands continued vulnerability to climate change and external events (APPF 2020). Additional borrowing to cover the costs of climate change adaptation and resilience initiatives was viewed as a problematic solution for such expenditure, particularly considering the lack of contribution to global climate change of Cook Islands and other Pacific Island economies (APPF 2020). Of additional concern is the growing recognition that a large proportion of Cook Islands tourism revenue, particularly from accommodation, is going offshore due to ownership by outside entities and is therefore not being put back into Cook Islands' economy (APPF 2020).

These and other concerns regarding Cook Islands dependence on tourism revenue have led to suggestions of policy reforms and targeted technical assistance from development partners with a view toward supporting alternative revenue streams (Homasi & Webb 2020). While this is prudent, options such as expanding fisheries, exploring mining potential, and better utilisation of Cook Islands 1.9 million square kilometre exclusive economic zone would also need to consider the impacts of climate change currently and into the future.

5.3.2 Climate change for a coastal population

An analysis of Pacific Islands' susceptibility to climate change based on physical variables, including rock-type, shape, maximum elevation, and area, determined that 60% of Cook Islands fifteen islands had 'high' or 'very high' indicative susceptibility (Kumar et al 2018). This includes all six of the northern, sparsely populated atoll and sand kay islands and three of similar structure in the southern grouping. It should be noted that the high susceptibility of such islands is not necessarily due to land loss, erosion, or potential 'disappearance'. Analysis of Pacific atolls in the context of sea level rise has concluded that some have increased in area and elevation, changing size, shape, and/or position as they adjust to environmental events and conditions (Kench, Ford & Owen 2018; McLean & Kench 2015). This suggests future adaptation strategies will need to be flexible and consider not only sea level rise, but also variations in island type and shifting coastal patterns (McLean & Kench 2015). These issues are particularly relevant for Cook Islands, where

the entirety of the population lives within five kilometres of its coasts and over 90% lives within one kilometre (Pacific Data Hub).

As such, climate change factors that impact the frequency or severity of coastal flooding and damage are of significant importance. The three main factors thus identified as posing the greatest threat for Cook Islands are changes in mean sea level, changes in the frequency or intensity of cyclones, and changes in extreme swell events (SPREP 2014).

Similar to Tonga, when measured by percent of population affected by storms, Cook Islands ranks in the top ten countries in the Asia-Pacific region (Nurse et al 2014). Further, as 90% of built infrastructure by value lies within 500 metres from the coastline (70% by count), this has significant ramifications for coastal adaptation and/or repair, which require substantial financial resources (Kumar & Taylor 2015). In recognition of this, and with the understanding that the frequency and intensity of cyclones is increasing across the Pacific, Cook Islands created a mechanism to enable effective planning and preparation for the eventual damage to coastal infrastructure and populations.

In 2005, as part of a harbour rebuilding project following a series of five tropical cyclones, the Cook Island Coastal Calculator was developed to forecast the probability of extreme events occurring up to 100 years in the future (UNDP 2016). The Calculator utilises the island and surrounding area's physical characteristics and climate-related information to enable site-specific calculations related to extreme cyclone and swell event conditions (SPREP 2014). It also acts as a database for offshore wave height, water levels, tide gauges, and other relevant data that can then be used by engineers, communities, and stakeholders in making design and development decisions for coastlines and coastal structures (SPREP 2014; UNDP 2016). Following its initial use in rebuilding the main harbour on Manga'ia, the Calculator and the knowledge gained from that project were used on additional 'climate-proofing' projects across Cook Islands, including upgrading two additional harbours, building a removable jetty and coastal protection walls, and constructing cyclone shelters (UNDP 2014).

More than just facilitating the design of the Calculator, these coastal climate-proofing projects also looked to build the resilience of the local community and incorporate traditional knowledge. To accomplish this, workshops were held with a view toward involving older generations and gathering knowledge and information of extreme weather events and cyclones going back sixty or seventy years (UNDP 2014). The workshops actively engaged the local communities to identify risk reduction and adaptation options that would inform the development of an integrated coastal management plan and policy (SPREP 2014). The options identified by the community included consideration of frequently needed/immediate options, occasionally needed/longer term options, and rarely needed but potential options (Figure 5.8).

Table 5.8: Community identified risk reduction and adaptation options (Onerea, Manga'ia, Cook Islands)

Key risk reduction/adaptation options
• Improve existing and provision of new evacuation routes inland from the village • Limit any further new roads down to the shoreline along the village frontage • Encourage landowners not to build new residential property on the seaward side of the road • Encourage the planting of natural vegetation between the road and the shoreline
Occasionally required/longer term risk reduction/adaptation options
• Rebuild houses with raised floor levels (e.g. on piled foundations) during any renovations where they are built in areas that could potentially be inundated • Progressively over time move further inland any essential infrastructure or residential property at high risk of damage from inundating waves
Rarely required risk reduction/adaptation options
• If structural measures (e.g. seawalls or boundary walls) were ever deemed necessary to protect infrastructure or property, to have these located as close to the level of the first makatea bench rather than at the shoreline

Source: SPREP 2014, PACC Technical Report 12, p. 35.
Reproduced with permission by SPREP

As with many island and atoll nations, land availability and an overall vulnerability to climate change means that internal migration is also challenging (Ash & Campbell 2016). Given that the largest of the Cook Islands, Rarotonga, is 11.2 kilometres across at its widest point and that the entire Cook Islands population, resident and visitor, will be within five kilometres of the coast regardless of which island they are on, large scale internal migration does not appear to be a useful adaptive strategy with regard to sea level rise or the impact of increasing extreme weather events. Rather, Cook Islands has focused on building sustainability and resilience in its communities and economy.

In 2016, the Government of the Cook Islands released its *National Sustainable Development Plan 2016 – 2020* (NSDP) setting out sixteen national goals and their indicators. These sector-based development goals built upon the eight that comprised the previous plan (2011-2015) and are closely aligned with the Pacific Regional Framework and the United Nations Sustainable Development Goals (SDGs) (Government of the Cook Islands 2016). In addition to a stand-alone goal to 'strengthen resilience to combat the impacts of climate change and natural disasters', the impact of climate change is highlighted as an issue of concern in three additional goals:

- sustainable management of water and sanitation;
- achieve food security and improved nutrition, and increase sustainable agriculture; and
- sustainable management of oceans, lagoons and marine resources.

The focus for the stand-alone climate goal is on promoting resilient communities, enhancing protection from cyclones, and building resilient infrastructure. The NSDP also acknowledges that

‘the effects of climate change impact on all facets of Cook Islands life, from public infrastructure to food security’ and further states that ‘in the next five years we must continue to take appropriate actions to prepare our country for the current and future challenges of climate change and natural disaster’ (p. 44).

With regard to climate change, Cook Islands’ vulnerability is impacted twofold by its economic dependence on tourism. Not only is the sector as a whole vulnerable to external factors, as evidenced by the impact of global financial crises and the COVID-19 pandemic, but it is also recognised that tourism, if not developed sustainably, can damage or destroy the natural environment that, in the case of Cook Islands and similar destinations, is the primary attraction (United Nations 2005). To manage this, it has been advised that:

- the impacts of tourism development are monitored to ensure that tourism development and social and environmental priorities are mutually supportive at all levels;
- partnerships are utilised in developing guidelines and best practices to appropriately assess carrying capacity;
- sustainable tourism development plans are developed and implemented in partnership with relevant stakeholders, including the private sector, and are integrated into national strategies for sustainable development; and
- community-based initiatives on sustainable tourism are developed and implemented, including building the necessary capacities of civil society and local stakeholders, while protecting culture and traditions and conserving natural resources (United Nations 2005).

An evaluation of Cook Islands tourism sector support in 2015 reported on new standards, regulations, and practices relevant to the environmental sustainability of the sector, including those related to water and sanitation, lagoon water quality, and the use of more fuel-efficient aircraft (Wilson, Corbett & Lanham 2015). It has also been suggested that improving environmental education programs, modifying transport vehicles, and supporting local brewing and agriculture practices would contribute to a more environmentally sustainable tourism sector (SPREP 2004; Tyedmers et al 2020).

Cook Islands creation of Marae Moana multiple-use marine park in 2017 further aligns with the advice outlined above. Marae Moana encompasses the entirety of Cook Islands exclusive economic zone and, in the words of the Prime Minister at the time:

> *will provide the necessary framework to promote sustainable development by balancing economic growth interests such as tourism, fishing and deep-sea mining, with conserving core biodiversity and natural assets, in the ocean, reefs and islands. (Puna 2017)*

In addition to fulfilling Cook Islands commitment to the global target of protecting 10% of coastal and marine areas by 2020 under the Convention of Biological Diversity, Marae Moana also provides support for coastal traditional marine protected areas and marine reserves. Further, in terms of both creation and management, Marae Moana is a collaborative endeavour, engaging with government, traditional leaders, and local communities as well as religious, private sector, and NGO leaders (Government of the Cook Islands n.d.). The management structure also includes a Technical Advisory Group made up of representatives from the formal body of traditional chiefs, organisations with marine science and social policy expertise, and relevant government ministries (Government of the Cook Islands, n.d.).

This practice of, and commitment to, engaging with a broad range of Cook Island stakeholders for the broader benefit of Cook Islands is consistent with the cooperative approach Cook Islands is taking with regard to climate change adaptation and environmental initiatives as well as sustainable development more broadly. It also aligns with the goals of the NSDP in its efforts to 'ensure a sustainable population, engaged in development for Cook Islanders by Cook Islanders' that aims, in part, to address the issue of 'continued outward migration [that] calls into question the very viability of many of our island communities' (p. 48).

5.3.3 Migration patterns and trends

While Cook Islands is an independent, self-governing country, its Free Association relationship with New Zealand creates distinct regional migration opportunities for its citizens. In addition to being considered New Zealand citizens, Cook Islanders also benefit from the Trans-Tasman Mutual Recognition Agreement between Australia and New Zealand, which allows an ease of access into Australia that is not available to other Pacific Islanders, with the noted exception of Niue, which is also in Free Association with New Zealand. When measured as a percentage of total population, Niue and Cook Islands consistently rank as the first and second country of origin, respectively, for migration in Asia and the Pacific (ESCAP 2020). The combination of a relatively small population and high level of emigration equates to 128.2% of Cook Islands resident population emigrating in 2019 and 96.1% in 1990 (ESCAP 2020).

Historically, Cook Islands has experienced a high level of emigration for decades. In the intervening years between 1995 and 2011, the population of Cook Islands decreased by almost half due in large part to emigration as a response to two global financial crises that impacted heavily on Cook Islands' economy. Between 1996 and 1998, the Asian Financial Crisis caused an 11.0% decline in Cook Islands' GDP, resulting in public service cuts that in turn triggered a 16.9% reduction in Cook Islands' resident population as emigration to New Zealand, and subsequently Australia, increased (Homasi & Webb 2020). A decade later, the Global Financial Crisis led to a decline of 3.5% of Cook Islands' GDP in the 2008 fiscal year with a much smaller, although still declining, associated impact on population size (Homasi & Webb 2020; UNDESA 2019). This time

period also saw a shift in Cook Islands' urban population, from 58.7% in 1995 to around 73.5% in 2011 (UNDESA 2018). More recent demographic indicators include crude net migration rates between -7.3 and -2.0 and an urban population of around 75% (SPC 2016 & 2020; UNDESA 2018). Based on overseas census data, this practice of emigration has created a substantial and growing diaspora of Cook Islanders in New Zealand and Australia whose size far exceeds that of the resident population. Unlike the faster growth of the Tongan diaspora in New Zealand (Table 5.5), the Cook Islands diaspora is growing faster in Australia, and while the rate of growth has declined in Australia in the more recent period, it has increased substantially in New Zealand (Table 5.9).

Table 5.9: Cook Islands diaspora in Australia (2006, 2011, 2016) and New Zealand (2006, 2013, 2018)

	Census 2006	Census 2011 |2013	Census 2016 | 2018	Annual rate of change (%) 2006 - 2001/13	Annual rate of change % 2011/12 - 2016/18
Australia	11,400	16,191	22,228	8.4	7.5
New Zealand	58,008	61,839	80,532	1.3	6.0

Source: Created by the Author; refer data Batley 2017 (AU) & Stats NZ (NZ)

As mentioned previously, the fluidity of the Cook Islands population, both resident and total, can cause difficulty with regard to accurate statistics related to tourism and migration. An illustration of this is presented in Table 5.10, which, based on net arrivals and departures of Cook Islands residents, indicated the resident population has been increasing since 2017, despite reports of negative net migration throughout the same time period.

Table 5.10: Cook Islands total arrivals and departures, 2016-2020

Period	Total			Visitors			Cook Islands Residents		
	Arrivals	Departures	Excess [1]	Arrivals [2]	Departures	Excess [1]	Arrivals	Departures	Excess [1]
YEAR									
2016[p]	159,219	158,931	288	146,473	145,014	1,459	12,746	13,917	-1,171
2017[p]	174,776	173,762	1,014	161,362	160,496	866	13,414	13,266	148
2018[p]	182,845	182,669	176	168,760	168,833	-73	14,085	13,836	249
2019[p]	187,226	187,596	-370	171,550	173,382	-1,832	15,676	14,214	1,462
2020	30,081	35,452	-5,371	25,230	31,723	-6,493	4,851	3,729	1,122

Source: Cook Islands Statistics Office, Tourism and Migration Statistics – August 2021
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Further complicating the assessment of the impact of tourism and migration are studies that examine the link between the two and indicate that migration increases visiting friends and relatives (VFR) tourism in both directions. One 2020 analysis noted that the 'collective expenditure of mostly international visitors which includes a considerable number of overseas-based Pacific Islanders visiting friends and relatives in their home countries has direct, indirect and induced

effects across the different sectors of the PICTs economies' (Lal 2020). For Cook Islands, such effects are more pronounced than for most Pacific Island countries, with the number of overseas visitor arrivals per year steadily increasing, with the noted drop due to COVID-19, (Figure 5.23) and frequently in excess of eight times its population (SPC 2015).

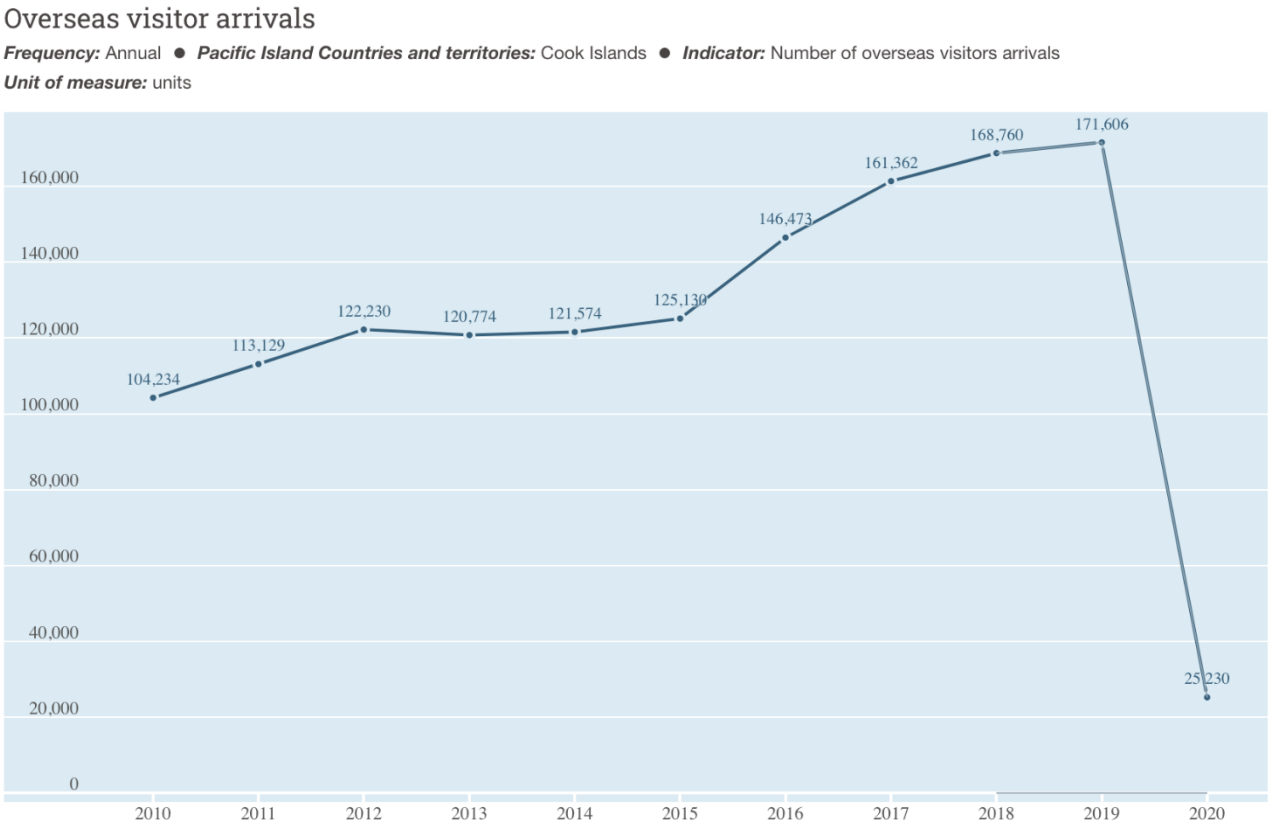

Figure 5.23: Cook Islands overseas visitors 2010 – 2020
Source: SPC, Statistics for Development Division, Overseas Visitor Arrival Dataset
Reproduced with permission under Educational and Research Purposes by SPC

This has resulted in recent concerns regarding sufficient labour to support the tourism industry due to the emigration of Cook Islanders, thus necessitating labour immigration from other countries in the region (APPF 2020). Related to this are anecdotal indications that Pacific Islanders more broadly, as with many Cook Islanders themselves, are not interested in working in Cook Islands when they have the opportunity for higher wages and better long-term prospects in Australia or New Zealand (APPF 2020; Author, *Consolidated Field Report – Tonga*).

5.3.4 Achieving the Sustainable Development Goals

As with Tonga, reported progress toward achievement of the SDGs shows Cook Islands as having fully achieved Climate Action Target 13.1 - *Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries* – with the other Climate Action Targets not measured due to having no established methodology (Figure 5.24).

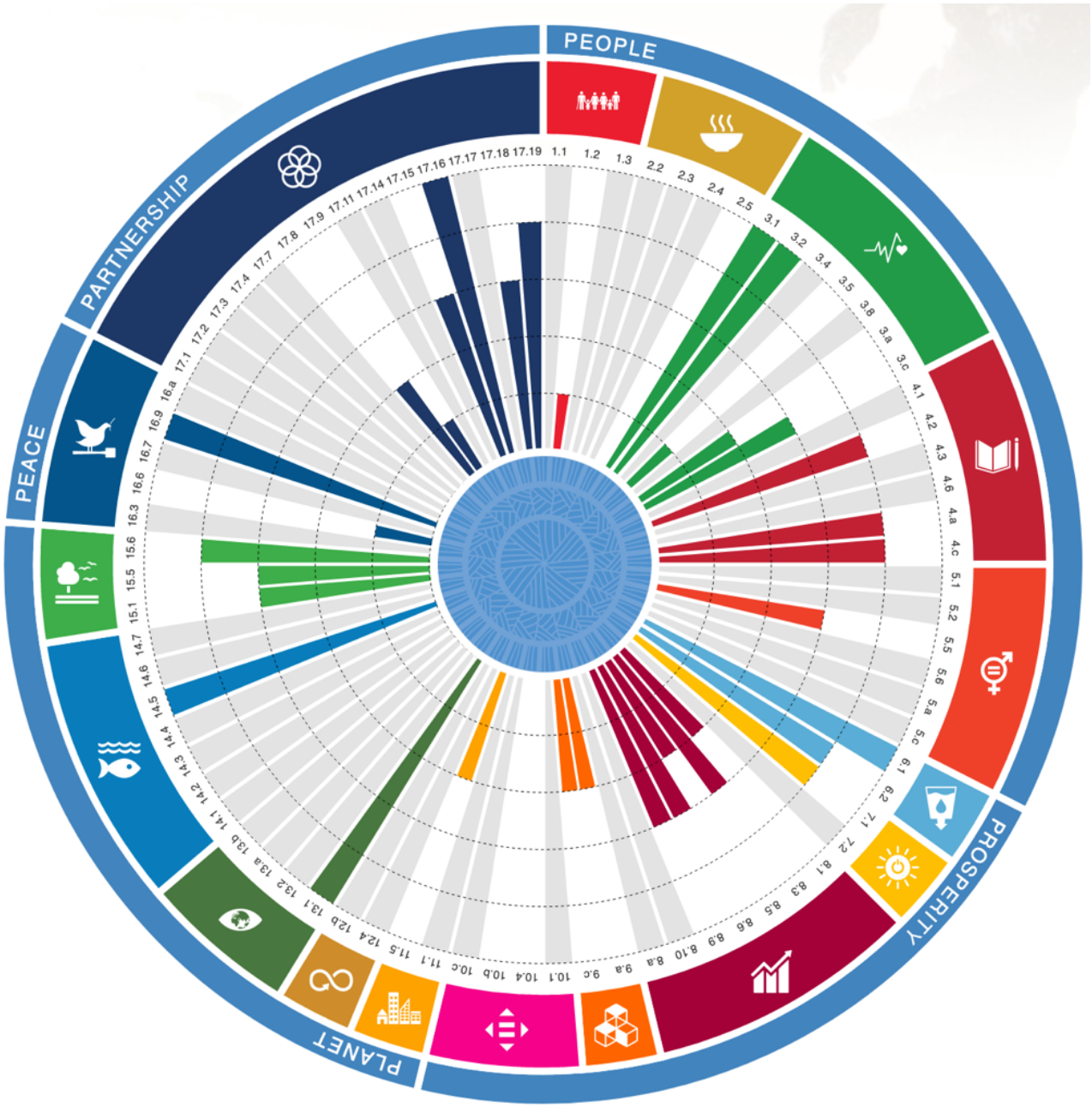

Figure 5.24: SDG Progress Wheel for Cook Islands, 2021
Source: Pacific Data Hub, Sustainable Development Goals in the Pacific Dashboard, 2021
Reproduced with permission under Informational, Educational and Research Purposes by SPC

Despite this, there are clear indications that Cook Islands are making progress toward *integrating climate change measures into national policies* (Target 13.2) and *promoting mechanisms for raising capacity for effective climate change related planning and management in … small island developing States* (Target 13.b) through its National Sustainable Development Plans and initiatives such as Marae Moana. Further, the creation and broader utilisation of the Cook Islands Coastal Calculator, as well as the engagement that went into the overall project speaks to Cook Islands commitment to *improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning* (Target 13.3).

Cook Islands has also fully achieved six other Targets and made good progress toward seven more. Among those fully achieved is SDG 14 Life Below Water (conserve and sustainably use the oceans, seas and marine resources for sustainable development) Target 14.5, which calls for countries to *conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information* by 2020. The designation of Cook Islands exclusive economic zone as a sustainable marine park was a strong step in this direction, as was the inclusion of a goal for the sustainable management of oceans, lagoons and marine resources in the National Sustainable Development Plan. The added establishment of protected areas around all islands comprising 16% of the exclusive economic zone firmly achieved this Target. Arguably, under the same initiative some progress has also been made toward Target 14.2 aimed at sustainably managing and protecting marine and coastal ecosystems. However, the continued focus on tourism, which can severely damage such ecosystems at scale, and proposals for increased support for fisheries and deep-sea mining may undermine true progress in this area.

Given Cook Islands economic dependency on tourism and the related complications of workforce and migration, their average progress toward Targets associated with SDG 8 Decent Work and Economic Growth is somewhat expected. The creation of Marae Moana as a sustainable marine park with designated zones for tourist activities and the robust management strategy around it may aid in achieving SDG Target 8.9: *By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products,* although arguably the volume of visitors may need to reduce for Cook Islands tourism sector to become truly sustainable.

The SDG for which Cook Islands appears to have made the broadest and highest achievement is SDG 17 Partnerships for the Goals. This includes full achievement related to enhancing cooperation around knowledge sharing, science, and technology (Target 17.16) and decent progress toward shared capacity-building in areas of technology, policy and planning, and data (Targets 17.8, 17.9, 17.15, 17.18. 17.19).

5.3.5 Cooperation for adaptation

It is this area of partnerships and cooperation that appears to typify Cook Islands approach to sustainable development and to environmental and climate change initiatives more broadly. In announcing Cook Islands' target to generate 100 percent of its electricity from renewable sources by 2020, the Prime Minister made the point that it was important to 'practice what we preach including addressing the harmful effects on our environment' (SPREP 2011). As such, Cook Islands, along with the six other Pacific Island countries to commit to such a target, took a 'coordinated and consultative approach at all levels (local, national and regional)' in order to remove any barriers that might hinder the achievement of the goal (Agarwal 2015). They also developed regional partnerships, built consensus among stakeholders, attempted to draw synergies with follow-up activities, and increased regional cooperation to build readiness. The

regional approach of addressing the goal in partnership and cooperation with one another had a number of benefits, including: making the implementation of projects more attractive and viable, increasing access to decentralised renewable energy technologies that would have otherwise been unaffordable, and building managerial and technical capacity at all levels, thus shifting the focus for technology transfer from hardware to skills-based training (Agarwal 2015).

A similar cooperative approach has been taken with regard to data collection and its role in evidence-based solutions and goal achievement. Historically, Cook Islands has often been excluded from large scale global comparisons and data collection and synthesis initiatives such as ND-GAIN, the World Risk Index, and World Bank Group development indicators. However, this paucity of data has lessened in recent years, arguably due to the focus on, and funding for, increased data collection and statistical analysis encouraged by the United Nations and included as both Targets and Indicators within the Sustainable Development Goals. This level of global attention and support has enabled regional organisations and institutions to focus on data collection, monitoring, and information more broadly, including by establishing partnership initiatives that undertake research, data gathering, and information dissemination on and with Cook Islands. For example, Auckland University of Technology's Tourism Research Institute (TRI) has begun managing data initiatives in Cook Islands as well as other Pacific destinations with a view toward providing consistent monitoring of International Visitor Surveys, business confidence indices, and consumer attitudes surveys. TRI, in partnership with the Pacific Community (SPC), is also working toward consistent Pacific tourism research and dissemination and the development of a Regional Tourism Statistics Strategy (Pacific Islands Forum Secretariat 2020).

5.4 Conclusion

Despite being a planetary problem that requires a global solution, the impacts of climate change on human populations are profoundly local. Even across the Pacific, a region recognised as highly vulnerable to sea level rise, increases in extreme weather events, and ocean acidification, how those impacts manifest for a particular population can be highly specific. For countries like Tonga and Cook Islands, for which the risk and impact of climate change is great and the lack of international agreement and action with regard to climate change has significant impact, regional approaches and smaller partnerships and coalitions offer an alternative to international assistance and attention that has been slow in coming.

Tonga's concerns are broad, reflecting both the physical and demographic composition of the country. Plans, strategies, and policies are updated and revised to provide a consistent focus on an overarching strategy of creating a Resilient Tonga by 2035. This includes consideration of agricultural practice, fisheries, infrastructure, drought, water, gender, and youth. Conversely, Cook Islands' primary focus is on tourism, with related concerns regarding economic and labour dependency on the sector. Recent initiatives aimed at environmental protection and preservation

include future options for diversification while also addressing the issues of coastal communities and related infrastructure. Their respective approaches reflect a similar dichotomy, with Tonga engaging widely throughout the region and internationally, while Cook Islands has a narrower focus for collaboration and partnership within the region.

This chapter has presented two case studies that illustrate the specific challenges that can occur at the intersection of climate change and migration, including how the diaspora may impact both issues. It further highlighted the role that sustainable development, and the Sustainable Development Goals in particular, can play in adapting to a changing environment. The next chapter will use these case studies as the foundation for a broader discussion of regional approaches to these issues and identify opportunities for enhanced regional engagement.

CHAPTER 6 CONVERGING REGIONAL RESPONSIBILITIES

This chapter provides further analysis of the research findings through a comparison of the Tonga and Cook Islands case studies and highlights possible implications for other Pacific Island countries. It reconsiders the applicability of the Sustainable Development Goals to addressing climate change and migration in the Pacific region, thus contributing to research Objective 4, and evaluates emerging engagement trends within the region, with a particular focus on the approaches of Australia and New Zealand, which addresses research Objective 3. These discussions form the foundation for an examination of the potential benefits of a regional enabling environment grounded in collaboration and partnerships and identifies opportunities for expanded engagement in the region. As such, this chapter also contributes to research Objectives 2 and 5.

6.1 Introduction

The two case studies presented in Chapter 5 illustrate the complexity present at the intersection of climate change and migration for Pacific Island countries and territories. The selection of Tonga and Cook Islands specifically allows for a comparison of situations and contexts that reflect the diversity of Pacific Island countries' approaches to these issues and the role of the Sustainable Development Goals (SDGs) in addressing them. Despite similarities in subregional location (Polynesia), history and practice of migration, and severe vulnerability to the impacts of climate change, Tonga and Cook Islands differ considerably in size, economy, island structure, affiliation, and development status. This combination of factors influences their respective focus and approach to managing the impacts of climate change both physically and economically, with due consideration of their population structures and highly mobile populations.

The case studies of Tonga and Cook Islands have implications for other Pacific Island countries that may have similar physical, demographic, and/or economic characteristics. For example, Niue and Palau share many similarities with Cook Islands, including free association status with major trade and development partners and relatively small populations. This has implications for aid, support, and pathways for migration as well as development status due to the per capita income generated as a result of their islands' attractiveness as tourist destinations (Homasi, Rabanal & Webb 2021). Palau, like Cook Islands, has taken an active approach to managing their ocean resources, having made 80% of its marine area a sanctuary in a combined effort to protect and conserve the marine environment and attract tourism revenue (APPF 2020). Similarly, Tonga and Samoa have much in common, with a high reliance on overseas labour migration and its associated remittances as well as similar population structures relative to the rest of the Blue Pacific Continent. For both countries, a reduction in remittances would not only impact individual and household standards of living, but potentially the ability of the country to effectively respond to the projected increase in natural disasters as a result of climate change. Tonga and Samoa also

face similar development challenges and vulnerabilities with regard to health, disaster risk, and debt distress are the only two Pacific Island countries with access to grant-only financing from international financial institutions (Webb & Tinio 2021).

More broadly, the analysis of the case studies showed the extent of collaboration among Pacific Island countries in their approach toward climate change adaptation and mitigation. In addition to leveraging their collective voice in global and Asia-Pacific forums, they actively promote and participate in joint initiatives for disaster risk management, renewable resource development, climate change resilience, data collection, and emergency management and response. The majority of these projects and initiatives are externally funded either at the country or regional level, adding to the interconnections, and in some cases shared challenges, among them. The United Nations is instrumental in the region, primarily through the SDGs but also through various department level funding. Similarly, the World Bank Group and the Asian Development Bank have financed a number of regional research and development initiatives focused on climate change adaptation as well as migration. Country level funding is frequently in the form of financial aid, either grants or loans, primarily from Australia, European Union, New Zealand, and the United States, with increasing contributions from China and Japan.

6.2 Reconsidering the Sustainable Development Goals

On the basis of the literature examined prior to conducting the case studies, the conclusion was made that SDG 13 Climate Action, SDG 17 Partnerships for the Goals, and the 2030 Agenda's attention to migration and SIDS could act as a catalyst for action on issues at the intersection of climate change and migration in the Blue Pacific Continent. However, the case studies demonstrate that a number of other SDG Targets are equally applicable to these issues, regardless of their categorisation within the SDGs as a whole. This is particularly true with regard to addressing the impacts of climate change, which are dependent not only on physical characteristics of place but also demographic ones.

In both of the case studies, the greatest concern related to climate change is the projected increase in the number and intensity of extreme weather events. Examining this specific impact more closely with regard to the SDGs highlighted additional Targets that Pacific Island countries should consider integrating into climate adaptation and resilience plans. A number of these SDG Targets were identified in a Global Climate Risk Index briefing report (Kreft et al 2016) analysing the impacts of extreme weather events globally in order to contribute to the broader conversation on climate policy and action. The report reiterates the vulnerability of small island developing States to 'exceptional catastrophes' and climate risks while identifying thirteen Targets across five SDGs directly related to managing climate disasters (Kreft et al, p. 15). Along with SDG 13 Climate Action and its five associated Targets, the report highlights Targets related to:

- reducing exposure and vulnerability to climate-related extreme events (SDG 1 No Poverty Target 1.5);
- sustainable food production systems and resilient agricultural capacity for adaptation to climate change and extreme weather event (SDG 2 Zero Hunger Target 2.4);
- sustainable and resilient infrastructure, buildings, and development, including financial and technical support (SDG 9 Industry, Innovation and Infrastructure Targets 9.1, 9.4, 9.a and SDG 11 Sustainable Cities and Communities Target 11.c);
- reduced deaths and economic losses from disasters (SDG 11 Sustainable Cities and Communities Target 11.5); and
- integrated policies that include resource efficiency, mitigation and adaptation to climate change and disaster risk reduction (SDG 11 Sustainable Cities and Communities Target 11.b)

Despite their relevance, four of these Targets (1.5, 9.1, 9.4, and 11.c) are not included in the subset of SDGs selected by the Pacific SDG Taskforce as part of the Pacific Roadmap for Sustainable Development (SPC 2018). Returning to the case studies, Tonga is reported as fully achieving one of the included Targets (13.1) which is to strengthen resilience and adaptive capacity to climate related hazards and natural disasters, but only having made minimal progress toward two others (9.a and 11.5); the remaining Targets are considered not measurable or as having insufficient data (Pacific Data Hub). Cook Islands is also reported as fully achieving Target 13.1 and making some achievement toward 9.a and 11.5 (Pacific Data Hub). In spite of this, the case studies show clear progress on the part of both countries to reduce their vulnerability, improve infrastructure, and create policies that include adaptation to climate change and disaster risk management as highlighted in the listed Targets above. In the case of Tonga, sustainable food production and resilient agriculture is also a stated priority within climate change strategies and plans.

Similar arguments can be made for SDG 14 Life Below Water. Out of the nine Targets included in the Pacific subset, Cook Islands reports only one Target achieved and Tonga reports average or good progress on two others, with all the remaining Targets lacking measurability (Pacific Data Hub). Similar results are reported for the Pacific Region as a whole (excluding Australia and New Zealand).

However, lack of reported progress is not an indication of lack of action on this Goal. The insistence on the part of Pacific Island countries for the inclusion of SDG 14 Life Below Water as a focus of sustainable development and a dedicated goal for oceans and marine health is in keeping with their role as ‘global ocean guardians’ and members of the Blue Pacific Continent (Diver 2018; Quirk & Hanich 2016). Both Tonga and Cook Islands are implementing strategies to address the Targets associated with SDG 14 Life Below Water, in particular:

> **Target 14.7** By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

Further, due in part to the sustained focus of Pacific Island countries and their global small island state counterparts, the last five years have seen an increasing focus on the role of the ocean in sustainable development and planetary health. In June 2017 there was the UN Summit on the Ocean SDG (SDG 14), followed in September 2017 by the UN Secretary General appointing the first UN Special Envoy for the Ocean. Finally, the UN Decade of Ocean Science for Sustainable Development has just began, running from 2021-2030. This may increase measured progress on the part of Pacific Island countries with regard to SDG 14 Life Below Water, as it may for the rest of the world.

Due to the interconnected nature of the SDGs, a number of other SDGs and Targets are also relevant to the issues of climate change and migration in the Pacific region, both tangentially and directly. One such Goal is SDG 5 Gender Equality - achieve gender equality and empower all women and girls. As discussed previously, research has shown that women are disproportionately impacted by climate change and that the opportunities for migration and economic independence are comparatively limited. Within the context Tonga and similar Pacific Island countries that have a culture of migration and reliance on remittances, both nationally and domestically, the impact on women is then multiplied. Many women have less opportunity to migrate than men, resulting in less financial security and autonomy in a remittance culture as well as additional unpaid responsibilities related to family and community support. Understanding the importance of these issues, Tonga has taken steps to integrate gender into its broader strategies and policies, and has reported full achievement of:

> **Target 5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

Although SDG 5 Gender Equality Targets and Indicators do not directly address the impact for women in the areas of climate change and migration (trafficking excepted), they do reflect both the need for women's engagement and agency in these areas as well as the mechanisms through which this may be achieved.

Given the social and economic drivers of migration in the Pacific examined in the case studies, there is also scope and reason to include SDG 8 Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) and SDG10: Reduced inequalities (reduce inequality within and among countries) into integrated strategies and planning related to climate change adaptation and migration plan.

However, equally important for the Pacific is the emphasis on youth and youth engagement included within the SDGs. In much the same way that migration is not a stand-alone Goal, and yet is addressed throughout the 2030 Agenda and the SDGs, so too is youth.

While Cook Islands is representative of a handful of other Pacific Island countries with small populations and relatively low proportion of youth, many others have a significantly larger populations, high fertility, and a large, and increasing, proportion of youth. When considered alongside other Pacific Island countries and territories, Tonga could be viewed as a mid-point in terms of population structure and proportion of youth, noting that its practice of migration is contributing to a decrease in both total and youth population. Melanesian countries in particular are confronting significant issues in this area, with some of the highest global levels of fertility and population growth resulting in a large youth population looking to enter the workforce (Hugo et al 2010). Melanesia also does not have the same history and culture of migration as Tonga, Cook Islands, and many other Polynesian countries and territories. As such, it has not been able to utilise migration as either an economic or social 'safety-valve' that can act as a stabilising factor for the population and the economy.

In 2010, the *World Youth Report: Youth and Climate Change* (UNDESA 2010) stated that 'the combined acumen and involvement of all individuals, from regular citizens to scientific experts, will be needed as the world moves forward in implementing climate change mitigation and adaptation measures and promoting sustainable development' (p. 48). It went on to discuss the importance of both engaging and preparing youth to participate in these activities, with the acknowledgement that 'existing participatory mechanisms frequently do not allow them to contribute meaningfully to the decision-making process' (p. 49). This is despite continued high level acknowledgement that youth offer 'unique perspectives that need to be taken into account' with regard to 'the building and designing of the future' (United Nations 1995, para. 104).

These ideas are reflected in the SDG Targets that specifically mention youth: two for SDG 4 Quality Education, two for SDG 8 Decent Work and Economic Growth, and one for SDG 13 Climate Action, as follows:

> **Target 4.4** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
>
> **Target 4.6** By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
>
> **Target 8.6** By 2020, substantially reduce the proportion of youth not in employment, education or training.

> **Target 8.b** By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.
>
> **Target 13.b** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

Tonga's high education and literacy rates are an advantage in this area. Further, Tonga has developed dedicated plans and policies for youth related to skills development and employment, including specific consideration of disaster risk management and the intention to align national youth strategies and action plans with its climate change policy. However, Tonga's reported progress toward the youth related SDGs listed above shows only minimal progress toward one Target (8.6) (Pacific Data Hub).

Arguably, for the Blue Pacific Continent the SDGs are an effective focal point and catalyst, but not necessarily as useful as an indicator of measurable achievement. This is consistent with argument that the SDGs are a concept, not a practice, and cannot be 'achieved' in a manner similar to that of the Millennium Development Goals that preceded them (Glennie 2020). In other words, the SDGs provide a framework and an enabling environment: a lens through which activities and priorities can be viewed, focused, and realised.

It is in this capacity that SDG 17 Partnerships for Goals, is best understood. It has been shown that having multiple stakeholders working on the SDGs increases the rate of success and achievement (Sachs 2015a, 2015b). SDG 17 Partnerships for the Goals reflects this, containing the most Targets of any of the SDGs, nineteen in all, and 1,303 global actions to date, second only to SDG 14 Life Below Water, with 2,046 (UNDESA n.d.b). A particular area of focus for SDG 17 Partnerships for the Goals is that of *Data, monitoring and accountability,* a subsection containing two Targets:

> **Target 17.18** By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts
>
> **Target 17.19** By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

The existence and availability of data on and for the Pacific is an ongoing point of concern and has significant implications for development. A number of reports have noted the difficulty in obtaining

sufficient economic, population, and/or climate data for Pacific Island countries and territories, resulting in their omission from larger datasets as well as subsequent analysis and rankings (see Eckstein et al 2020; Kreft et al 2016; ND-GAIN n.d.; Pacific Islands Forum Secretariat 2020). While there has been progress with regard to data collection and statistical capacity within the Pacific region, due in large part to the SDGs, obtaining accurate and consistent data for Pacific Island countries and territories remains challenging, especially longitudinal data. Much of the available information comes from the World Bank Group, the Asian Development Bank, and the United Nations, resulting in a lack of inclusion of Pacific Island countries or territories without full membership or affiliation. Data is often unavailable or not measurable, particularly comparative data that would allow Pacific Island countries to be included or ranked within the larger environmental and climate framework of risk and vulnerability assessment. For example, the Notre Dame Global Adaptation Initiative (ND-GAIN) presented as part of the Tonga case study utilises data from World Bank Group, the Food and Agriculture Organisation of the United Nations, United Nations Statistics Division, and the National Oceanic and Atmospheric Administration, among others. Yet it notes that there is not enough data available to determine country ranking within their vulnerability-sensitivity assessment for five of the Pacific Island countries included, with others, such as Cook Islands, not mentioned at all.

This was a consistent theme over the course of the case studies: the availability of data and inclusion, or not, of Cook Islands in broader datasets relating to climate change, migration and the SDGs. An early assumption was that independent, as opposed to territorial, status would better ensure inclusion in research, data collection, or attention on a global scale. This has not been shown to be the case historically for Cook Islands, although recent efforts on the part of the Pacific Community, particularly its Statistics for Development Division, have made progress in recent years. Despite the increased funding and focus on the need for Pacific data, it is still a point of concern. All of the Voluntary National Review reports presented by Pacific Island countries and territories at the 2019 High-level Political Forum on Sustainable Development, of which Tonga was one, ‘demonstrated that many of the challenges of data paucity and capacity remain prevalent across the region’ (Pacific Islands Forum Secretariat 2020). This continued marginalisation is problematic, both within the context of climate change and migration, but also more broadly with regard to engagement and participation in the partnerships, coalitions, and affiliations that are needed to effectively address these complex global issues.

Even where there are initiatives underway to address this issue, they still may not address the needs of the Blue Pacific Continent. One such initiative is the Subnational SDG Dashboard, parts of which are still under development at the time of this writing, which has a stated aim of contributing to SDG 17 Partnerships for the Goals Target 17.18 *increasing significantly the availability of high-quality, timely and reliable disaggregated data.* The Dashboard has not yet constructed the data, maps, reports, and rankings related to natural disasters or regions

considered coastal. While one such indicator, that measuring the incidence of climate-related disasters in the region, is part of SDG 13 Climate Action, two others, measuring the impact and incidence of natural disasters in the region respectively, are reflected in SDG 11 Sustainable Cities and Communities. It is unclear how 'climate-related disasters' and 'natural disasters' will be differentiated. Again, similar to many global databases, while Tonga is included in the region and country datasets, Cook Islands is not.

A related area of focus within SDG 17 Partnerships for the Goals that is of particular significant to Pacific Island countries is that of knowledge sharing and capacity building through enhanced North-South, South-South, and triangular regional and international cooperation (Targets 17.6 and 17.9). Both of the case studies demonstrate a commitment to these types of partnerships and cooperative activities. More broadly, it is in this area that the role Australia and New Zealand as regional partners provides new opportunities for broader engagement with the Blue Pacific Continent.

6.3 Renewed regionalism of Australia and New Zealand

The discussion of Pacific regional engagement presented in Chapter 2 highlights the shifting identity of Pacific Island countries and territories and the role of Australia and New Zealand in the region. As mentioned, the approaches these two developed countries take toward managing the effects of climate change and addressing issues of regional migration can have significant impact on Pacific Island countries. Climate change is arguably the more contentious issue. Both Australia and New Zealand have been reluctant to support calls to action, ambitious targets, or formal declarations on climate change that are in keeping with the position that climate change poses the greatest risk to Pacific Island countries' survival. Migration is principally viewed in terms of labour migration, with Australia and New Zealand's labour migration schemes the primary source of remittances for many Pacific Island countries.

There are indications that the positions of Australia and New Zealand on these issues may be shifting. Both countries have developed strategic approaches to the Pacific in the form of the Pacific Step-up (Australia) and Pacific Reset (New Zealand) with stated aims of providing stability and security in the region. These initiatives are in large part a response to the increasing interest of China in the Pacific and are an attempt on the part of Australia and New Zealand to limit China's influence on Pacific Island countries. In practical terms, the Step-Up and Reset provide integrated approaches for their respective countries in engaging with the Blue Pacific Continent, including addressing issues of labour migration, skills development, resource allocation, and financial support. Further, they provide a consistent regional focus for national policies related to foreign policy, defence, and immigration as well as a commitment to strong partnerships with Pacific Island countries and active collaboration with select developed nations on regional issues.

These positions, and their relationship to climate change and migration, are made clear in the recent defence strategies of Australia and New Zealand, both of which have begun placing increasing emphasis on regional engagement. Australia's 2016 Defence White Paper identifies South Pacific Island countries as part of Australia's 'immediate neighbourhood', acknowledges the challenges the region would experience as a result of climate change, and recognises that the impacts of sea level rise and extreme weather events would 'exacerbate the challenges of population growth and environmental degradation' (Australian Government 2016, paragraph 2.68). In response to these issues, Australia intends to take a regional leadership role in close collaboration with Japan, New Zealand, the United States, and other nations, including through the deployment of the Australian Defence Force to humanitarian and disaster relief operations in the region (Brangwin et al 2015; Australian Government 2016; ASPI 2020, Department of Defence 2020).

The New Zealand Government's Defence Capability Plan (2019) similarly identified a number of security concerns associated with climate change, among them the potential for violence as a result of mismanaged adaptation or migration. It further recognised that the broader 'Pacific region, including New Zealand, will continue to be impacted by the intensifying impacts of climate change' and that 'climate change will be one of the greatest security challenges for New Zealand defence in the coming decade' (paragraph 95). As a consequence, it anticipates that the Pacific Islands' will require increased levels of assistance, with 'key implications' for New Zealand including increased humanitarian assistance, disaster relief and response, and stability operations as well as more and broader search and rescue missions (New Zealand Government 2019). New Zealand is clear in its assessment of the threats posed by climate change, stating that:

> *with current warming rates, the links between climate change and security are on course to intensify, and without prioritisation the New Zealand Defence Force, as well as those of our partners, will be stretched with a growing number of tasks in response to climate-induced impacts globally' (paragraph 98).*

Similar to Australia, New Zealand's emphasises on partnerships and cooperation within the region is clear, including on the part of Pacific Island countries themselves. It encourages Pacific Island nations to cooperate 'in fostering a secure, stable and resilient region' by 'leverag[ing] respective strengths and coordinat[ing] complementary approaches to meet Pacific security needs' (New Zealand Government 2019, paragraph 66). Consistent with this approach, a 2020 report on Pacific contributions to peacekeeping released by the Australian Strategic Policy Institute (ASPI) advises that there would be considerable benefit in Australia and New Zealand taking a coordinated approach to identify areas in which Pacific Island countries are interested in support and acknowledges climate change as a security challenge that has become increasingly pressing in recent years (Sharland & Feely 2020).

In monetary terms, support from Australia and New Zealand for climate change related issues has been gradually increasing. In 2016, Australia announced a $300 million package, over four years, to support climate change and resilience in the Pacific, with a focus on climate research and information, building resilience and increasing country capacity to respond to disaster events (DFAT 2018). In Tonga, as in other Pacific countries, this support manifested as increased capacity of meteorology services and sea level rise measurement, improved access to climate information, technical support to integrate climate change across programs, and a strengthening of the Pacific Risk Resilience Program (DFAT 2018). In 2019, the Australian Government increased their intended expenditure in this area, pledging $500 million from 2020-2025 for Pacific climate change and disaster reliance as part of their Climate Change Action Strategy (2020-2025). In doing so, it also acknowledges the need for further integration and stronger engagement with the private sector to find solutions for the challenges of climate change and disaster resilience in the Pacific.

In October 2021, New Zealand announced that it is quadrupling its support to Pacific Island countries most affected by climate change. This includes $1.3 billion over four years (2022-2025 inclusive) 'to assist lower income countries to protect lives, livelihoods and infrastructure from the impacts of climate change', with at least 50% of the funding going to the Pacific (New Zealand Government 2021c). The stated priorities for the funds are clean energy, storm resistant buildings, resilient crop development, and protecting communities from sea level rise and storm surge. In allocating this funding, New Zealand reiterated its responsibility as a comparatively wealthy nation to support other countries in preparing for and adapting to climate change, with the Minister for Climate Change noting that it would 'also further cement New Zealand's presence in the region as a constructive, supportive country, committed to a resilient, prosperous future for Pacific Islands' (Government of New Zealand 2021c).

6.3.1 Domestic approach to climate change

Despite these levels of financial support, domestic climate policies in both countries continue to impact their broader engagement with the Pacific. As detailed previously, the positions of Australia and New Zealand with regard to climate change have caused some difficulty for their relationships with Pacific Island countries, particularly the lack of support for limiting the rise in global temperature to 1.5 degrees ahead of the Paris climate summit in 2015 and refusal to endorse the Tuvalu Declaration in 2019 due to disagreements on emissions reduction, coal use, and the Green Climate Fund. Historically, Australia has tended to view policies addressing environmental issues such as climate change as completely separate to economic and social policies (Hugo et al 2010). As such, Australia's lack of domestic action and good climate policy has had an adverse effect in terms of reputation, political standing, and a weakening of its strategic position with regard to the Pacific (ASPI Climate Policy Forum 2020; O'Gorman 2019).

In 2018, Australia's Shadow Minister for Foreign Affairs characterised the importance of domestic climate change policy in stating that 'you can't have a Pacific policy if you don't have a climate change policy' (Wong 2018). That same year, the Department of Foreign Affairs and Trade identified the threats of climate change as including an erosion of community coping capacity, damage to critical infrastructure, and an undermining of development gains (DFAT 2018). This led to proposals that Australia should be 'leading climate change engagement within our region, with a focus on the Pacific' as an 'immediate priority' in order to mitigate concerns regarding Australia's regional and international standing and in response to Pacific Island countries extreme vulnerability to the impacts of climate change (Australian Labor Party 2019).

A report by the Australian Strategic Policy Institute (ASPI) further highlights the issues Australia will face regionally as a result of climate change, including increased climate hazards and the societal impacts they will cause (ASPI 2021). Although the report focuses primarily on Southeast Asia, the findings are also relevant with regard to the Pacific, particularly in light of Australia's Pacific Step-up and its focus on regional security. For Australia, an effective response to such challenges is to emphasise Australia's strengths, outlined in its Climate Change Action Strategy (2020-2025), as expertise in climate science and meteorology, energy, water, agriculture, infrastructure, adaptation, and disaster preparedness and response (DFAT 2019). These same areas are highlighted in the Australian Government's domestically-focused National Climate Resilience and Adaptation Strategy 2021-2025 (NCRAS), with a significant focus on improving climate information and encouraging collaborative investment and action.

The New Zealand Government intends to release its national adaptation plan by August 2022, having released its preliminary report in 2020. Similar to Cook Islands, much of New Zealand's adaptation response is focused on its vulnerability to sea level rise and its impact on coastal communities. As such, activities are already being undertaken to restrict development in coastal erosion areas, plan for managed retreat, reject alternations or extension to existing buildings in coastal zones, and discourage the construction of defences such as sea walls (Ministry for the Environment n.d.). It has also invested heavily in clean energy and emissions reduction, with targets for a carbon neutral public sector by 2025, reduction in net greenhouse emissions by 50% by 2030, and complete carbon neutrality by 2050 (New Zealand Government 2021a; New Zealand Government 2021b; New Zealand Government 2021d).

6.3.2 Growth of the Pacific diaspora

The earlier evaluation of bilateral estimates of migration stocks shows Australia and New Zealand as consistently the top two receiving countries for Pacific migrants, resulting in an expanding diaspora in both countries (see Chapter 3 for the full discussion). The last three census reports in each country indicate that, of the three subregions of the Blue Pacific Continent, Polynesia is the largest source of origin and the fastest growing Pacific Island regional group in both Australia and

New Zealand, followed by Melanesia, then Micronesia (Batley 2017; Stats NZ n.d.). This is reflective of the respective subregions' size as well as their relative engagement in Australia and New Zealand's Pacific labour programs. It may also reflect the historical reticence on the part of both Australia and New Zealand to accept migrants from Kiribati, Tuvalu, and the Melanesian countries (Campbell 2010).

New Zealand in particular has a history and practice of flexibility in its approach to Pacific Islander migration. Its willingness to establish quotas for a range of needs speaks to its commitment to Pacific Island countries. This includes a separate quota in place specifically for Pacific Islanders regardless of refugee status and the proposal, later abandoned as it was not of sufficient interest to Pacific Islanders, of a special refugee visa for Pacific Island residents forced to migrate due to sea level rise (Dempster & Ober 2020; Manch 2018; Ministry of Business, Innovation & Employment 2018b). New Zealand's immigration policies also include a number of options for Pacific labour migrants to transition to residents, although the pathways vary depending on the source country. For example, in 2016/17, 58% of the temporary workers from Fiji who became permanent or long-term (PLT) residents did so through the Skilled Migrant category, while 65% of temporary workers from Samoa, 71% from Tonga, and 73% from Vanuatu became residents through the Family visa stream (Ministry of Business, Innovation & Employment 2018b). In the same year, 1,121 people were approved for residence through the Samoan Quota Scheme, which allows Samoan citizens to be granted residence in New Zealand, and an additional 17,655 people were approved for residence through the Pacific Access Category, which was established for Pacific countries with which New Zealand has close cultural and historical ties, including Tonga, Fiji, Tuvalu, and Kiribati (Ministry of Business, Innovation & Employment 2018a). Both schemes include special provisions for partners and dependent children.

Conversely, Australia's approach to Pacific migration centres on its labour migration and skills development programs. Until recently, these programs were short duration, encouraged cyclical return, and had a clear emphasis on long-term sustainability and benefit for Pacific Islanders, Pacific economies, and Australian businesses. Labour market programs in particular identified remittances as a primary objective and an important contribution to the economic development of the workers' home countries (TNS Consultants 2011). Some of this focus began to shift in 2019, coinciding with a greater awareness and concern on the part of the Australian public with regard to Australia's engagement in and with the Pacific region. Polling by the Lowy Institute in 2019 and 2020 showed that 77% of Australians were of the view that 'Australia has a moral obligation to help the Pacific' while 51% thought that Australia's approach to climate change has had a negative effect on Australia's relations with Pacific Island countries (Lowy Institute 2021). However, views were evenly split (48% & 49%) on whether or not Australia should spend more than it does (as at 2019) on helping the Pacific, with 36% of the view that 'Australian aid to the Pacific has little impact on life in the Pacific'. At the same time, in late 2019 and into 2020, the Australian Senate

established a Select Committee on Temporary Migration 'to inquire into and report on the impact temporary migration has on the Australian economy, wages and jobs, social cohesion and workplace rights and conditions.' This resulted in a greater awareness of the issues currently facing Pacific labour migrants in Australia, with an announcement by the Government in 2021 that, commencing in 2022, Australia's Seasonal Worker Programme and its Pacific Labour Scheme will be consolidated into a single Pacific Australia Labour Mobility (PALM) scheme. The new program will allow businesses to recruit workers from nine Pacific Island countries and Timor-Leste for up to four years in unskilled, low-skilled, and semi-skilled positions (Australian Government n.d.b.). The nine participating Pacific countries are Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Such longer term options and a broadening of skill levels is in keeping with previous recommendations related to the potential revision of Australia's Pacific labour programs and may further increase the size of the Pacific diaspora. This, in turn, may have the effect of encouraging greater participation on the part of Pacific Islanders in labour market programs as well as providing a larger foundation for community support in-country. One such example is that of the Tongan diaspora in Australia and New Zealand, which actively assists rural communities in Tonga to engage with and participate in both countries seasonal work programs, including by gaining accreditation as approved employers or acting as recruiters on behalf of Australian or New Zealand employers (Bedford, Burson & Bedford 2014).

6.4 Integrated regional solutions

6.4.1 Creating a regional enabling environment

SDG 17 Partnerships for the Goals' emphasis on the importance of knowledge sharing and capacity building through enhanced forms of regional and international cooperation suggests an opportunity to re-evaluate partnership structures within the Pacific region. Building on high-level partnerships and agreements already in place offers potential for innovative regional solutions to addressing issues of climate change and migration. The Trans-Tasman Mutual Recognition Agreement between Australia and New Zealand, the Free Association Agreements of Cook Island and Niue, the Pacific Step-up, and Pacific Reset have complementary aims that could be used as a basis to develop a unique, focused form of regional engagement to address specific regional needs.

While there are multiple financial, political, and social arenas impacted by these layered associations, of particular relevance here is the increased availability of multiple migration pathways open to residents of Pacific countries, including Australia and New Zealand, in relation to one another. Taken together, these pathways could expand the range of migration mechanisms available to specifically address the myriad impacts of climate change across the Blue Pacific Continent to the benefit of all parties. One recent suggestion of such integration focused on

securing Australia's role in the Pacific and proposed a 'compact of association' between Australia and South Pacific Island countries, specifically Kiribati, Nauru, Tonga, and Tuvalu, similar to the free association arrangements of New Zealand with Cook Islands and Niue as well as the United States with Palau, Marshall Islands, and Federated States of Micronesia (Blaxland 2020). Also discussed was the potential for similar arrangements, albeit with selected residency opportunities as opposed to potential citizenship, with the larger Pacific Island countries of Fiji, Solomon Islands, and Vanuatu (Blaxland 2020). The benefits of such an arrangement for Australia includes additional influence in the region and potential favourable access to the Pacific Islands' extensive exclusive economic zones; benefits to the selected Pacific Island countries include increased opportunities and a secured migration pathway should relocation due to climate change become necessary (Blaxland 2020). Notably, Papua New Guinea is considered to be 'in a league alone' due to its sizeable population and expansive EEZ and capable of managing its own affairs in this regard (Blaxland 2020). Such suggestions are not without criticism. Others have noted that such an approach does not consider the current state of Pacific regional engagement and influence, nor does it sufficiently address concerns related to the continued impact of colonialism and exploitation and related discussions of Pacific identity and sovereignty (Kabutaulaka 2020; Maclellen 2020).

There have also been recent calls within Australia to revitalise Pacific labour migration and skills development programs more broadly, including greater integration between the two (see Barnett 2012; Curtain et al 2016; Curtain et al 2017; Hawke 2019; Hawke 2020; Howe, Charlesworth & Brennan 2019; Joint National Standing Committee on Foreign Affairs, Defence and Trade 2019; O'Brien 2017; Shorten 2018; Wong 2018). Although the aims and objectives for Australia's labour market and workplace skills programs for Pacific Islanders are complementary, they are distinct. Labour market programs aim to fill employment gaps across Australia, build skills and experience for workers to take back to home country, increase remittances, and strengthen people-to-people links. Workplace skills programs aim to build skills for employment and income opportunities in the home country, support and develop in-country technical and vocational education and training, improve economic outcomes and promote economic growth, and target specific skill sectors. As such, many of the suggestions reflect a progression from Australia's current limited and siloed approach to something resembling New Zealand's commitment to flexible migration, wider opportunities, and an integrated diaspora. This includes recommendations to:

- Include a pathway to permanency as part of the Pacific Labour Scheme;
- Expand education and labour access programs;
- Explore possibilities of open access schemes and migration pathways;
- Develop a Pacific-wide technical and vocational education and training (TVET) qualification system to promote labour opportunities on workplace movement among Pacific Islands;
- Support regional communities to integrate migrant populations through sport and church affiliation;

- Fund skills projects involving in-country TVET institutions focused on resilient infrastructure construction and maintenance; and
- Utilise Australia's technological expertise and finance to support renewables and green development in the Pacific.

In principle, these proposals align with the Australian Government's 2017 Foreign Policy White Paper's acknowledgement of the need for 'new approaches' in the Pacific and its three prioritised areas of support: 1) promoting economic cooperation and greater integration within the Pacific and also with the Australian and New Zealand economies, including through labour mobility; 2) tackling security challenges, with a focus on maritime issues; and 3) strengthening people-to-people links, skills and leadership. However, such proposals do not go far enough toward establishing an effective enabling environment of the kind needed to address the complex issues currently facing the Pacific region.

The strength of, and need for, enabling environments at the national, international, and regional levels have been included in the outcomes of the Mauritius Strategy for Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (2005), the Conference on Sustainable Development (Rio +20) (2012), the SIDS Accelerated Modalities of Action (SAMOA) Pathway (2014), and the 2030 Agenda for Sustainable Development (2015). They have further been identified as the mechanism most needed by Pacific Island countries and other small island States to address issues of technology transfer, capacity-building, innovation and entrepreneurship, and private sector investment, among others (Raina 2017; SPREP 2011; UNEP & UNDESA 2013).

In the main, an appropriate and effective regional enabling environment would encourage and promote opportunities to create, examine, and expand knowledge and skills that could be shared and used in the local context. It would allow for the incorporation of local goals and traditional knowledge alongside new technologies and information sharing platforms. Most importantly, it would support collaboration and an open, integrated approach to finding solutions to regional issues by leveraging the strengths of its diverse participants. Of necessity, cooperation of this sort would involve innovative partnerships and coalitions among States, private companies, civil society, and organisations from multiple sectors in order extend the capabilities, expertise, capacity, and creativity of individuals and individual stakeholders to the greatest advantage (Abbott & Snidal 2009; Schroeder, Burch & Rayner 2013).

Within the context of this research, an effective enabling environment is one that addresses the intersecting issues of climate change, migration, and sustainable development in the Pacific region. To that end, it needs to:

- Address short, medium, and long-term migration trends with consideration for the multiple and varied contexts that occur among and within the countries in the region;
- Prioritise the development of sustainable economies;
- Ensure sovereignty and equal voice;
- Include information sharing and development capacity mechanisms;
- Address security concerns; and
- Allow flexibility of partnership structures and coalitions.

Such a cooperative regional approach involving both developed and developing nations in the Pacific region could have a significant and lasting impact. On their own, most Pacific Island countries do not have the infrastructure, funding, economies of scale, technology, or a population large enough to support an internal coalition of parties coming together to monitor, mitigate, and adapt to the impacts of climate change. For Pacific Island countries with a history and practice of migration, the situation is further exacerbated by long standing patterns of 'brain drain' to developed nations, most often Australia, New Zealand, and the United States, where emigrants have more opportunities and the ability to provide support to countries of origin in the form of remittances. Alongside this is the recognition that, in addition to employment opportunities and social support, it is also important that migrants, whether short or long term, are assisted to acquire the skills and training knowledge that is needed in their destination country (Campbell 2010; Tong 2009). This view has shaped skills development programs throughout the Pacific region and formed the basis for recommendations of greater integration between skills development programs and labour migration schemes. However, equally important are opportunities to gain knowledge and skills that are of use in countries of origin that address current needs as well as anticipate future challenges, such as those associated with the need for ongoing climate change adaptation. One solution to this is the creation of *an integrated sustainable enabling environment focused on reciprocal education, skills development, and knowledge sharing within and throughout the region aimed at addressing the current and future impacts of climate change,* to include the aspects outlined in the dot-points above.

The success of such an approach will be predicated on an understanding of the broader needs of the region, leveraging complementary strengths of the stakeholders, and providing a customised framework that can be adapted to achieve specific outcomes and focus on particular issues. Just as national objectives are frequently achieved through 'flexible frameworks whose membership varies with situational interests, shared values, and relevant capabilities' (Patrick 2015b), so too will this approach be effective in underpinning the enabling environment, with the notably broader participation of the private sector, individuals, and civil society alongside organisations, institutions, and governments.

The lack of historical progress and current intractability of the global and regional political climate indicate that effectively addressing the complex issues of climate change increasingly relies on collaborations and partnerships among capable and interested parties rather than multinational organisations, governments, and institutions. Effective action of a type that would yield benefits to populations in the rapidly decreasing timeframe needed, given the current timescale escalations indicated by the IPCC among others, needs to be focused on a particular outcome that has potential for lateral application. Such coalitions may be built from transnational partnerships and social connections whose interests, whether short or long term, intersect in a way that enables them to engage with and support one another to address the issues facing their respective populations. For example, Tonga has recently become part of the Island Resilience Partnership (IRP) alongside Sint Maarten, Samoa, Palau, and GridMarket, an artificial intelligence company established as a by-product of New York City's Hurricane Sandy Task Force. Although the IRP began as a partnership to aid Palau in its transition to renewable energy and climate resilience, it was later presented as a model for other small island developing States. The purpose of the IRP is to transition island nations to renewable energy and resilient infrastructure in furtherance of their respective climate mitigation and adaptation goals through the use of data, predictive analytics, and mapping technology.

The relatively narrow focus of renewable energy and resilient infrastructure is part of what contributes to feasibility of partnerships such as the IRP, making it more manageable and focusing participants on clear outcomes. It is in this space that the SDGs can provide short, medium, and long-term contributions. In discussing the SDGs, Jeffery Sachs (2018) states the need for governments to take 'transformative measures' and identifies six major transformations that need to occur, including transformation around education, skills and jobs as well as those to address human induced climate change. The Independent Group of Scientists appointed by the UN Secretary General (2019) to develop the *Global Sustainable Development Report* went further, pointing to the need for individual and collection action as well as engaging informal communities to find solutions for climate change adaptation. In their assessment:

> *Transformative change will mean harnessing bottom-up social, technological and institutional innovation, including indigenous knowledge and creativity at the grassroots level and in the informal sector, particularly – but not exclusively – in developing and emerging economies. For example, coastal and river communities have been living and coping with weather events for centuries; they have accumulated critical knowledge that could be applied to climate change adaptation. Innovations that combine advanced and traditional technologies, bringing together the best of multiple forms of knowledge, also need to be scaled up, where available, so as to have greater reach. (Independent Group of Scientists 2019, p. 35)*

This form of engagement was successfully used in the development of the Cook Islands Coastal Calculator discussed in Chapter 5, which was initially narrowly focused on rebuilding the main harbour on Manga'ia. It is also consistent with the earlier findings of the expert group convened by UN departments to identify emerging issues from the perspective of small island developing States. In 2013 this group identified the need for 'new and innovative approaches and tools that are adapted to local conditions, cultures and community needs' and highlighted the effectiveness of integrating traditional knowledge with modern science (UNEP & UNDESA 2013, p. 20).

Taken together, this suggests that, regionally, the most effective way to address the impacts of climate change, including mitigation and adaptation, involves *leveraging the technological expertise of Australia, the flexible approach of New Zealand, and the local knowledge of Pacific Island countries to create an enabling environment for knowledge exchange and collaborative solutions.*

6.4.2 Leveraging strengths

As mentioned previously, Australia's Climate Change Action Strategy identified Australia's areas of expertise as including climate science and meteorology, energy, water, agriculture, infrastructure, adaptation, and disaster preparedness and response (DFAT 2019). These are also the broad areas of concern identified in the case studies of Tonga and Cook Islands and for Pacific Island countries more broadly, with threats to trade, tourism, transport, energy supplies, and food security of particular concern (UNEP & UNDESA 2013).

Australia is very comfortable in the scientific leadership and technology space in its approach to climate change. Since 1992, it has been engaged in providing data and analysis of sea levels and climate fluctuations in the Pacific through the South Pacific Sea Level and Climate Monitoring project and its predecessor the Pacific Sea Level and Geodetic Monitoring Project. More recently, Australia developed an integrated marine observing system and the Pacific Climate Change Data Portal that provides site-specific historical climate information and trends in mean and extreme indices for the Pacific Islands (BOM n.d.). These initiatives in turn support activities like the Pacific iCLIM Project, which supports the implementation of a regional approach to climate change information and knowledge management throughout the Pacific. The project is aimed at ensuring access to good quality data, information, and knowledge that can be used in adaptation and resilience planning, with funding provided by Australia through its Department of Foreign Affairs and Trade (SPREP n.d.b.). In further support of the region and as part of its Pacific Step-up, Australia has also established the Australian Infrastructure Financing Facility for the Pacific (AIFFP) aimed at supporting transformative infrastructure across the Blue Pacific Continent.

Funding for projects such as these reflects a new understanding of the roles and provision of development aid. Globally, the approach to aid has begun shifting to a new paradigm in which aid is not temporary but is a vital part of a package of shared responsibility and contribution under a

global membership model (Glennie 2020). It has been recognised that aid agencies are attempting to increase their support of people and communities to find their own solutions to climate change adaptation and resilience (Cork 2017). This includes new approaches for integrated financial support structures that encourage contributions from lower-income as well as high-income countries and incorporate a range of indicators to evaluate participation rather than relying on an income/capita assessment (Glennie 2020). Receiving countries are also accessing and adapting to sources of finance from new donors, foreign investment, and the private sector as well as better utilising remittances as an integral part of development funding (Hawke 2020).

This new approach to the provision and use of development funding is particularly beneficial in that it allows for greater decision making and engagement on the part of the recipients. Pacific countries and territories, and those that work closely with them, recognise that effective long-term strategies will need to be different depending on the local context in which they are being enacting (SPC 2020a). It has also been noted that, with regard to building resilient communities, the most effective strategies are those that support experimentation and self-organisation (Cork 2017). The development and expanded use of the Cook Island Coastal Calculator discussed in the previous Chapter is an example of the effectiveness of such an approach. It also illustrates the type of cooperation that is needed for effective risk-reduction and adaptation in the Pacific: focused in terms of scale and purpose, actively incorporating traditional and local knowledge, building resilience and ownership within the community, engaging and utilising the diaspora, grounded in scientific information and technology use, and supported by a broad base of funding. As such, it exemplifies the 'development of adaptive measures that combine the best local and modern scientific knowledge to address… growing environmental threats' as recommended by experts from small island developing States (UNEP & UNDESA 2013, p. 11).

New Zealand's experience with proposing a humanitarian visa for Pacific Islanders displaced by climate change that was later abandoned provides a good illustration of the importance of engaging Pacific Islanders early and appropriately when taking measures to address the impacts of climate change on their populations (Manch 2018). For Pacific Islanders, becoming 'climate change refugees' was the option of last resort. Rather, their focus for receiving assistance in managing the impacts of climate change is for developed countries to first reduce emissions and keep the global average temperature rise to at or below 1.5 degrees Celsius, followed by providing support for adaptation measures that would enable populations to remain on their islands (Dempster & Ober 2020). If migration is required, the preferred method is via expanded legal migration pathways, including those currently in place for labour migration, humanitarian visas, and planned relocation (Dempster & Ober 2020).

This response makes clear the importance of having mechanisms in place to allow for discussion by diverse stakeholders focused on specific issues or solutions even if they do not have decision-

making authority. One such example is that of the Pacific Ocean Alliance. In 2015, it brought together diverse participants who do not typically engage with one another, including from national, regional, and international organisations as well as the private sector, civil society and academia, to discuss regional cross-cutting issues related to the world's oceans. In outlining the work Pacific Ocean Alliance, the Steering Committee on the Partnership for Small Island Developing States (2016) highlighted its role as a 'mechanism for inclusive consultation' and its focus areas and issues of interest beyond national jurisdictions. The Pacific Ocean Alliance has been successful in that, while it was not a decision-making body, its approach to regional cooperation related to sustainable development, management, and conservation of the ocean enabled it to inform SDG 14 Life Below Water Indicators and provide an effective monitoring and evaluation arrangement for ocean-related issues (Steering Committee on the Partnership for Small Island Developing States 2016; United Nations n.d.b.). While this particular initiative focused on oceanic issues and concerns, the overall approach and framework speaks to the effectiveness, benefits, and role of regional cooperation in addressing large scale, cross-cutting issues affecting multiple countries.

Similarly, many of the issues facing Australia and New Zealand with regard to the impacts of climate change are the same as those of Pacific Island countries, including sea level rise, storm surge, drought, development of renewable energy infrastructure, and the potential retreat or relocation of coastal communities. A significant difference is scale and jurisdiction. Due to their size, physically and demographically, many Pacific Island countries have a centralised approach to addressing these issues. Conversely, Australia and New Zealand not only have national approaches in these areas, but also local government priorities and responsibilities in these areas. This opens a range of collaborative possibilities for regional engagement. For example, cooperation on renewable energy facilitation and use in the Pacific is well underway, with a number of countries close to, or having achieved, 100% renewable energy, as previously discussed in the context of Cook Islands. Others have ambitious targets and rapidly progressing goals in this area, as in the case of those Pacific Island countries involved in the IRP. Australia and New Zealand are also moving toward greater renewable energy generation. The New Zealand Government (2019b) is aiming for 100% renewable electricity by 2035, with the majority of current and anticipated renewable electricity supplied by hydro power (Ministry of Business, Innovation & Employment 2019). In Australia, cities and domestic regions are increasingly shifting to renewable energy utilising a range of supply options appropriate to their needs (Barkla 2020; City of Adelaide n.d.; City of Sydney 2020; Climate Council 2016). All of this activity suggests there would be benefits in broader collaboration in this area, including lessons learned, new technology, energy infrastructure resilience, and skills development and training. It is also an opportunity for cooperation at multiple levels, including for city or local governments to engage directly in building networks and coalitions across the region to address the technical, social, and environmental challenges associated with renewable energy transitions.

The interest and success of lateral collaboration of this type can be seen through the example of the Global Covenant of Mayors for Climate & Energy in Oceania, which is made up of cities and local governments across the region who have made a commitment to the broader international alliance of Global Covenant of Mayors for Climate & Energy. The current international Global Covenant grew out of earlier initiatives in 2008 and 2014 aimed at bringing together local governments committed to addressing climate change. The Oceania contingent engages councils and local governments from across Australia, New Zealand, and four Pacific Island countries. Although broadly based around commitments and pledges, the Covenant is indicative of the role sub-national governments can play in addressing global issues and is an example of how new networks, when organised around a specific goal, can be more agile and effective than relying on large global forums or expansive regional ones.

6.4.3 Establishing knowledge communities for capacity building

One of the primary principles set forth with regard to achieving the SDGs is that of subsidiarity, or, as Sachs (2018) explains it, trying 'to solve problems nearest to the people as possible, so if something can be done at a city level rather than a national one, then keep it in the city'. Extending this to the idea of regional cooperation and the creation of a regional enabling environment, the enabling environment needs to be one that is flexible enough to support initiatives taking place as close to the people impacted as possible while still allowing for support and transfer of knowledge from a range of other areas. Speaking in an Australian context, Deborah Ralston (2013) points out that 'we should not forget how damaging smaller, localised incidents are on the well-being and future of local communities. Information sharing is the key to adapting to climate risk and building resilience into our land use planning, building codes, and future development'.

Unfortunately, information sharing on issues of climate change, Pacific development, migration, and even the SDGs frequently occurs in exclusionary 'Communities of Practice' aimed at engaging policy makers, high-level practitioners, and subject matter experts. This is problematic in that such Communities of Practice can be heavily focused on solutions viewed as appropriate by developed countries and may privilege colonised ways of knowing, resulting in the silencing or excluding of those most impacted. Further, membership and participation are often limited to staff of member agencies or organisations, meaning that even those working or with expertise in the topic area are not permitted a voice within this structure if, for whatever reason, their employer or organisation does not have membership (see ACFID Communities of Practice's Management Framework and Organisation). This can have the effect of creating a particular interpretation of the issues as well as potential solutions that are then transmitted as information to other groups and decision-making bodies. In discussing the risks of information dependency with regard to climate change, Woodward et al emphasised the hazards involved in relying on others for information, 'especially in a rapidly changing world', noting that the harm manifests in two ways: that of security and 'the danger of being cut off from essential data'; and that of 'ownership and relevance: when problems

are defined by outsiders in foreign and inaccessible terms, those directly affected cannot participate in seeking solutions' (1998, p. 35).

Another interpretation of information sharing relates to the collection and collation of data and statistics. As discussed previously in the context of SDG 17 Partnership for the Goals, this has been an increasing area of focus for the Pacific Community and region. It is a much-needed area of development and the progress that is being made is of significant benefit. What is not progressing as quickly is support or capacity to develop similarly inclusive structures to share practice across the region at the community level. High level forums and initiatives abound, but the ability of small groups or local communities to benefit from the experiences and ideas of similar cohorts in other areas of the region appears to be ad hoc and highly localised (APPF 2020; Author, *Fieldnotes 03.2020)*.

For many, the key to effective climate change adaptation, resilience, and mitigation lies in information sharing on everything from land use planning, building codes, and insurance practices to future development, improvisational solutions, and policy implementation (ACFID 2018; Ralston 2013). This is where the role of epistemic, or knowledge, communities becomes imperative. Epistemic communities are essentially networks of expertise, knowledge and practice around specific challenges or issues. Returning for a moment to Sachs' (2015a) position that goal-based initiatives such as the SDGs are effective in mobilising such communities, it is important to understand that the reason their role is so vital is because governments, and by extension intergovernmental organisations, do not have the expertise that is necessary in and of themselves to determine the best course of action for specific challenges. Sachs goes on to state that complex global challenges appear 'more manageable and less remote because the epistemic communities helped to map the pathways to achieve them' (2015a, pg. 491).

The two case studies in the previous Chapter demonstrate that despite multiple similarities, the ways in which climate change and migration intersect and are impacting Pacific Island countries and territories are highly specific to their individual circumstances and populations. Appropriately, so too are their priorities and approaches with regard to sustainable development and climate change adaptation. However, both countries are seeking to diversity their economies in an effort to become more sustainable and self-reliant. Earlier analysis of this issue by expert groups from the perspective of small island developing States (SIDS) recognised that:

> *regional cooperation and sharing of best practices can lead to progress, especially as some SIDS create enabling environments for new investments and industries, including technology-based and service industries as well as renewable energy…SIDS are also capitalizing on other areas of strength, including cultural industries such as performing arts, visual and media arts training, galleries,*

museums, festivals, music, and literary and film industries (UNEP & UNDESA 2013, p. 32).

However, such efforts will require adequate investment in education, technology development, and research (UNEP & UNDESA 2013). There is the strong view among Pacific Island and other small island communities that a combination of traditional knowledge and modern science is needed to address the challenges of the contemporary world, with the associated recognition of the value of regional and small island cooperation and partnerships in these efforts (UNEP & UNDESA 2013). It has also been suggested that Australia and New Zealand could benefit from engaging more fully with the er approach to addressing particularly complex social and ecological issues, which emphasises whole of community dialogue in order to access the diversity of ideas, skills, and resources within the community (Cork 2017). Further, collaborative climate change resilience programs in the Pacific have yielded a number of lessons for the success of future initiatives, including strengthening the collection and management of data, making the transfer of soft skills a mandatory component, and ensuring that countries 'participate in the 'many partners, one team' approach taken up through increased coordination between development partners, donors, regional institutions, national authorities and universities' (SPREP 2011). While implementing these suggestions can take many forms, integrating them with the findings and analysis of this research yields two possibilities: one which provides a framework and one which expands engagement.

6.4.3.1 Suggestion 1: Focus on education

The first suggestion offers a structural framework and provides an example of a truly integrated initiative supported by an effective regional enabling environment. Through the *provision of integrated and reciprocal regional educational options focused on climate change adaptation at multiple levels* it would be possible to create a knowledge community that is expansive, future-focused, and inclusive.

Using a combination of Targets from SDG 4 Quality Education (ensure inclusive and equitable quality education and promote lifelong learning), SDG 13 Climate Action, SDG 14 Life Below Water, and SDG 17 Partnership for the Goals creates an effective framework for engagement and development. SDG 4 Quality Education contains four Targets that address the need for more advanced skills training and post-secondary education that can be used as a starting point. Setting aside the recommended timelines, they are:

> **Target 4.3:** ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
>
> **Target 4.4:** substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

Target 4.7: ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contributions to sustainable development.

Target 4b: substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries.

This last Target (Target 4b) is useful in suggesting a manner through which multiple countries, organisations, private sector parties, and institutions can engage and where potential funding will come from. The idea of expanding the number of scholarships, potentially through the reallocation of aid as suggested in a Target Indicator (4.b.1), with a longer time-frame could be broadened to encompass a coordinated group of scholarships for Australian, New Zealand, and Pacific Island educational institutions focused on areas relevant to climate change adaptation in the region. Available programs would be open to residents of all participating countries and incorporate vocational skills development, higher education, and combinations thereof. For those participants unable to acquire a scholarship, there should be an option for the incurred debt to be forgiven following time spent working on building adaptive capacity in the s or appropriate Australian or New Zealand communities. This common structure for educational debt forgiveness, frequently used with regard to public service in rural areas, should be *expanded with regard to working location, integrated across the Pacific, include both vocational and higher education, and be focused on innovative climate change adaptation measures.*

Examples for the focus of such programs include renewable energy, coastal communities, and integrated data for the future. Some of the potential synergies around renewable energy were discussed previously in the broader context of creating a regional enabling environment. Many Pacific countries have progressed significantly with regard to renewal energy infrastructure development, moving toward 100% much sooner than Australia or New Zealand. As this transition occurs there will be a need to retrain and reskill those currently employed in traditional electricity production and fill new jobs in renewable energy-related fields, with current calls for additional support in this area as part of transition plans. The transition to renewable energy across the region creates a strong argument for the benefits of collaborating with the Pacific Islands on these issues. This includes through more flexible two-way migration mechanisms, thus expanding low or semi-skilled labour programs to include skilled labour reciprocal opportunities.

Similarly, a focus on coastal communities adapting to climate change offers a range of knowledge exchange opportunities. The coastal nature of many Australian and New Zealand cities mean that they are facing similar issues to those that are and will affect Pacific Island coastal communities. This includes sea level rise, storm surge, drought and water crises (Hugo et al 2010). To return to Hau'ofa, a regional identity predicated on the 'common heritage of the ocean' is one in which the 'most important role should be that of custodians of the ocean, and as such we must reach out to similar people elsewhere for the common task of protecting the seas for the general welfare of all living things' (p. 406). A focus on coastal communities would inherently include a focus on oceans, thus linking to SDG 14 Life Below Water:

> **Target 14.5** conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
>
> **Target 14.a** increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.

Cooperation in this area also includes the potential for broader lateral application and developing frameworks. This is applicable in terms of 'hard' climate change technology, i.e., improved infrastructure and monitoring capabilities, but also in terms of cooperative planning and responsibility, broader application of new technologies, information gathering, stakeholder relations and buy-in, and communication within and among vulnerable communities. New Zealand has been putting in place a member of coastal development plans in areas affected by climate change with a view toward effective long-term planning and utilising new and developing technology (Warne 2015). These experiences and developments may have applicability to the broader Pacific region if they can be shared effectively.

The third focus area returns to the issue of data, access, and analysis that has arisen throughout this research, in particular the need to be able to plan for and anticipate future needs. In the words of Sachs (2015a), 'it may not be possible to know the future, but it is certainly important to plan on how to overcome certain obstacles, to think ahead, to be prepared for the problems that will come' (p. 496). As such, it is necessary to make significant effort to anticipate the capabilities, vulnerabilities, and societal possibilities for dealing with climate change. Wolfgang Lutz makes the point that climate planning and climate adaptation needs to be done with future populations, and population projections, in mind as those are the populations and demographics that will actually be impacted. In other words, as climate projections and impacts are adjusted, they need to be integrated with future population and migration projections to be able to provide a reasonable basis from which to plan (Lutz 2021).

The volume of available data and its accessibility around the world is increasing rapidly, with a number of new initiatives aimed at compiling global, comparative information and making it publicly available in such a way that governments, researchers, policy advisors and other actors can utilise it to address global issues such as climate change and migration. A focus in this area would enable the layering of what is available from a selection of these sources and allow a focus on a specific nexus, making connections that enable the framing of more relevant localised questions. This can simultaneously provide both a holistic and specific view, potentially leading to more creative and collaborative solutions which may be applicable to other issues, localities, nations, and regions, either in method or solution. However, such a focus would also need to include the integration of data from a wide variety of sources, formal and informal. Dimity Fifer, founder of the Pacific Women's Network which works to improve the political, economic and social opportunities of women in the Pacific, has demonstrated the frequency with which the Pacific has been overlooked from global population and other statistics, going so far as to launch the hashtag #IncludeMe as a reminder to include Pacific Islands in statistical profiles. This aligns with the findings of this research with regard to the continuing lack of complete or comparative data on and for the Pacific, despite recent progress in this area.

It is also important to acknowledge the social and demographic challenges that will occur alongside environmental and economic ones as a result of migration that may occur within the region. For Pacific Island countries this includes ensuring 'a demographic equilibrium across age groups, cop[ing] with 'brain drain' that limits local human capacity, and maintain[ing] island heritage and cultural unity across the diaspora … [while] the receiving country … must deal with the assimilation of island peoples while encouraging the persistence of island social structures and culture' (UNEP & UNDESA 2013, p. 26). These are equally important factors that should be considered alongside the creation and analysis of statistical and data projections. Also relevant is consideration of the impact that in-migration, particularly as it relates to short-term tourism and visitations, will impact some island nations. This is not be the typical construct at the centre of the nexus between climate change and migration. However, climate change is significantly impacting the physical characteristics of island nations that draw short-term migrants, investors, and tourists to many of these islands, thus having a direct and significant impact on labour, economies, and the environment.

Cork (2017) argues that Pacific Islanders have identified solutions for appropriate climate change adaptation but are in need of support that will enable them to create networks, gather information, and assemble groups of people to engage with the problems. With regard to relocation, he points out that the cultural and social impacts, including emotional issues due to displacement and loss of environment, are of greater concern than the physical challenges in the Pacific Island context. These are the same issues that many communities, regardless of geography, are facing with regard to climate change adaptation. The difference is that many developed countries, Australia

and New Zealand included, tend to approach such challenges with ‘hard hat’ solutions, i.e., strengthening infrastructure, expanding ICT and telecommunications, securing food supply, but frequently overlook ‘soft hat’ solutions that address emotional, psychological and cultural impacts (Cork 2017). The opportunity to integrate such solutions based on the experiences and needs of communities across the Pacific region is significant benefit of creating an integrated skills development, education, and work practice mechanism of the type suggested.

Countries like Tonga and Cook Islands, for which the risk and impact of climate change is great, migration is common, and education is prioritised, regional enabling environments that include programs such as these provide a mechanism through which they can achieve their development goals, maintain autonomy, and provide employment opportunities at home. Similarly, for countries like Kiribati and Tuvalu, where efforts have been made to increase the skill level of the population in anticipation of relocation, this mechanism could offer an opportunity to develop needed transferable skills and knowledge while also providing potential solutions that would enable more of the population to remain and adapt, either in the short or long term.

However, the programs themselves are but one aspect of the larger enabling environment for regional climate change adaptation. Many Pacific Islanders view Australia and New Zealand as the first choices for both education and alternative residence (Blaxland 2020). Accordingly, a regional enabling environment must also include a broad, integrated, and flexible approach to migration that includes short, medium, long-term, and cyclical options. There is precedent for such a collaboration, albeit focused and on a much smaller scale. The Australia Pacific Training Coalition (APTC) works collaboratively across nine Pacific Island countries (Fiji, Samoa, Vanuatu, Papua New Guinea, Solomon Islands, Nauru, Tuvalu, Tonga and Kiribati) to provide technical and vocation education and training for careers where skilled employees are in high demand. It engages national governments, regional institutions, development partners, the private sector, and civil society organisations. The APTC has been cited as an excellent model for integrating skilled labour into regional labour markets by providing Pacific Islanders with qualifications recognised in Australia based on skills needs in both countries. It also ‘gives Pacific Islanders the ability to move safely and in a way that benefits all parties involved, without waiting for the impacts of climate change to take even greater hold’ and has the potential to promote migration in other regions (Dempster & Ober 2020).

In a manner of speaking, such an initiative has potential to provide knowledge remittances. Put another way, instead of sending back money, send back knowledge. It is migration in support of cyclical information transfer and local implementation and involvement in climate change adaptation. Initiatives such as this will also enable populations to engage more fully in the knowledge economy, regardless of where in the region they reside. If structured appropriately, they would also encompass the World Bank Group’s four pillars of the knowledge economy: 1)

institutional structures that provide opportunities for entrepreneurship; 2) skilled labour availability and good education systems; 3) ICT infrastructure and access; and 4) vibrant innovation landscape including academia, private sector, and civil society.

Creating a regional enabling environment focused on skills and knowledge development as well as various levels of labour and relocation migration also addresses the following SDG 13 Climate Action Targets:

> **Target 13.1:** strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.
>
> **Target 13.3:** improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
>
> **Target 13.b:** promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing states, including focusing on women, youth, and local and marginalised communities.

The final Target, 13.b, also addresses the potential inherent in the second possibility suggested as part of this research: *activating new coalitions as participants in the regional knowledge economy for broader engagement with current and future climate change adaptation.*

6.4.3.2 Suggestion 2: Expand demographic engagement

There are two important demographics in the Pacific Island context that are of particular relevance in establishing a regional knowledge community: youth and the Pacific diaspora.

The World Programme of Action for Youth (United Nations 1995) put forth a number of proposals for youth participation in societal development, noting the value of their 'unique perspectives'. Among them are suggestions for 'increased national, regional, and international cooperation and exchange between youth organisations' as well as improved access to information with a view toward enabling 'young people to make better use of their opportunities to participate in decision-making' (UNDESA 2010). In line with the focus on education outlined above, the argument should also be made for the need for information literacy, not just access, and for the development of additional and productive opportunities for youth participation. It is worth noting that when the World Programme of Action for Youth was adopted in 1995, environmental concerns focused on the deterioration of the natural environment rather than climate change (UNDESA 2010). This shifted over the course of the next decade and by 2008 youth delegates to the United Nations identified climate change as a key priority and articulated their desire to participate in decision-making in this and other critical areas (UNDESA 2010). As with the broader Pacific and AOSIS delegations to the various Conferences of the Parties (COPs) over the last decade, youth have organised into a global group and recognised constituency at COPs. They have put forth collective

demands for climate action that are also in line with those of the Pacific and SIDS, including a 1.5 degree limit on global temperature rise and a focus on ‘climate justice’ (UNDESA 2010).

As youth are becoming more active and engaged in global climate action, there is growing awareness of the benefits of education and training focused on climate change, including recognition that ‘civic engagement and community service represent an important component of non-formal education, providing youth with personal, hands-on experience and training’ (UNDESA 2010, p. 39). Further, such education and training prepare youth ‘to take advantage of new employment opportunities arising from the shift to a greener economy’ and the provides ‘empowering tools that will facilitate their active involvement in preserving the safety of their communities’ (UNDESA 2010, p. 35). This coincides with expert findings that the ‘loss of local and indigenous knowledge about island environment and island natural resource use’ is a ‘critical emerging issue’ and that ‘with the ageing and death of the older generation of knowledge holders comes the loss of many years of traditional knowledge’ (UNEP & UNDESA 2013, p. 20). This led to the recommendation that ‘youth should be empowered to participate in new innovations that are integrated with traditional knowledge’ (UNEP & UNDESA 2013, p. 20).

Youth activation and engagement can take multiple forms, including sharing information on disaster risk reduction, management, and preparedness with families and communities (UNDESA 2010, p. 35). The youth bulge present in many Pacific Island countries also means that employment generation will become increasingly important in the region, with expanding discussions on how this issue may be addressed through greater international labour mobility (Maclellan & Mares 2006; SPC n.d.). Further, it has been suggested that countries with large youth populations will see the greatest benefit in their subsequent ‘worker bulge’ if they invest in education and are thus able to provide an educated work force (NIC 2008). If such education were to include skills, knowledge, and expertise in innovative and integrated adaptation measures combined with flexible migration opportunities such a ‘bulge’ would also benefit the Pacific region as a whole. Countries in the region with a projected increase in the proportion of older people, such as Cook Islands, could benefit from a regional youth cohort that is mobile, knowledgeable, and interested in expanded opportunities in the region.

This once again expands the ‘inclusive definition’ of Pacific populations that Bedford argued should include the vast Pacific diaspora and recognition of the role of diaspora communities on Pacific identity. For example, diaspora plays an important role in providing assistance following natural disasters, with contributions including an almost doubling of remittances, provision of goods and services, organisation of contribution collections, assistance with locating displaced persons, technical information on coping with disasters, and returning to the home country to assist with recovery and reconstruction (World Bank Group 2016). In these situations, the coordinating efforts of local organisations are critical to maximising the effectiveness of diaspora contributions, leading

to suggestions of temporary measures, such as waived remittance fees or custom duty exemptions, that could be put in place following a natural disaster (World Bank Group 2016). While such suggestions are useful in the short term, considering and including the diaspora in longer term policy and planning initiatives would potentially further maximize benefits to both home and host countries. Diaspora are also an important aspect of community engagement, migration information, and support more broadly.

As part of the discussions on the climatic and economic drivers of migration from a small island perspective, it has been suggested that policies should be developed that encourage 'brain circulation', i.e. mechanisms by which 'those who emigrate can return, or at least share their skills and expertise with their home countries', in order to alleviate the difficulties of out-migration for the sending island state (UNEP & UNDESA 2013, p. 37). It was further stated that:

> *the goal is not to prevent people from leaving but rather to continue integrating the diaspora into the society and economy of their home countries, not only through remittances but also through 'diaspora bonds' and other innovative mechanisms. Migration can potentially create fertile ground for SIDS-SIDS cooperation, and the sharing of best practices, technology and training. (UNEP & UNDESA 2013, p. 37)*

As such, there is a facilitating role for Australia and New Zealand in bringing together the broader Pacific diaspora with a view toward enabling the exchange of appropriate traditional knowledge and modern science in an effort to create, share, and establish best practice and community building around planning for, adapting to, and mitigating climate change in a Pacific context.

6.5 Conclusion

This chapter has shown the myriad of ways in which regional partnerships and coalitions can be developed in order to address the impacts of climate change as well as the role that migration and the SDGs can play. Whether rising sea levels and extreme weather events result in the permanent dislocation of people or a more temporary one, there will need to be some capacity to manage relocation within the region. However, the case studies have shown that the intersection of migration and climate change in the Pacific context is about more than disenfranchisement and relocation. There is a clear need to look beyond wholesale community relocation to the more nuanced interaction between climate change and migration.

In recent years, stability and security, both political and economic, have become consistent themes for Australia and New Zealand in their approach to engagement in the Pacific, with both climate change and migration identified as contributing factors. Current evaluations of regional migration schemes and attempted climate change adaptation measures have already taken place, meaning that the problems are known and some recommendations or best practice is already available.

Utilising this to take a more holistic regional approach would be beneficial and, given the stated intention of Pacific Island countries to increase their activity, profile, and membership in regional fora such as Asia Pacific Parliamentary Forum, welcome.

What this Chapter has proposed is a web of cooperative approaches that would further strengthen an integrated regional enabling environment focused on climate change adaptation. Part of the value of such an approach is that it is, in practice, a type of flexible multilateralism in that its 'cooperative frameworks' can be ad hoc, informal, and voluntary as well as multilevel and multistakeholder (Patrick 2015b). Placing these possible adaptive strategies within the larger framework of the Sustainable Development Goals enables a focus on clear outcomes as targets tailored to the Pacific, and specific Pacific Island, context. Effective cooperation and mutual benefit with regard to technology use in the Pacific has been in place for some time, particularly in regard to climate monitoring. Expanding this to include new and developing technologies that can be deployed and utilised within both developed nations and the more vulnerable developing States within the region will benefit both while at the same time potentially addressing a number of related and tangential issues. This may include providing aid in the form of technology and education, making clear strides toward the SDGs, providing new skills training and future job growth within the developing States, and potentially reducing future migration numbers due to increased opportunity and flexible pathways.

Climate monitoring, disaster preparedness, and infrastructure improvements are integral to the continued survival of Pacific communities, as are effectively managing issues of migration within a regional context. As emigration is a well-established part of many Pacific Island economies and social structures, establishing a focused, regional migration support network to develop skills that benefit both the sending and receiving country would be a boon to the region as a whole, with the added benefit of building communities abroad that could support and assist in larger-scale resettlement should it become necessary in the future. Aiding in skills development focused on environmental solutions that would work in the region while at the same time supporting initiatives toward achieving the SDGs outlined above could aid in providing opportunities for a youthful workforce. This could potentially reduce the need for migration in some areas as well as decrease violence resulting from a combination of reduced economic opportunity and scarcity of resources, also contributing to stability in the region as a whole.

CHAPTER 7 POLICY IMPLICATIONS AND CONCLUSION

This chapter provides a summary and analysis of the major findings of this research and applies them to the research questions and objectives set out in Chapter 4. It discusses the broader policy implications that arose as a result of the research analysis presented in Chapter 6 and offers five recommendations for consideration and action. After clarifying the contribution to knowledge of this research, it touches briefly on correlated issues and impacts related to the COVID-19 pandemic and identifies areas for further investigation.

7.1 Summary of findings

The disproportionate vulnerability of small island developing States to environmental change has been widely recognised by national, regional, and international governments and organisations for some time. In the case of South Pacific small island States specifically, the impacts of climate change are further exacerbated by a range of environmental, geological, geographic, historical, and demographic factors. As a result, Pacific Island communities have been increasingly challenged to cope with the effects of climate change on their populations. Alongside this is the increasing recognition of the interconnection between climate change and migration, including, in the Pacific context, an historical and social reliance on emigration as an appropriate and effective way to manage economic and population capacity issues. On a global scale, these issues are also being addressed as part of the Sustainable Development Goals (SDGs). Further, the SDGs emphasise the role of partnerships and allow for the 'special case of SIDS'. This suggested that the SDGs may be a mechanism through which Pacific Island countries and territories could address the issues of climate change and migration. The aim of this resulting research then, was to examine the relationship between climate change, migration, and achieving the SDGs with the Pacific context and contribute to a deeper understanding of how this interconnection manifests within specific Pacific environments.

The literature reviewed prior to conducting the case studies presented in this research provided an introduction to the Pacific region, including a brief overview of geographical, historical and political influences that have shaped it as well as contemporary practices of formal cooperation and engagement. It also presented current and emerging regional partnership structures, including transnational mechanisms, multilateral forums, and coalitions relevant to the region and its increasing global visibility. An early examination of climate change, migration, and the Sustainable Development Goals (SDGs) described how these three major global priorities intersect with one another in the Pacific context.

This information provided the foundation for the development of ten sub-questions (see Box 1, Chapter 4) that were used to conduct two case studies: one for the Kingdom of Tonga (Tonga) and

one for the Cook Islands. These locations were selected based on five relevant criteria that considered the impact of climate change, current and historical migration practices, contemporary population patterns, sovereignty, and national affiliation. The majority of the sub-questions focused on the issues of climate change, migration, and the SDGs for each case study, with additional sub-questions that addressed the intersection of the three issues for each specific context.

7.1.1 Research questions and objectives

With regard to climate change, the sub-questions were aimed at identifying key climate change impacts, their effect on human populations, and the national priorities of the case study locations. The answers to these questions, in combination with the literature that informed them, addressed **Objective 1: Identify initiatives at the local level related to climate change adaptation and planning, including sustainable development best practice and consideration for traditional knowledge.**

The literature discussed in Chapter 3 had suggested that the major point of concern related to climate change in the Pacific was the impact of sea level rise, as seen in the extreme cases of Kiribati and Tuvalu. However, one of the main findings in this area was that while sea level rise is projected to impact most Pacific Island countries, this is not the aspect of climate change that is of greatest concerns for either Tonga or Cook Islands. Rather, the increasing intensity of tropical storms is of far greater and more immediate concern, with many adaptation initiatives aimed at addressing coastal infrastructure and community resilience. Tonga's infrastructure projects include new roads, footpaths, wharfs, commercial buildings, and naval headquarters, many funded by Japan and China. Cook Islands looks to improve harbours, wharfs, and tourist infrastructure that supports its economy. For both countries, these initiatives reflect not only their priorities, but also the understanding that increasing the climate-resilience of infrastructure has a high benefit to cost ratio (see Guterres 2019). Such economic considerations are of vital importance when the economies in question are developing and at high-risk of debt distress, as with Tonga, or highly dependent on a single sector and primary partner, as with Cook Islands. These concerns are addressed in detail in Chapter 5.

In terms of national priorities, for Tonga, climate change concerns include not only finding a way to finance large infrastructure projects to reduce flooding and storm damage, but also consideration of the practicalities of rebuilding after extreme events when a large proportion of the workforce is engaged in seasonal work overseas and those remaining are among the more vulnerable of the population. Further, sea level rise will impact saline intrusion of available soils, impacting on their ability to sustain human populations. These issues are further exacerbated by the increasing severity of cyclones in both countries, resulting in extensive flooding of the most populated areas as well as significant damage to infrastructure.

The sub-questions related to migration were aimed at identifying patterns and trends for each case study location and examining the impact on economic and social structures, particularly as they might relate to climate change adaptation measures. This addressed **Objective 2: Identify and evaluate emerging trends in new forms of engagement on climate change and migration related initiatives within the region, including relevant regionally focused initiatives of Australia and New Zealand.** These trends and initiatives are discussed within a broad Pacific context in Chapter 2 and Chapter 3, with regard to the case studies in Chapter 5, and brought together alongside Australia and New Zealand in Chapter 6.

For both Tonga and Cook Islands, one unanticipated finding had to do with the extent to which visiting diaspora were a source of economic and social support in addition to their contributions in the form of remittances. As such, the culture of migration in these two countries needs to be understood in the context of not only remittances or 'external' tourism dollars, but also the 'internal' visitor support that is provided by overseas-based Pacific Islanders visiting their home countries. For both Tonga and Cook Islands, a reduction in international visitors represents a significant reduction in economic capacity. The COVID-19 pandemic and associated shut-down of international travel has highlighted the extent to which a broader definition of Pacific Islander migration and migrants is needed in order to understand its impact on the overall economy of such nations.

Domestically, while Tonga is currently experiencing internal rural-urban migration and the associated challenges that come with it, Cook Islands has already undergone this transition, with its urban population currently comprising almost three-quarters of the total population. Tonga and Cook Islands also differ in terms of development status and access to external financial and project support. Tonga receives significant financial assistance from Australia relative to many other Pacific Island countries and has participated in a number of Pacific and SIDS-focused initiatives supported by international funding bodies (DFAT 2017; World Bank Group 2016). Cook Islands is heavily dependent on, and engaged with, New Zealand financially and developmentally, due in large part to the Free Association Agreement between the two countries. These relationships are also reflected in the countries' migration patterns. The majority of Tonga's emigration is through labour mobility programs, primarily to Australia and New Zealand, with projections of continued and increasing participation numbers. Cook Islands, whose citizens have the right of free travel to New Zealand as part of the free association relationship, experienced significant out-migration and associated population decrease in past decades. As presented in Chapter 5, this has resulted in population projections indicating a steady state or slight decrease to 2050.

The case studies of Tonga and Cook Islands also demonstrate the expanding role of both China and Japan in providing support to Pacific Island countries. Recently, Chinese President Xi Jinping (2020) publicly prioritised domestic climate change initiatives, aiming for China to achieve carbon

neutrality by 2060 and scaling up its Intended Nationally Determined Contributions. He also stated an intention to 'seize the historic opportunities presented by a new round of scientific and technological revolution and industrial transformation' as part of a global effort to drive sustainable development. This is relevant in the Pacific context due to China's increasing lending and infrastructure project funding, including assistance for climate change adaptation and disaster risk management. This was discussed in Chapter 5 with regard to the case study locations and again in Chapter 6 to address the broader regional concerns.

In Tonga, many of the public works projects related to building higher roads and storm drainage are being undertaken by Chinese construction companies, with increasing levels of loans from China for both Tonga and Cook Islands. Tonga is the world's fourth most heavily indebted country to China, with 56.5% of their total debt (26.7% of GDP) owed (Rajah, Dayant & Pryke 2019). Samoa and Vanuatu are also heavily indebted to China, owing 39.5% and 32.3% of their total debt (19.9% and 17.0% of GDP) respectively, followed by Cook Islands owing 22.9% of their total debt to China (Rajah, Dayant & Pryke 2019). While there are concerns regarding China's lending practices, there are no indications that China is the primary factor behind rising debt levels in the Pacific region more broadly (Rajah, Dayant & Pryke 2019). Despite this, Cook Islands has expressed concern regarding their levels of debt obligation to China, particularly in the context of Cook Islands' loss of developing country status as discussed in Chapter 5 (APPF 2020).

The sub-questions that focused on the SDGs addressed prioritisation and progress on the part of the case study locations as well as the region more broadly. They also aimed to examine the SDGs' role in enabling effective climate change adaptation and planning and the potential role of migrants in achieving them. As such, they addressed **Objective 4: Consider the role of relevant established, high-level partnership structures currently in place within the region in addressing the interrelated issues of climate change, migration and the achievement of the Sustainable Development Goals;** and **Objective 5: Evaluate the role that partnership structures, including microlateral and minilateral initiatives, can play in increasing the capacity to adapt to the impact of climate change and achieving the Sustainable Development Goals**.

Both Tonga and Cook Islands are looking to expand and diversify their respective revenue streams. Tonga is considering ways to increase their share of tourism revenue and Cook Islands is seeking to expand fisheries and other marine resources. In determining options for such an expansion Cook Islands made a point to consider its largest resource – the ocean – in light of sustainability, climate change, and culture. In establishing Marae Moana Marine Park, Cook Islands looked to examples and research from the Philippines, Australia, and the Mediterranean for options and solutions appropriate for, or adaptable to, the Cook Islands context (Government of the Cook Islands n.d.).

Taken in aggregate, the contribution of the Blue Pacific Continent toward achieving the Sustainable Development Goals is significant. Using the examples of Tonga and Cook Islands, both have made significant progress toward SDGs that impact not only their own populations, but that of the global commons. For example, Cook Islands' protection of marine coastal areas and ecosystems in line with SDG 14 Life Below Water. It is difficult to measure their overall contribution as there is not current data available for all SDG Indicators. Further, where data is available, there has not been a history of consistent collection or appropriate methodology development that could provide a baseline for progress. This is changing, due in large part to the efforts of regional organisations such as the Pacific Community and its various Divisions in response to the data and information targets contained within the SDGs themselves. As highlighted in Chapter 6, this inclusion has provided additional funding for such initiatives from international bodies and increased awareness around these issues.

In principle, one of the strengths of utilising a regional approach to achieve the SDGs is that it provides a mechanism for all countries involved to achieve Targets. As in the case above, the work of the Pacific Community and its Divisions enables all Pacific Island countries and territories to contribute to, and achieve, Targets related to data collection. Similarly, using the example of potentially providing integrated and reciprocal regional education options as suggested in Chapter 6, Australia and New Zealand would contribute to and achieve SDGs in concert with Pacific Island countries. These would include SDG 13 Climate Action Targets 13.1 (strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries) and 13.3 (improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning) as well as SDG 10 Reduced Inequalities Targets 10.7 (facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies) and 10.c (reduce to less than 3 percent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent).

However, this research also found that the goal of achieving the SDGs, while understood and supported by the governments in many Pacific Island countries as well as high level regional forums, may not provide the same motivation for other parties. Even awareness of the SDGs within government, the private sector, and the general public may be low due to a 'focus on socio-economic and political issues over environmental or sustainability concerns' (Fleming et al 2017, p. 94). Further, there has been significant criticism of the Australian Government's narrow and siloed approach to climate change and the risks it poses in the region as well as both Australia and New Zealand's lack of support for Pacific Island concerns around climate change as discussed in Chapter 2 and Chapter 6. Where Australia and New Zealand do have significant interest in the Pacific region is with regard to security, in particular increasing engagement between Pacific Island countries and China highlighted above. It has been argued that this is the motivating factor behind

many of the initiatives included in Australia's Pacific Step-up and New Zealand's Pacific Reset, including the expansion of Pacific migration opportunities. In the case of Australia, the development of Australian Infrastructure Financing Facility for the Pacific as part of its Pacific Step-up is thought to be partially in response to China's financial loans and infrastructure support in the Pacific.

These situations show that it is not only partnerships specifically focused on issues of climate change, migration, or the SDGs that can impact engagement in on these issues. It can equally be partnerships, enterprises, or strategies outside these areas that motivate parties to engage more fully with these issues and to address Pacific Island concerns related to various aspects of climate change adaptation. This conclusion came out of the analysis presented in Chapter 5 and informed the answer to one final sub-question related to the role of migration as a climate change adaptation measure and led to the discussion of the primary research question, which is:

> *Can the SDGs be utilised to address the connected issues of climate change and migration in the Pacific within the next decade and build a foundation for a sustainable future in the region?*

Although the initial focus with regard to the SDGs was on SDG 13 Climate Action and SDG 17 Partnerships for the Goals, the case studies made clear that the interconnected nature of the SDGs, the diversity of the Blue Pacific Continent, and the complexity of migration with regard to both require consideration of other SDGs and their associated Targets. Among these are SDG 8 focused on promoting sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all; SDG 10 calling for the reduction of inequalities within and among countries; and SDG 14 which looks to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

However, more than the Goals themselves, it is distinct Targets and Indicators that Tonga and Cook Islands focus on when developing strategies, policies, and plans to address issues related to the impacts of climate change and/or migration on their populations. Further, the volume of Targets associated with SDG 17 Partnerships for the Goals and the clear and stated priority for supporting small island developing States within the 2030 Agenda more broadly have enabled Tonga and Cook Islands to actively engage with and benefit from new regional initiatives in these areas. Taken holistically, these activities highlighted the significant potential for reciprocal exchange of knowledge and practice between developed and developing countries and emphasised the unique contribution Pacific Island countries could make to an integrated regional approach to addressing the impacts of climate change.

The answer then, is a qualified yes: the SDGs, in particular a combination of selected Targets, can provide a focus and foundation to address the connected issues of climate change and migration

in the Pacific, although it may not be fully achievable by the SDGs end date of 2030. However, using SDG Targets to provide a structure for the creation of regional knowledge communities is not dependent on a specific timeframe but rather the engagement of, and benefits to, the interested parties. The suggestions offered on how this can occur as presented in Chapter 6 satisfies **Objective 3: Illustrate how local and regional networks, relationships, and practices can be utilised to create enabling environments and knowledge communities for effective climate change planning in the region, including the role of Pacific diaspora and migrants.**

A number of convincing arguments and research point to the need for appropriate enabling environments, goal-based development and the creation of knowledge communities in order to successfully address complex issues such as migration and economic and environmental sustainability in a globalised world. At the same time, new technologies and a changing global political environment may provide mechanisms for increased commercialisation, information and resource sharing, and application from one area to another.

Creating regional enabling environments and knowledge communities focused on education and engaging new coalitions of participant is a long term, supportable, and cooperative measure. It is inclusive, respecting local situations, potentially providing solutions or options across borders and boundaries, and is not reliant on the expertise of one country or participant. This approach also allows for the utilisation and application of traditional knowledge across boundaries, and the potential merging and complementary use of traditional and contemporary approaches to managing these challenges longer term.

7.2 Policy implications and recommendations

According to Sachs, there are a number of aspects to implementing a plan of action once a goal has been set. These include good policy design, new financing, new institutions, measured outcomes, and a commitment to rethinking and adapting strategies ‘in a continuing loop of policy feedback’ (Sachs 2015a, pg. 493). It is with this in mind that the policy implications of this research are discussed and recommendations are made. The five recommendations aim to address the foundational steps needed to create a regional enabling environment focused on climate change adaptation measures appropriate for multiple geographic contexts. As such, they address relationship and partnership development, community and diaspora engagement, financial support, business development, and post-secondary education.

In 2016, the Steering Committee on Partnerships for Small Island Developing States noted the potential for innovation within and among small island states, stating that ‘islands are the laboratories to test integrated market-based solutions that can be scaled and replicated to address global challenges’ (p. 19). This comment is particularly relevant with regard to the high potential for reciprocal exchange of information and approaches between developed and developing countries

with regard to climate change adaptation. Knowledge sharing in this manner also emphasises the contribution that Pacific Island countries can make under the auspices of a regional approach. In this way, it supports the premise of truly effective partnerships providing a benefit and outcome for both parties that could not have been achieved independently of one another.

A number of Pacific development partners are seeking to increase their engagement with the region. The European Union (EU) has significant interest as the region's second largest donor of development assistance and sees the potential for broader collaboration in the region (European Commission 2015). This includes suggestions that the EU should engage in research that pays close attention to issues related to fisheries management, climate change, biodiversity, and social inclusion, noting that 'lessons should be drawn from the Pacific experience for devising new approaches, as well as on how Europe can effectively respond to the strategic challenges posed by the Pacific' (European Commission 2015, p. 67).

China's engagement in the region, as outlined previously, appears to focus on financial support in the form of loans and infrastructure development across a range of Pacific countries. This has been noted as having implications for Australia and New Zealand, with suggestions for increased concessional financing to Pacific Island countries in order to protect debt sustainability (Rajah, Dayant & Pryke 2019). Other observations regarding Australia's Pacific Step-up and New Zealand's Pacific Reset have characterised them as good strategy, but suggest that greater benefit would be gained from engaging with Pacific Island countries with regard to the provision of technological expertise, renewable energy, green development finance, and a readjustment of aid budgets (Millar-Rakisits 2019; Rajah, Dayant & Pryke 2019).

In addition to these options, the Pacific region offers a range of opportunities for Australia and New Zealand, as primary regional partners, to engage more broadly with Pacific Island countries in a mutually beneficial manner, particularly in education, community engagement, and active diaspora participation. This type of engagement may assist in confirming Australia and New Zealand's commitment to their Pacific Island neighbours and offer mechanisms to enable productive solutions related to climate change and migration. It may also solidify Australia and New Zealand's role in the region amidst security concerns and the expansion of Pacific Island partners globally.

7.2.1 New forms of collaboration

Global governance and multilateral structures have shifted in recent years to become multi-level, relying less on large bodies and institutions and more on minilateral and 'a la carte' groupings based on converging interests, challenges, or demographics (Patrick 2014; Patrick 2015a; Patrick 2015b). One example is the Global Covenant of Mayors for Climate & Energy and its Oceanic sub-group highlighted in Chapter 6. It has been argued that as more of the world's population becomes urban, 'networks of cities are emerging as dynamic centers [sic] of policy innovation' (Patrick 2015b). A long-standing, although arguably outdated, structure for more community-based city-city

engagement is that of sister-city, or twin-town, relationships. These social agreements tend to be culturally and commercially focused and aimed at encouraging exchange between local institutions. Recommendation 1 below is based on the idea of combining these two forms of collaboration in a Pacific context for smaller communities and focusing the relationship on managing the impacts of climate change. Such sister-communities could be self-selected based on a combination of factors: physical (coastal, agricultural); demographic (high youth; linked diaspora); impact (sea level rise, storm surge, drought); and/or objective (storm-resistant infrastructure; better climate-impact projections).

One of the weaknesses associated with both the policy-focused city-network structure and the socially-focused sister-city structure is a lack of broad, multi-level engagement on the part of the population, i.e., these arrangements tend to work for businesses and governments, but are of little value or interest to the general populace. For this reason, sister-community engagement should be flexible and focused on specific outcomes or projects, for example similar community-based adaptation (CBA) initiatives occurring contemporaneously. Creating such environments and communities would involve support, engagement, and on-the-ground project work by local organisations, groups, and individuals. Projects or initiatives with limited timeframes, as is often the case due to funding parameters, need to have stated objective or measure of contributing to the creation of the enabling environment or knowledge community, including through community dialogue, implementation of nature-based solutions, and incorporation of traditional knowledge. In this way, the impact becomes broader, longer-term and more useful.

> *Recommendation 1. Establish sister-community relationships between communities across diverse geographies that are facing similar challenges due to the impacts of climate change.*

The success of these relationships and engagement initiatives will be influenced by the participation of small enterprises in the private sector. The Council of Council's (2019) Report Card on International Cooperation includes commentary from participants noting the 'expanded environmental, social, and corporate' engagement in caring for the environment and identifies the private sector as 'indispensable in encouraging efforts to mitigate and adapt to climate change'. Small enterprises and private sector businesses are often the source of innovation and in-practice skills development, much more so than government or traditional institutions. They are also a source of material and in-kind support that can aid in making a given initiative financially viable. As more Pacific Island countries and territories achieve their development goals, there may be a shift in their access to various forms of development assistance. Further, as with Cook Islands, many Pacific Island and other small states have a relatively high GDP per capita due to their small populations. This has raised arguments for aid criteria beyond GDP per capita in order to enable them to address the challenges they are facing (APPF 2020; Independent Group of Scientists 2019). As this research has shown, many of the measures that are used globally are not the most

appropriate for Pacific Island countries. Further, their lack of inclusion in data gathering and statistical comparisons further limits the utility of such 'comprehensive' indicators, as discussed in the context of achieving the SDGs in Chapter 5. However, until more inclusive measures are developed and utilised in a way that will allow other forms of financing to become available to them, there will need to be other avenues of funding and support for climate adaptation initiatives in Pacific Island countries. Expanding the potential role of small enterprise private sector participation alongside development aid in implementing climate change adaptation and education measures is one way to address this need.

> *Recommendation 2. Support the development of small enterprises focused on climate change adaptation measures for and in Pacific Island countries and territories, including support for skills development, work experience, and employment opportunities.*

Coalitions of the capable and minilateral networks as recommended above also need to reflect broader social constructs. This research has shown that, in a Pacific context, when it comes to addressing issues of climate change and achieving the SDGs, migration needs to be considered and integrated into the conversation more broadly. Migration is frequently viewed too narrowly through the prism of whole community relocation or remittance/labour benefits that are then relegated to trade discussions rather than seriously considering larger implications and opportunities. Migration, like flexible coalitions, is a form of social development and network building that includes a broad range of actors, including diaspora, and can result in non-economic benefits, such as social remittances. The social partnerships inherent in these constructs already exist in the Pacific context and should be utilised in planning for climate change and migration related issues. Adaptation initiatives should be as equally focused on achieving and utilising social goals, such as increased cohesion and addressing issues of social justice, as it is on economic, political or infrastructure ones.

Any successful approach to managing the effects of climate change in the Pacific must include a combination of adaptation and mitigation strategies as well as migration management in order for the solution to be sustainable. The populations of the individual islands may need to decrease, stabilise, or relocate internally while the physical environment of the islands, both natural and man-made, will need to be monitored, managed and, when necessary, repaired or replaced. It will also be necessary to develop international, cooperative policies and strategies to managing the movement of people and the resultant effect on the region's economies. However, rather than these issues being addressed at the regional level, larger organisations and funding bodies often provide the impetus for planning and solutions in the region. This can have the effect of disenfranchising and limiting the engagement of those with practical knowledge and experience in these areas: that of the collective Pacific diaspora. Pacific diaspora communities also tend to be

highly engaged with their countries of culture and countries of origin as well as their countries of residence, thus providing a bridge between two, or even three, distinct geographies.

> *Recommendation 3. Actively engage Pacific diaspora communities in developing climate change adaptation and migration plans and actions in countries of original culture, origin, and residence.*

7.2.2 New development opportunities

Sachs (2018) has argued that the key to successfully achieving the SDGs is new technology, or 'the adoption of key innovations' that enable countries around to quickly progress to having sustainable practices and economies across multiple sectors. Conversely, critics of Sachs' approach cite an over-reliance on science and technology at the expense of other forms of cultural and/or linguistic knowledge (Hurst 2015). There are also related criticisms that compare the preference for technological solutions to outdated, yet persistent, development models that prioritise Western modes of thought and values (Australasian Aid Conference Development Aid Panel 2020; Glennie 2020). With regard to addressing climate change in particular, this has led to suggestions for 'more cooperation between developed and developing countries in sharing knowledge and climate technology' (Council of Councils 2019).

Cooperation such as this is the foundation of the longer-term goal of creating a sustainable enabling environment focused on reciprocal education, skills and knowledge sharing within and throughout the region as presented in Chapter 6. Too often discussions centre on how much 'the Pacific' can learn from developed countries in the region. However, as it relates to climate change and in light of the broader understanding of migration presented in this research, there are significant opportunities to establish initiatives that facilitate open knowledge sharing and support adaptation efforts and opportunities.

> *Recommendation 4. Pilot integrated multi-country post-secondary educational programs focused on climate change adaptation, to include: skills development, community placement, knowledge exchange, Pacific research principles, data and information use, and mobility options.*

In order for such initiatives to succeed there will need to be dedicated funding mechanisms aimed at supporting broad engagement across the region at multiple levels. This may require a shift in development models and priorities, including those of international partners, in order to incentivise and facilitate the participation of individuals, private actors, institutions, and communities (see Patrick 2021). SDG 17 Partnership for the Goals Target 17.3 identifies the need for additional financial resources for developing countries, including through the provision of foreign direct investments, official development assistance, and South-South Cooperation (see Indicator 17.3.2). For Australia and New Zealand, education is one of the highest priorities for aid to the Pacific

region (Australian Government 2016; Australian Government 2017a; Ratuva 2017). This practice lends weight to the potential effectiveness of suggestions that wealthier countries could allocate greater proportions of their bilateral and multilateral aid with the condition that it be used for global conservation or sustainable environmental initiatives (Patrick 2021).

> *Recommendation 5. Re/allocate development funding to expand scholarships and debt forgiveness mechanism for climate change adaptation programs at multiple levels across the region, to include flexible migration pathways.*

For all of these recommendations, and for policy development and adaptation planning more broadly, there needs to be particular considerations regarding gender. It is imperative that any enabling environment includes, supports, and encourages the voices of women to be heard. They have been shown to be more vulnerable to the impacts of climate change and less likely to migrate. This means that, particularly in migration culture countries such as Tonga and Cook Islands, they are also the ones that tend to remain on the island and in their home communities. Collectively, women have extensive knowledge and experience in practical, day-to-day management and mitigation strategies both short and long-term: they know what works for their families and communities. This knowledge and experience should be actively sought and incorporated into regional and local initiatives involving the impacts of climate change and/or migration. Adaptation plans addressing climate change should also provide longer term stability and opportunities for women. In some Pacific contexts, gender dynamics are traditional and, if not handled sensitively, can cause tension and violence in the domestic sphere (see Aguilar, Granat & Owren's 2015 *Roots for the Future* report).

In summary, while there have been suggestions of regional solutions and compacts with regard to broader 'climate refugee' issues in the region, many of these proposals build upon and replicate what is already occurring at high-level political forums such as the United Nations and, to a lesser degree, the Pacific Community. Adding additional forums and bureaucratic levels of discussion will do little to create a long term, realistic plan to manage these issues, particularly in a Pacific context. Incorporating Pacific climate change and migration issues into the larger context of refugee issues facing the region does a disservice to the broader issues and impacts of Pacific climate change adaptation and practice of migration. It also risks having Pacific-specific issues overshadowed by other political and geographical concerns. These recommendations then, are a first step toward creating flexible regional coalitions of actors supported by mutually beneficial policies focused on addressing Pacific concerns.

7.3 Contribution to knowledge

The original contribution to knowledge provided by this research is offering a new analysis and reframing of the intersection of climate change, migration, and the achievement of the SDGs within a Pacific regional context. It does this by:

- examining how the nexus climate change, migration, and the SDGs manifests in two distinct Pacific contexts;
- providing a visual framework for better understanding of the intersection of climate change, migration, and the SDGs;
- suggesting future strategies for a more effective regional approach to addressing climate change and migration issues in the Pacific; and
- offering next steps and better approaches to future research in this area.

The research also broadens the understanding of the relationship between migration practice and policy in the Pacific region, the impacts of climate change on Pacific small island States, and the influence of the Sustainable Development Goals on these intersecting issues.

Within the nexus of climate change, migration, and the SDGs there are new opportunities for regional climate change adaptation planning. This research offers suggestions for an approach that is sensitive to specific contexts and promotes a cooperative regional strategy flexible enough to address both current challenges and future contingencies. These include:

- the creation of an integrated sustainable enabling environment focused on reciprocal education, skills development, and knowledge sharing within and throughout the region aimed at addressing the current and future impacts of climate change;
- leveraging the technological expertise of Australia, the flexible approach of New Zealand, and the local knowledge of Pacific Island countries to create an enabling environment for knowledge exchange and collaborative solutions;
- the provision of integrated and reciprocal regional educational options focused on climate change adaptation at multiple levels;
- increasing scholarship opportunities and expanding educational debt forgiveness mechanisms with regard to working location, integrated across the Pacific, to include both vocational and higher education and be focused on innovative climate change adaptation measures.
- activating new coalitions as participants in the regional knowledge economy for broader engagement with current and future climate change adaptation.

Finally, this research provides a better understanding of the complex relationship between climate change and migration in the specific contexts of Tonga and Cook Islands, including the contributions of extensive diaspora both monetarily and socially. It also establishes a potential framework and methodology for further examination of these issues across the Blue Pacific

Continent and other small island geographies. In doing so, it has satisfied the role of Pacific research more broadly, which is 'to generate knowledge and understanding about, and for, Pacific peoples and their environments' (University of Otago 2011, p. 9).

7.4 Related issues and impacts

The broader global issues of climate change, human migration, and the SDGs discussed in this research are all areas undergoing rapid change. During the course of this research project alone, the Intergovernmental Panel on Climate Change released three special reports and the first its Sixth Assessment Reports, each more concerning than the last. At the same time, fourteen nations signed on to a new international agreement to protect coastal waters and the Atlantic Ocean's largest marine protected area was created. In the area of global governance, both the SDGs and the Paris Agreement turned five, marking the point by which nations had pledged to achieve a number of environmental and development targets. Many of these were not achieved.

Arguably, the most immediate and significant event was the onset and continuation of the COVID-19 pandemic, which both highlighted and exacerbated existing issues related to climate change and migration. As a result of the pandemic, four international climate conferences were postponed: the One Planet Summit, the Ocean Conference, the International Union for the Conservation of Nature congress, and the 26th United Nations Climate Change Conference (COP 26). This led to questions regarding the relevance, necessity, and utility of such large, multilateral gatherings in addressing complex global issues more broadly, particularly in light of the pandemic's ability act as a catalyst for increased international engagement and cooperation on the part of universities, scientists, regional organisations, and the private sector in the absence of effective global leadership and governance (Richardson 2020).

In this way, the COVID-19 pandemic resulted in a different global understanding of borders, cooperation, and global vulnerabilities. In discussing how the COVID-19 pandemic was impacting climate action, Sylvie Goyet (2020), Director of the Climate Change Division of Pacific Community (SPC), stated that:

> *There's a greater understanding now that things are global, and that climate change is a global issue, just as COVID-19. We have to address it together. We have this communality, this multilateralism that I hope will be stronger. We're also looking now at a more systemic type of approach. Climate change, like COVID-19, has to be treated in a systemic way, looking at job uncertainties as well as financial risk and food security. Climate change will have to have a more systemic approach looking at all these issues.*

Even prior to the onset of the pandemic, the language around climate change was intensifying. Germanwatch's 2020 Global Climate Risk Index briefing report states that 'signs of escalating climate change can no longer be ignored – on any continent or in any region' (Eckstein et al 2020). This is a statement that was not included four years prior as part of the 2016 briefing report. It is also consistent with the IPCC's (2021) first AR6 report's assessment that 'human induced climate change is already affecting many weather and climate extremes in every region across the globe'. Given such statements, it is not surprising that the economic recovery from the COVID-19 pandemic has been linked to opportunities to focus on mitigating the impacts of climate change and promoting sustainable development alternatives. In the context of discussion regarding the fiscal recovery from COVID-19, non-governmental and academic advisors have proposed a number of key principles for an effective 'green recovery' (UNEP 2021), among them:

- Building resilience: mitigating climate risk by emphasising nature-based solutions and investment in effective disaster management;
- Centring participation: protecting the most vulnerable and synthesising the diverse priorities of different socioeconomic groups, genders, ethnicities and age groups; and
- Creating alliances: building trade and innovation networks and utilising shared governance approaches to create fiscal space for recovery in developing countries (UNEP 2021, pp. 40-41).

Specific to this research, the situation arising from the COVID-19 pandemic inadvertently provided a real-time illustration of many of the issues being examined. It highlighted the particular vulnerabilities of Pacific Island countries with mobility-based economies that are reliant on remittances, visiting diaspora, and/or international tourism. It showed not only how unsustainable this is, but also the impact it has on their ability to secure necessary funding or support to take significant action on climate change adaptation and mitigation measures. It has been suggested that Pacific Island countries seeking to reduce their dependency on development partner financing and tourism revenue, as in the case of Cook Islands, could look to the examples of sovereign wealth funds such as the Revenue Equalization Reserve Fund of Kiribati and the Tuvalu Trust Fund to hasten their economic recovery (Homasi & Webb 2020, p. 6).

Whatever forms recovery takes, there is an opportunity, and a responsibility, for Australia and New Zealand to aid their Pacific Island neighbours. Senator the Honourable Penny Wong (2020), Leader of the Opposition in the Australian Senate and former Shadow Minister for Foreign Affairs, has stated that 'supporting Pacific states to recover is an opportunity for New Zealand and Australia to put their respective Pacific Reset and Step-Up policies into practice. If building more reciprocal, equitable relationships with Pacific states is the goal, now is the time to ensure economic recovery also strengthens their socio-economic, environmental and political infrastructures.'

Whether or not such engagement will occur is difficult to determine. Despite increased support for Pacific Island countries during the COVID-19 pandemic, the closure of borders and delayed re-opening across the region continues to heavily impact Pacific Island economies. Further, there are indications that, globally, national and domestic priorities will take precedence over international or even regional concerns.

7.5 Future research implications

One of the primary aspects of this research was the role of partnerships, coalitions, and new forms of collaboration that could be used to address issues of climate change and migration in the Pacific region. This offers a range of areas for further research, particularly in light of the global response to the COVID-19 pandemic. Climate change, like COVID-19, is a global challenge that cannot be addressed in isolation. Solutions require cooperation, collaboration, and compromise, but of a sort that encourages immediate action, multilevel engagement, and new ways of engaging. There is room for experimentation and it is imperative that it occurs. This raises the potential to examine the long-term effectiveness of small-scale initiatives and local actions related to climate change awareness and adaptation that have arisen in the absence of global action and leadership in this area.

Similarly, in the wake of the COVID-19 pandemic, it will be useful to investigate whether the growing recognition of the interconnected and interdependent nature of effective responses to a global crisis translates into continued cooperation on other global issues. Current indications are that national priorities will take precedence over regional or international concerns, but equally there is an increasing awareness in the general population of the impact the situation in one country can have on its neighbours. Whether this translates into further isolation or increased engagement, even if motivated by national self-interest, is an area that will require further examination.

With regard to Pacific regional engagement specifically, Australia and New Zealand have made recent announcements related to increased funding for climate change initiatives, to include Pacific Island countries. This raises the possibility of developing innovative pilot programs that engage the public in incorporating nature-based solutions and traditional knowledge of adaptation measures. Such measures would benefit from more extensive research into the role of that Traditional Ecological Knowledge (TEK) can have in specific Pacific contexts, to include potential applicability across geographies. These findings would also be useful if incorporated into multidimensional vulnerability indices and assessments in order to provide a more holistic view of adaptive capacity alongside vulnerability.

Another recent announcement is that of particular relevance to the topic of this research is the consolidation of Australia's Pacific labour programs into the expanded Pacific Australia Labour

Mobility (PALM) scheme. Topics of potential investigation include: its success in addressing issues raised in association with previous labour schemes; its effectiveness in addressing the longer-term migration requirements of Pacific Island countries; the appropriateness of the mechanisms intended to increase diversity of representation within the program; and an evaluation of expanded social remittances as a result of the longer time allowance for migrants.

With regard to social remittances, a final area of further investigation is current role of the Pacific diaspora in addressing issues of climate change. It has been argued that as Pacific Islanders migrate and become settled in their new environment, they are then able to aid others in navigating the challenges of international migration. However, it also been shown that while later generations of diaspora may feel a connection to their country of culture or their country of origin, or both, they may not feel a sense of obligation or responsibility to it in the same way that earlier Pacific migrants have. As the impacts of climate change become more severe, this sense of connection, responsibility, or obligation may change or may begin to take different forms. A suggested approach to such an investigation is a modification of Betts' engagement with refugees as research partners.

In discussing public engagement with research, Betts (2017) argued that it must engage the wider public at all levels, and that it can do so in three ways: by informing, i.e., viewing research as an output that can benefit the community; by consulting, i.e., importing knowledge from communities; and by collaborating, i.e., seeing knowledge as a joint product with communities. He illustrated this through an example of training refugees as peer-researchers and enumerators, making them partners in the joint projection of research. This created opportunities for them to learn, for researchers and students to interact with refugees, and to launch the results of the research within the communities. As such, the study was inclusive of, and relevant to, those who would have otherwise been studied as the objects of research. In other words, it made them subjects and active partners. This practice aligns with the Pacific research principles set out in Chapter 4. Further, this approach led to concrete benefits for the refugees, with many going on to create their own NGOs or gaining scholarships to higher education. This idea, broadly, provides additional impetus for the integrated diaspora recommendations around regional climate change adaptation solutions set forth in this research.

Part of the motivation in initially developing this research was the potential for lateral application of the findings to other geographies. The recommendations presented in the Section 7.2 are intended for the Pacific region, to include the Pacific Island countries and territories of the Blue Pacific Continent, Australia, and New Zealand. However, they are flexible and adaptable enough to be applicable to a range of associations. For example, among CARICOM or AIMS/AIS States and their relevant regional and development partners, the recommendations could be focused on oceans and seas; between Pacific Island countries and Japan they could be based on disaster

resilience and infrastructure; among small island developing States and coastal nations more broadly there may be synergies around the blue economy. While these are all possibilities, any implementation, including that presented here, would require additional research and consultation to ensure that it is appropriate for its intended aims.

Despite attempting to address a range of ways in which the intersection of climate change and migration manifests, this research was only able to present relatively limited examples, even within the context of the Blue Pacific Continent. For example, the intersection of climate change and migration will look very different for Melanesian countries, which have significantly more land area, larger populations, and a wider variety of natural resources. Similarly, the populations of territorial countries have different migration options available to them that come with their own challenges and opportunities. Finally, the global shifts that have occurred in recent years, including the increasing awareness of the need to act with regard to climate change and the ongoing impacts of the COVID-19 pandemic, create an uncertain environment globally, regionally, and nationally, impacting on cooperation at multiple levels. This could not be addressed fully within this research even for the two case studies presented – there is simply too much that is still unknown. In some respects, it makes this research particular not only to the specific geographies it examines, but also to the very particular point in time in which it occurred.

7.6 In closing

Climate change, migration, and achieving the SDGs are large and complex issues, even when 'limited' to a Pacific context. At the point at which the three intersect, they become more focused, but more difficult to grapple with. Applying that intersection to specific contexts, namely the Kingdom of Tonga and the Cook Islands, enabled a better understanding of how each of the three issues support, and hinder, the others in a Pacific context. The underlying intention, broadly, was to be able to view adaptation possibilities in a different way and offer suggestions for a regional approach that was both sensitive to the specific contexts of a diverse area while promoting a cooperative regional strategy flexible enough to address issues now and into the future. The impacts of climate change are not going away, and the need for, and reliance on, migration in one form or another within the Pacific region will continue. The potential for viewing these issues as a strength and a regional opportunity in the Pacific region are great, provided they are understood, planned for, and actioned in a respectful and timely manner.

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APPENDICES

Ethics Statement

The Author, whose name appears on the title page of this work, has obtained, for the research described in this work Human research ethics approval from the Social and Behavioural Research Ethics Committee of Flinders University with the following details:

Project No.	8379
Project Title:	Toward the Global Goals
Approval Date:	23 July 2019
Approval Expiry Date:	31 December 2022