

**E tū manu ae lē tū logologo:**

Examining Samoa's participation in the United Nations Framework  
Convention for Climate Change (UNFCCC)

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## Abstract

This thesis examines Samoa's participation in the United Nations Framework Convention for Climate Change (UNFCCC) from the years 1994 to 2022. The aims of this research include understanding the integral responsibilities and actions undertaken by Samoa as a party country to the Convention to help address the global issue of climate change. To determine what this looks like, this thesis analyses six different instances that Samoa directly participated in the UNFCCC. This was done through submissions to the UNFCCC as well as its participation in international events and negotiations pertaining to climate change. To do this, there was an analysis of four main documents submitted to the Convention as part of its obligations and responsibilities. This thesis also looked at two instances where Samoa played an integral role in climate change negotiations and in doing so, fulfilled its obligations to the UNFCCC; these are the Paris Agreement and the Third Small Island Developing States (SIDS) conference. This thesis also examines the local institutions of water and energy sub – sectors in Samoa to further understand Samoa's participation in the Convention and its relevant instruments. To assess the nature of Samoa's participation in the UNFCCC, the thesis is guided by an effectiveness dimension framework, developed to understand how countries participate and perform in the UNFCCC. The ultimate objective of this thesis is to establish that whilst Samoa can be effective in meeting its obligations to the UNFCCC, the UNFCCC as an institution seems ineffective in meeting its responsibilities to small island states like Samoa. This means Samoa's progress is contingent on the assistance of developed countries and nation – states. The research approach was primarily document analysis because there is much to be considered with the material online. The plan to undertake interviews did not happen because of complications related to COVID 19. It was also difficult to conduct this research due to the paucity of information and research that have looked at Samoa's participation and performance in international climate change regimes. Nonetheless, this thesis is purported to contribute to overall research and scholarship about climate change.

## Dedication

This thesis is dedicated to the memory of my late father, the dream weaver:

Tiatia Tapunu'umau Leatigaga Fanuaea Matoka  
(1963 – 2018)

O le alofa e lavātia ai mea uma.

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## GLOSSARY

AOSIS	Alliance of Small Island States
AFOLU	Agriculture, Forestry and Other Land Use
BASIC	Brazil, South Africa, India and China (coalition)
BPOA	Barbados Programme of Action
COP	Conference of the Parties
CIM	Community Integrated Management
DOS	Department of Statistics
EU	European Union
EPC	Electric Power Corporation
FAO	Food Agriculture Organisation
Gafa	genealogy
G77	Group of 77 (coalition)
GEF	Global Environment Fund
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas (es)
INDC	Intended Nationally Determined Contribution
IPPU	Industrial Processes and Product Use
IPP	Independent Power Provider
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Corporation Agency
KP	Kyoto Protocol
LMDC	Like – Minded Developing Countries
MRV	Measuring, Reporting, and Verification
MAFF	Ministry of Agriculture, Fisheries, and Farming
MPE	Ministry for Public Enterprises
MNRE	Ministry of Natural Resources and Environment
NAPA	National Adaptation Programme of Action
NCCP	National Climate Change Policy
NGO	Non – Governmental Organisations
PA	Paris Agreement
PICAA	Pacific Islands Climate Change Assistance Project
PPSRCI	Pacific Plan for Strengthening Regional Cooperation and Integration

SIDS	Small Island Developing States
SWA	Samoa Water Authority
SDG	Sustainable Development Goals
SPREP	South Pacific Regional Environment Programme
SDS	Strategy for the Development of Samoa
UNFCCC	United Nations Framework Convention for Climate Change
UNEP	United Nations Environment Programme
UN	United Nations
UNDP	United Nations Development Programme
WBG	World Bank Group
WMO	World Meteorological Organisation



## Chapter 1: Introduction

“Your Excellencies. Climate change is the heart of our vulnerabilities as nations and people. While we may be the worst affected, the real solution is not in our hands especially when it comes to global emission reductions. However, through the COP26 negotiations and multilateral process, we hope to share the solutions to save our planet. There is no trade – offs, we are negotiating the survival of our islands”.

Fiamē Naomi Matā’afa (Nanette, 2021).

E tū manu, ‘ae lē tū logologo: The town – crier is reliable, but a rumour is unreliable (Schultz & Herman, 1951). This Samoan proverbial expression can be understood in different contexts within Samoan culture. For instance, when a fono or meeting is held, the town – crier (*manu*) is sent to advise the chiefs and if they have knowledge of it only through hearsay, they cannot be certain (Schultz & Herman, 1951). In this instance, the *manu* is known as the town crier who is considered reliable whilst the *logologo* is referred to as a rumour rendering it unreliable to those who hear it. In another context, this expression also relates to the art of *tapa* making where common designs used are known as *logologo* or *manu* (Schultz & Herman, 1951).

In everyday conversations in the Samoan language, this proverb has been used as an encouragement to people that consistent reminders will keep people informed. For the purposes of this thesis, one of its overall objectives is to serve as a reminder that climate change is a very raw and real experience for peoples and communities like those within the island nation of Samoa. Therefore, there needs to be effective action to mitigate and adapt to these impacts. This thesis aims to be both *manu* and *logologo* – drawing peoples’ attention to the realities of climate change for the island nation of Samoa despite its established position alongside other Pacific countries as those who contribute the least to human – induced climate change but disproportionately affected by its impacts (Bryant – Tokalau, 2018)

Climate change is a catastrophic phenomenon labelled as an ‘urgent crisis’ around the world (Government of Samoa: Ministry of Natural Resources and Environment, 2020). The implications of this understanding of climate change as a crisis effectively calls for immediate action. Climate change has been known to connect the world not just physically but holistically. The interconnectedness means both environments and people are impacted by climate change at multiple levels and in different layers. Much of the literature on climate change attributes the impacts of global warming on the environment to individual variables such as the process of colonialism and economic

development (Nurse et al., 2014). In more recent years, research about climate change in the Pacific has argued that Pacific Island countries and populations face some of the most detrimental impacts of climate change regardless of their contribution and evidently lack thereof to the causes of climate change (Finnie, 2018).

Pacific Island leaders have continued to reaffirm the argument that climate change represents the single greatest threat to the livelihoods, security, and wellbeing of the peoples of the Pacific (SPREP, 2019). The current Prime Minister of Samoa fundamentally established this position during the Pacific Island leader's forum prior to the Conference of the Parties (COP) 26 negotiations (Nanette, 2021). The Government of Samoa is therefore a very strong supporter of this position and have worked over the years to respond to climate change and its impacts. Like many Pacific nations, Samoa's concerns are around the impacts of natural disasters exacerbated by climate change on Pacific peoples' social, economic, cultural and environmental well – being, increasing the burden and risk of [the region's] security (Government of Samoa: Ministry of Natural Resources and Environment, 2020). Samoa, in its efforts to contribute to the fight against climate change joined the United Nations Framework Convention for Climate Change (UNFCCC) in 1994. This has led to the establishment of Samoa's Climate Change Policy in 2020; an amalgamation of its plans and policies pertaining to climate change, its impacts and solutions moving forward (Government of Samoa, 2021). To understand the development of this policy, it is important to place it in a wider international context.

At the international level, climate change plays a major role in global contexts such as multilateral negotiations and conventions such as the UNFCCC. This is majorly due to the process of climate change playing an integral role in shaping the future for generations of the world. Its catastrophic nature and its impacts have been experienced by many ecosystems and populations globally. Climate change also continues to play a significant part in the way governments and communities operate. One such defining aspect of climate change is its impacts do not discriminate against different groups of peoples or cultures. This means that for countries like Samoa, regardless of their contribution to global warming and having proven to contribute the least to Greenhouse Gas Emissions (GHG), they are undeniably one of the most affected by climate change and its impacts (Saifaleupolu, 1999). Climate change will eventually affect everyone and anyone, but some places and people will feel these impacts sooner. This is extremely concerning and yet again calls for immediate action to address the impacts of climate change. The available scholarship on climate change over the last three decades has been dedicated to exploring the nuances of this process of climate change, its

impacts on communities and environments as well as steps taken in response to climate change (Field et al., 2014; Makondo & Thomas, 2018; UNFCCC, 2013).

My analysis is guided by the notion of ‘effectiveness’ which is a critical framework for investigating countries’ participation in international institutions like the UNFCCC (Oberthür & Groen, 2015). Therefore, this thesis draws on four different documents and two events to determine the effectiveness of Samoa’s participation. I will examine this participation by drawing upon international and national examples of institutions on climate change, namely the UNFCCC and the Ministry of Natural Resources and Environment (MNRE). Furthermore, this thesis takes a closer look into two key sub – sectors in Samoa whose activities are critical to climate change adaption and mitigation which are the water and energy sectors.

The reasons for focusing on Samoa is threefold: Samoa has played a key leadership role among small island development states culminating in the hosting of the Third International Conference on Small Island Developing States (SIDS) in 2014; Samoa has also recently developed a national climate change policy, and the researcher is from Samoa providing both an insider and outsider lens to the research. These three important contextual factors underpin the rationale for focusing on Samoa. The action of hosting the Third International Conference for Small Island Developing States in 2014 was an integral one for Samoa. This move fundamentally meant that Samoa was stepping up on the international stage to lead, thus showcasing a commitment to address the impacts of climate change on SIDS. Secondly, the recent development of the climate change policy is further indication that Samoa is consistently looking to address the issue of climate change. Thirdly, the rationale for this research also stems from the researcher having a *gafa* connected to the island country of Samoa which will be explained in the methods chapter below.

The overall argument of this thesis is that Samoa has been effective in meeting its commitments and obligations on climate change through its participation in the UNFCCC. Samoa has done this by setting up and being involved in various institutions, including locally – based institutions. A primary example is the MNRE which has produced reports highlighting Samoa’s actions in response to climate change. However, Samoa’s effectiveness in creating changes that have effective implications for climate change responses are limited because of the lack of funding internally and resources from other international institutions (Saifaleupolu, 1999). As a result, there is a need for a close analysis of the effectiveness of those international organisations. This paper will argue that Samoa’s effectiveness in its participation in the UNFCCC is only as good as the effectiveness of the institutions that they are a part of. Moreover, this thesis will argue that whilst Samoa has continued to engage in

good faith, the UNFCCC seems ineffective in garnering or mobilising a global emissions reduction plan which is an integral part of climate change mitigation. Furthermore, the UNFCCC seems ineffective in its inability to direct resources to countries in need like Samoa which would have ensured better performance and improved responses to climate change. This can be seen in the ways in which local sectors responsible for climate policies struggled. Nonetheless, the argument remains that Samoa's effectiveness is dependent on how institutions put in place pathways for climate change mitigation efforts for everyone.

## Structure of thesis

The thesis will be made based on the following structure:

- Following this introduction, Chapter 2 consists of the literature review. This chapter is a critical review of the current and relevant literature covering some of the key points that this thesis seeks to discuss.
- Chapter 3 articulates the methodological approaches undertaken to gain knowledge and understanding about Samoa's participation in the Convention. This thesis primarily used document analysis as much can be considered from the content of these documents, but the effectiveness dimension framework was the theoretical basis used to analyse the relevant documents.
- Chapter 4 looks at the particular instances that this thesis will analyse to ascertain what Samoa's participation to the UNFCCC looks like. This will include looking at four key documents submitted to the Convention since Samoa became a party in 1994.
- Chapter 5 further examines Samoa's participation in international negotiations and to an extent the Convention through its participation at the Third International Conference on Small Island Developing States in 2014 and the Paris Agreement in 2015.
- Chapter 6 focuses on Samoa's national climate change sector as well as the integral role of the policy. It begins with an overview of the governmental ministry deemed responsible for executing climate change policies and implementing its activities. This chapter focuses on two important sectors and how their efforts can be connected to Samoa's ambitious efforts in participating in international climate change regimes like the UNFCCC.
- Chapter 7 discusses the different ways that Samoa has participated in the UNFCCC and what it means in the context of 'effectiveness'.
- Lastly, Chapter 8 will offer conclusions that address the overall research questions raised in this paper. This chapter will also tie together the aims and objectives of this thesis and how they contribute to the overall argument made throughout this paper.



## Chapter 2: Literature Review

### Introduction

This chapter provides a critical review of the current and relevant scholarly and policy literature pertaining to this research. Definitions of key terms and concepts that are significant to this research will be provided and will allow for identifying gaps in the current literature that this thesis hopes to fulfil and add value to. This chapter will also provide the current landscape and context of climate change at the international, regional, and local levels.

### Defining climate change

The UNFCCC and Intergovernmental Panel on Climate Change (IPCC) both have definitions for the concept of climate change as it is a fundamental concept in the way these two international instruments operate. The UNFCCC defined climate change as, “a change of climate that is attributed directly or indirectly to human activity, that alters the composition of the atmosphere in addition to natural climate variability over comparable time periods” (Pielke, 2004). Effectively, climate change is established as alterations to the environment cause by both natural environment and human systems. On the other hand, the IPCC concedes that climate change is, “any change in climate over time whether due to natural variability or because of human activity” (Pielke, 2004). Yet again, it is established that climate change is both human and naturally induced. While it is important to note that these definitions exist, it effectively places doubt on the specific actions by people that lead to exacerbating climate change. The current context of climate change almost 20 years later would argue that impacts of climate change have been extensively exacerbated by human interaction that led to greenhouse gas emissions (GHG) (Field et al., 2014). Therefore, these definitions of climate change are problematic in the sense that it does not wholly attribute rising emissions to actions of the developing world. This means that the onus is then placed on every other country regardless of their contribution to climate change.

However, IPCC has provided a more recent definition of the concept of climate change stating that:

“Climate change refers to a change in the state of the climate that can be identified (for instance using statistical tests) by changes in the mean and/or variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions, and persistent anthropogenic changes in the composition of the atmosphere or in land use” (Field et al., 2014).

## Defining adaptation

Like the concept of climate change, definitions of adaptation exhibit a difference of opinions that are rooted in fundamental differences in the definitions of climate change provided by the UNFCCC and IPCC (Levina & Tirpak, 2006). Though these differences may be considered small, implications of such, on responses to climate change including creating contradictory and complex expectations and objectives on countries and relevant stakeholders (Sommerholt, 2017).

The IPCC defined adaptation as the adjustment of natural or human systems in response to actual or expected climatic changes and effects (Barnett, 2005), there are several types of adaptations which all focus on different areas of the climate change response – for example anticipatory and reactive adaptation, and private and public adaptation (Barnett, 2005). While this is important to note, the focus of this research is on the country of Samoa's engagement with the UNFCCC. This means this research considers the definition of adaptation provided by the Convention.

Adaptation is therefore defined as the “practical steps to protect countries and communities from the likely disruption and damage that will result from effects of climate change. For example, flood walls should be built and in numerous cases it is probably advisable to move human settlements out of flood plains and other low – lying areas...” (Levina & Tirpak, 2006).

## Defining mitigation

Alternatively, mitigation focuses on interventions that encourage reduction of GHG concentrations to slow the rate of climate change (Barnett, 2005). The UNFCCC had also referred to mitigation as not only reduction of emissions but the work towards enhancing sinks – which will prove helpful with reduction in emissions (UNFCCC, 2022a). This is key in climate change solutions and the Convention had included this requirement for all parties to ensure that emission targets were reachable. Some of the key actions to mitigate climate change were by party countries to the Convention include developing economy – wide caps for national programmes (UNFCCC, 2022a). Other similar definitions outline the need to help countries move toward climate – resilient and low emissions strategies by encouraging efforts to reduce or prevent emission of greenhouse gases (United Nations Environment Programme, 2017). These definitions of mitigation show a different focus depending on the purpose of the programme or initiative. Nonetheless, mitigation can be understood as the actions that are being undertaken by individuals or groups of people to reduce the impacts of

climate change. IPCC has however argued that effective mitigation will not be achieved if individual agents advance their own interests independently (Edenhofer et al., 2014).

IPCC further argues that climate change has:

“Characteristics of a collective action problem at the global scale because most greenhouse gases accumulate over time and mix globally, and emissions by any agent affect other agents. International cooperation is therefore required to effectively mitigate GHG emissions and address other climate change issues (Edenhofer et al., 2014).

## Current Climate Change

### Global Climate Change Context: Causes and Consequences

It has been well – established within literature that climate change is a global phenomenon that continues to affect environments and peoples. Climate change is both human induced and a result of natural variability in the environment (Barnett, 2011; Finnie, 2018; Nurse et al., 2014). Although alterations to the environment are a natural part of an ecosystems’ cycle, human action has been heavily attributed as the main factor in the exacerbation of climate change (Bryant-Tokalau, 2018; Nurse et al., 2014). Main contributors to climate change include historical processes such as the Industrial Revolution which saw a shift in the way people practiced and developed economies as well as colonisation, globalisation, and economic development (Nurse et al., 2014). These processes are the foundations for human activities and interactions that have caused changes to the environment, contributed to GHG emissions, and overall has had catastrophic consequences for ecosystems around the world. This affirms that climate change has already started and one of its most concerning facts is that climate predictions have projected that by the year 2100, temperature increases between 1 and 3.5 degrees Celsius are expected to occur due to global warming (Field et al., 2014). These processes create change in the climate which in turn has detrimental implications on the natural environment and the livelihoods of people.

At the international level, the impacts of climate change can be defined as being complex, multi-layered, and interconnected: in that it is physical, social, political, economic, and cultural. One of the most notable aspects of the impacts of climate change is its ability to transcend time, place, and people. Much of the literature researching and understanding the impacts of climate change refer to the multi – dimensional impacts of climate change which has altered lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure (Edenhofer et al., 2014). The IPCC has reported that this has mainly been due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system (Field et al., 2014). The sixth assessment report of the IPCC concluded that the extent and

magnitude of climate change impacts are larger than estimated in previous assessments (Rama et al., 2022). The implications of such means that climate change is not slowing down, and its impacts are experienced by environments and peoples in levels never seen before.

Physical impacts of on geophysical systems include floods, droughts, and sea – level rise which have affected coastal areas, some low – lying island nation states, and fragile ecosystems of mountains and wetlands (Oberthür & Groen, 2015). Other physical impacts include inundation of various locations and areas because of sea – level rise (Field et al., 2014). Social – economic impacts of climate change include drastic changes to the lifestyles of people to accommodate to the changes in environment and climate. For instance, adverse impacts of extreme climate events on ecosystems such as agriculture, aquaculture and fisheries has meant reduction in food and water security for people (Rama et al., 2022). These social–economic impacts are directly linked to issues in overall health and wellbeing of many communities. With the reduction in food security, communities particularly vulnerable communities like children, elderly people, and pregnant women are exposed to increase malnutrition due to sever water scarcity (Rama et al., 2022). As such, these challenges are complex to the extent that achieving Sustainable Development Goals (SDGs) seems beyond attainment.

The impacts on health are both physical and mental. According to the IPCC, physical health issues have arisen due to extreme heat events which has led to increase in climate – related food – borne and water – borne diseases as well as bodily infections (Rama et al., 2022). Recent research into mental health related to climate change has identified the negative impacts climate change has on the mental health of peoples (Charlson et al., 2021; Palinkas & Wong, 2020). Issues such as depression, anxiety, and post – traumatic stress disorder are the most common impacts that has been identified as more prevalent in communities directly and indirectly experiencing the impacts of climate change (Palinkas & Wong, 2020). Overall, climate change is contributing to crises for humanity in a way that extreme climatic events coincide and interact at multiple levels with high vulnerability (Rama et al., 2022). Therefore, it is fundamental that there are systems put in place to ensure that appropriate responses are established to combat climate change. One such system is the United Nations Framework Convention for Climate Change (UNFCCC) which was established for countries to converge on how to best respond to climate change and its impacts.

## United Nations Framework Convention for Climate Change (UNFCCC) – A snapshot

### History and Development

The UNFCCC also known as the 'Convention' was an international treaty that was adopted in 1992 at the Earth Summit in Rio de Janeiro as a framework for international cooperation to combat climate change by limiting average global temperature increases and the resulting climate change, as well as coping with impacts that were, by then, inevitable (UNFCCC, 2022b). This followed negotiations that were launched in December 1990 by the United Nations General Assembly on climate change (UNFCCC, 2022b). Historical background to the UNFCCC can be traced back to political and economic feasibility debates that occurred in the United States from 1979 to 1980 around oil spill and the consequences it had on the environment (Oppenheimer & Petsonk, 2005). The Convention was then entered into force on the 21<sup>st</sup> of March in 1994 after receiving ratifications from 50 countries (UNFCCC, 2022b).

Recent updates showed that there are now 197 parties to the convention (UNFCCC, 2022b). Having this many countries ratify the Convention shows how important this framework is in negotiations pertaining to climate change. The ultimate objective of the Convention is to prevent “dangerous” human interference with the climate system (UNFCCC, 2022b). This is specifically expressed by Article 2 of the agreement which states that the purpose of the convention is to:

“Stabilise GHG concentrations at a level that would prevent dangerous anthropogenic (human induced) interference with the climate. It states that “such a level should be achieved within a time – frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner” (UNFCCC, 1992).

The Convention followed the establishment of the IPCC in 1988 which was set up by the UNEP and the World Meteorological Organisation (WMO) to review the state of scientific knowledge on climate change on a regular basis (Oberthür & Groen, 2015). Those who were at the time members of the United Nations (UN) and of the WMO were therefore members of the IPCC and its three working groups. Their functions were to: understand the science of climate change, conduct scientific – technical analyses of impacts, adaptations and mitigation of climate change as well as determine the economic and social dimensions of climate change (Oberthür & Groen, 2015). Essentially, the IPCC was created to focus on the science of climate change. The UNFCCC on the

other hand pertains to policy directly developed and implemented to fulfil the overall objective as outlined in Article 2 of the Convention.

Article 1 of the Convention expresses the definitions of some of the key terms or concepts used in climate change literature (UNFCCC, 1992). Article 3 of the Convention divides the 195 parties into two major camps known as Annex I and non-Annex I countries as well as the principles in which said countries are to be governed by Annex I countries refer to the developed countries who were required by the Convention to take the lead in combatting climate change and the adverse effects thereof (UNFCCC, 1992). This development within the Convention then put the onus on developed or industrialised countries where they are expected to do the most to cut emissions on home ground. For instance, these Annex I countries as a result were expected to reduce emissions to 1990 levels by the year 2000 (UNFCCC, 2022b). On the other hand, non-Annex I countries were the developing countries who according to the Convention should be given special consideration because of their position as being particularly vulnerable to the adverse effects of climate change as well as disproportionately and abnormally bearing an abnormal burden under the Convention (Financial and Technical Support Programme of the UNFCCC, 2009). Pertinent here is the dual delegation of responsibility where those who contribute the most to climate change were expected rather than required to reduce emissions while consideration was given to those most affected by the impacts of climate change. What is fundamentally important here is the language that is used in these negotiations does not explicitly put an onus or provide accountability for countries to actively reduce emissions. Evidently, this is reflected in the current state of climate change.

### Kyoto Protocol

As an extension of the international negotiations on climate change which started in 1992 with the Convention, the Kyoto Protocol (KP) was adopted in 1997 and entered into force on 16 February 2005 (Oberthür & Ott, 1999). Whereas the UNFCCC itself established a framework for developing international cooperation, the KP introduced specific commitments to limiting and reducing GHG emissions in developed countries by the period 2008 – 2012 (Sommerholt, 2017). Based on the principles of the convention and its annex – based structure, the protocol bound developed countries, and placed a heavier burden on them under the principle of “common but differentiated responsibility and respective capabilities” (Financial and Technical Support Programme of the UNFCCC, 2009). While this recognises that countries have varied contributions to the changing climate, evidence has shown that not all countries signed the KP (Böhringer, 2003). This is also evident in the complex ratification process which saw the protocol being entered into force 8 years since its inception. Countries like the USA and Australia had refused to sign the protocol to set the

targets for the reduction of GHG emissions (Barnett, 2005). This shows that despite the protocol's aims to bind developed countries to reduce emissions, there was no effective way of ensuring accountability of countries. This is concerning because it questions whether the UNFCCC is accountable to all its party countries and is effective in the objectives that it is purported for.

### Paris Agreement

In 2015, the Paris Agreement became the second major subsidiary agreement under the UNFCCC intended to eventually replace the KP as the driving mechanism for processes and actions in response to climate change (Leggett, 2020). Leggett (2020) argues that this agreement defined a collective and long-term objective to hold the GHG-induced increase in temperature to well below 2 degrees Celsius and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius above the pre-industrial level. This agreement was the first time in the history of the Convention that all parties participated in a common framework with common guidance, although some countries were still allowed limited flexibility (UNFCCC, 2015). During the negotiations, it was intended that the agreement was legally binding on the parties though not all its provisions were mandatory (Leggett, 2020). This implies that the agreement is legally binding and therefore all parties are required to fulfil their obligations as dictates by the Paris Agreement. However, there is limited research and scholarship that have been dedicated to exploring what party countries' participation in the Convention and its instruments look like. Therefore, it is crucial to look at some of the ways that these institutions are held accountable as well as parties' participation in international institutions such as the UNFCCC.

### Multi – lateral negotiations

#### Challenges

As climate change continues to affect the planet and its impacts are devastating to populations around the world, researchers have argued that responses to climate change have been hindered by several international negotiations which often results in more words and less actions. Carter (2015) argued at the Third UN SIDS conference in 2014 that the greatest challenge to global climate change negotiations is the failure of traditional diplomacy at the UN and the growing need for a new brand of diplomacy known as one voice diplomacy. This failure is troubling since the UNFCCC is the foundation of the global climate system. Such complaints echoed the dissatisfaction of Pacific leaders at the time, who were growing increasingly concerned about the state of negotiations during the parties' conferences (G. J. Carter, 2018). President Anote Tong of Kiribati argued that “we need to establish alliances that are non – traditional, that serve our best interest” (G. Carter, 2015).

Fundamentally, this argument acknowledges the need for collective action against climate change which the IPCC also alluded to when looking at ways of effective mitigation (Pachauri & Meyer, 2014).

Failure of traditional diplomacy however can be traced back to almost three decades where the global climate change regime has been an arena of complex and multifaceted diplomacy (Carter, 2015). One only needs to look at the development of the UNFCCC and the complex process of ratifying the KP and eventually the Paris Agreement to establish the complications faced by multilateral negotiations pertaining to climate change. In some instances, international negotiations have been referred to as a continuation of seemingly endless meetings about a wide range of issues between and with a plethora of actors including state, civil society as well as private businesses (Carter, 2015). This means that whilst all relevant stakeholders have participated in the regime; efforts have been almost futile because recent IPCC climate projections report climate change has exacerbated instead of slowing down. This suggests that whilst increasing climate change is happening around the world, there has been no consensus when it comes to efforts to respond to climate change. One of the reasons for this has been the issue of diplomacy.

### Climate diplomacy

According to Mabey & Gallagher (2013), diplomacy is the foundation of international agreement and an effective regime. However, standing in the way of an effective climate regime is the challenges presented by diplomacy (G. J. Carter, 2018). Climate diplomacy can be defined as the practice and process of creating the international climate change regime and ensuring its effective operation; thus, both precedes and shapes the construction of the climate regime (Mabey & Gallagher, 2013). It is the interface between national interest debates and international cooperation working to ensure that the accurate assessment of other countries' interests and intentions finds the space for agreement (Mabey & Gallagher, 2013). Therefore, climate diplomacy is an international arena of high stakes – negotiations that not only have environmental implications but also have the potential for major economic and security impacts (G. Carter & Howard, 2020). Thus, the ability of states to advance their interest through diplomacy and dialogue to find common solutions by consensus is the cornerstone of international climate politics (Carter and Howard, 2020).

One significant aspect of climate diplomacy that has been stressed to compliment any state's climate policy position are the political groupings or interstate coalitions they belong to (G. J. Carter, 2018). These groupings have been emphasised to accentuate Pacific voice in international climate



change negotiations (G. Carter, 2015). Coalitions have been highlighted as a powerful parallel to international negotiation processes (Dupont, 1996). Christophe Dupont (1996) outlines two core functions of coalitions; the first is to act as a means for maximising bargaining power for its members. The second function is to manage complexity of processes and issues within a regime where a common platform that incorporates the minimal demands of each coalition member is easier to handle and negotiate than the sum of individual items (Dupont, 1996). The implications of such political groupings in the context of the complex international environmental regime are important. According to Carter (2018), these two core functions are especially important for small countries with limited negotiation resources and political influence in climate negotiations, such as Pacific Island countries. Pertinent here is yet another acknowledgment of challenges of the overall international climate and environmental regime. Other advantages of coalitions include helping to streamline the negotiation process and transaction costs (Carter, 2018). This is particularly important in a regime that consists of a dual structure where issues are negotiated at the coalition level first, before common positions are presented in COPs and subsidiary bodies meeting (Wamsler et al., 2020). In addition, coalitions are extremely important as it would be logistically impossible to conduct negotiations among the 196 individual country delegations (Carter, 2018).

However, coalitions have not received enough attention despite their importance in climate change negotiations, particularly given their complex landscape. The work of Pacific state participation in UNFCCC coalitions is only briefly mentioned in a few studies, and even those studies are mostly concerned with the larger AOSIS (Carter, 2018). Prominent work around party coalitions have taken place but there are no rules or formal processes for establishing a negotiation coalition (Carter, 2018). Other problems with coalitions include tracking changes due to the ad hoc nature of these arrangements where they are not well – documented and sometimes involves secret side – door or back – room negotiations (Carter, 2018). In the case of Pacific countries, they are part of different blocs otherwise known as coalitions and most notable of them are the Least Developing Countries and the G77 which they are in coalition with other developed countries like China (G. Carter, 2015). Due to the nature of these arrangements, it was evidenced at COP15 when it was detrimental to the point that it derailed the negotiations (Sommerholt, 2017).

Fundamental problems with the literature include the Pacific Islands' experience being neglected and the fact that they are considered analytic objects rather than subjects of international relations theory (Carter, 2018). These issues raise the question of whether these regimes are actually doing what they are meant to. It also raises the question of whether big negotiations involving SIDS

countries will be possible thanks to opportunities created by international organisations like the UNFCCC.

#### *Assessing effectiveness of international regimes*

The question on the effectiveness of institutions such as the international regime of the UNFCCC therefore requires assessment and analysis. However, there is paucity in research that have investigated the effectiveness of international institutions particularly those similar to the UNFCCC. There was very limited information available that alluded to determining the effectiveness of international institutions. This is questionable considering that effectiveness studies started in the 1990s when some of these international organisations reached what can be referred to as “adulthood” (Andresen, 2016). Its main empirical focus has been on international environmental regimes. According to Andresen (2016), the commencement of effective studies made sense at the time as there was a need to ascertain whether these institutions made a positive difference in relation to the problem, they were set up to solve. Therefore, the UNFCCC being one of these international environmental regimes means effectiveness studies is integral in determining the efficacy of the institution.

#### *Effectiveness dimension framework*

The effectiveness dimension framework maps the different steps in a negotiation process by determining the actual ambition and ultimately level of effectiveness of an institution (Oberthür & Groen, 2015). Effectiveness studies commonly focuses on public policy evaluation and international relations on the environment (Sommerholt, 2017). The effectiveness dimension framework then came about as EU member states were often criticised for being unable to reach common positions on important foreign policy issues and has led to questioning of the effectiveness of national and international policies in goal attainment (Schaik, 2016). Schaik (2016) defined effectiveness as the extent to which EU’s major goals and position are represented in the outcome of international negotiations. This indicates that an actor’s efficacy is measured by how they achieve their goals which is also an important factor to consider when looking at other obligations and responsibilities.

The “Effectiveness Dimension Framework” was adopted by European Union (EU) countries to measure performance in international institutions or otherwise determine effectiveness in international negotiations such as the UNFCCC (Oberthür & Groen, 2015). When this framework first emerged, it dealt with the EU as the main actor, with initial effectiveness studies showing analysts using goal attainment as the main indicator for effectiveness (Andresen, 2016). This has been

criticised as it does little to capture a full understanding of the effectiveness of implementation of responsibility and obligation. Due to shortcomings of the goal attainment dimension, a new consensus emerged when investigating effectiveness in international negotiations. This was presented in a three – dimensional approach which shared similarities to the framework introduced by Oberthür and Groen. This approach was concerned with output, outcome, and impact (Andresen, 2016). Output dealt with rules, regulations, and programmes adopted by the institution in question whereas the outcome indicator focused on the institution’s effect on the behaviour of key target groups (Andresen, 2016). Lastly, the impact dimension pertained to the direct effect the institution has on the problem at hand. This indicator is important because it shows the problem – solving ability of the institution in question (Sommerholt, 2017). However, for this study, the elements introduced by Oberthür and Groen (2015) will be used because they were the elements used to evaluate China’s performance in the UNFCCC. The limited literature also meant that exploring other elements of the framework would be difficult to do. Despite this, using the effectiveness dimension framework is integral because China, along with the EU and the United States have been the only countries to the UNFCCC whose performance and participation have been evaluated by the effectiveness dimension framework.

Originally, there are three elements of this dimension developed by Oberthür and Groen (2015) which are (1) the quality of the EU’s policy objectives, (2) EU engagement in the negotiations, including its fit with the international constellation of power and (3) goal achievement (Oberthür & Groen, 2015). Much of the literature around ‘effectiveness’ has equated it to countries goal achievement. However, while adopting this framework to evaluate China’s participation in the UNFCCC, Sommerholt (2017) argued that goal attainment as an indicator of effectiveness is not enough. This led to the adoption of Andersen’s (cited in Sommerholt, 2017) five – dimensional framework which considers outcome and impact. However, Sommerholt (2017) acknowledged that the question of outcome and impact rarely has anything to do with actual negotiations and therefore was not included in determining the effectiveness of China’s participation in the Convention.

For this research, to understand Samoa’s participation in the UNFCCC, it is important to consider the effectiveness dimension framework as a tool for analysis. For this paper, the three – pronged assessment framework will be utilised. These three aspects are focused on the quality of Samoa’s policy objectives when compared to the core objectives of the UNFCCC (and relative to other players), Samoa’s engagement in international negotiations, including its fit with the UNFCCC’s position in the international constellation of power and interests and its goal achievement as

established in existing research. This closely follows the framework as outlined by Oberthür and Groen (2015) and used to examine the effectiveness of China's participation in the UNFCCC.

In ascertaining the quality of Samoa's policy objectives, it is important to understand the parameters for the assessment of policy objectives in accordance with the effectiveness dimension framework. According to Oberthür and Groen (2015), in the context of international institutions, the overall purpose (s) of the institution concerned provides a suitable internationally recognised standard. This means that the overall purposes of the UNFCCC should be used to evaluate the quality of Samoa's policy objectives. An actor's policy objectives can therefore be considered as long as they aim at the realisation of the core purpose of the institution in question. The only limitation of this assessment is that operationalising the general purposes of an international institution like the UNFCCC is not always straight forward. This is because some of its aspects could be contradictory which could make assessments difficult. However, Oberthür and Groen (2015) concretely argue that this is not enough to prevent making assessments based on policy objectives. The other parameter to ascertaining the quality of Samoa's policy objectives is determining how policy objectives compare to the objectives pursued by other actors (Oberthür and Groen, 2015).

The second dimension of this framework concerns the process aspect where an analysis of Samoa's performance is based on its engagement in international negotiations. Oberthür and Groen (2015) dictates that for the process dimension, there should be a focus on two aspects: the first is the extent and kind of engagement and second is how this engagement matches with the party's position in the international constellation of interests and power. By doing so, the process dimension establishes the link between a country's policy objectives to international policy outcomes. This will allow people to pinpoint a country's contribution to that international outcome. To avoid a spuriously higher degree of goal achievement though, Oberthür and Groen (2015) argues that the process dimension ensures that "linear outcome performance" is avoided. This is done by first establishing the link between policy objectives and the international outcomes and then investigating if these international outcomes would still be achievable without the contribution of a country's policy objectives. Fundamentally, this will determine whether the actual outcome is a result of the contribution of the overall constellation of powers and interests without Samoa's involvement and participation. Therefore, focusing on these two aspects will mean avoiding a linear outcome performance (Oberthür and Groen, 2015).

To ascertain the extent and type of engagement in the process dimension, first, it is important to look at Samoa's engagement and activity in international negotiations as evidenced from "participation in meetings, making proposals and submissions, and engaging in outreach to other parties within the international forum and beyond" (Oberthür & Groen, 2015). The second focus is the type and strategic approach of the engagement which for example looked like building different coalitions or alliances (Oberthür & Groen, 2015).

From here on, one can then assess to what extent a party's engagement matched its position in the international constellation of interests and power (Sommerholt, 2017). Regarding interests, Oberthür and Groen (2015) used bargaining theory to make the distinguish between interests, using reformative and conservative positions. For countries who are in reformist positions, they require change which in turn requires a higher level of proactive engagement due to the lesser chances of success. Conservative positions, on the other hand, have a higher probability of success and ought therefore call for less initiative. As a result, the type and strategic approach of engagement that an actor chooses to use depends on their position. For instance, adopting an extreme stance may reduce the potential for forming a coalition or bridge – building and the relative position of a player in the global constellation is also influenced by the positions that other actors take. In terms of the power positions of an actor, the strength or weakness of an actor is dependent on two interrelated aspects. These two aspects are the weight of an actor or party as well as the symmetry of its international dependence (Oberthür & Groen, 2015).

Therefore, to define a country's position in the international constellation of powers and interests, Oberthür and Groen (2015) suggest distinguishing between strong – conservative, weak – conservative, strong – reformist and weak – reformist. At one extreme, an actor with a strong conservative stance will not need to be especially proactive and may not even need to make any concessions. On the other hand, to increase its prospects of success, an actor in a weak – reformist stance needs to be proactive and engage in coalition and or bridge building (Sommerholt, 2017).

The third aspect of the framework is concerned with goal achievement. Sommerholt (2017) argued that this aspect is not enough as goal achievement may not always equate to the 'effectiveness' of an institution. Nonetheless, in determining the effectiveness of China's participation in the UNFCCC, goal achievement was considered an indicator capturing the outcome dimension of the framework. Goal achievement concerns the extent to which Samoa's objectives are reflected in the international outcome irrespective of actual Samoa influence. Attributing goal achievement to Samoa itself will

require establishing a connection between the outcome indicator and other indicators within the framework (Oberthür & Groen, 2015). The two main steps for assessing goal achievement are identifying Samoa’s main policy objectives with respect to the major agenda items of the international negotiations in question, which are usually reflected in official documents such as policy papers (Oberthür & Groen, 2015). The second step is assessing the degree of Samoa’s goal achievement by comparing the identified policy objective with the actual outcome of the international negotiations. It is not always possible to quantify the exact degree of goal achievement, but Sommerholt (2017) argues that a distinction can be made using low, medium and high levels.

<b>Indicator</b>	<b>Assessment criterion</b>
<b>Quality of Policy Objectives</b>	<p>-Degree of alignment of the actor’s policy objectives with objectives of the international institution.</p> <p>-Degree to which the actor is more or less ambitious than other parties (reformist-conservative).</p>
<b>Engagement</b>	<p>-Extent and type of engagement.</p> <p>-Fit of actor’s engagement with its position in the international constellation of interests and power.</p>
<b>Goal Achievement</b>	<p>-Degree to which actor’s objectives have been achieved in the international institution.</p>

Figure 1: Effectiveness dimension framework

Thus, the effectiveness dimension framework used to evaluate EU’s performance in international institutions can be used to determine the effectiveness of Samoa’s performance in the UNFCCC. The breakdown of the criteria and requirements for assessment is presented in Figure 1.

#### Effectiveness dimension framework – China

This framework was established to ascertain the effectiveness of EU but has also been used to determine the effectiveness of China’s performance in the UNFCCC. This was done by examining and making comparisons between China’s position at the Conference of the Parties (COP15) in

Copenhagen and in Marrakech in 2002 (Sommerholt, 2017). During the COP15 negotiations in Copenhagen, the common consensus at the time was the shared ambition of the international community to replace the KP for another legally binding agreement (Sommerholt, 2017). This aligned with the central issues commonly discussed during negotiations; whether there would be a legally binding treaty, mitigation commitments and the issues pertaining to climate finance (Oberthür & Groen, 2015). The intention at COP15 was to encompass countries like the United States and Canada that left the KP earlier (Sommerholt, 2017). This was crucial as the COP was also the meeting of the parties to the KP. This meant that China being a party to the KP had an important role to play in deciding whether there was another legally binding agreement, what the mitigation targets and climate funding should be and under what terms (Sommerholt, 2017). To further examine what China's participation in the UNFCCC looks like, it is necessary to look at how the effectiveness dimension framework was tested on China's performance in the COP15 negotiations.

In determining the quality of China's policy objectives, Sommerholt (2017) distinguishes between the quality of the policy objectives in relation to the overall aim of the UNFCCC and in relation to other groups and nation states. According to Sommerholt (2017), the aim of the UNFCCC as articulated by Article 2 of the Convention refers to 'any related legal instruments' that 'parties may adopt'. The phrase 'parties may adopt' therefore creates a loophole for related legal instruments like the KP – showcasing that countries could be parties to the meetings but have no obligations under the treaty (Sommerholt, 2017). This concretely shows that the aim of the Convention is too broad and generalised for any conclusions to be made about the performance of any party country. This was also criticised by Helm & Sprinz (2000) who argued that article 2 of the UNFCCC is an example of vague institutional goals that are made vague on purpose to ensure its acceptance by all parties.

In relation to other parties and nation states, China entered a coalition called BASIC which consisted of Brazil, South Africa, India, and China to secure an advantageous deal (Sommerholt, 2017). Other parties to the coalition had pledged to reduce their carbon intensity but media reports found that China's emissions would not decrease as much (Groen et.al, cited in Sommerholt, 2017). None of the other member countries of BASIC had tabled these mitigation goals at the conference and Oberthür (cited in Sommerholt, 2017) wrote that "it was obvious that the US and China had less ambitious reduction targets". One of BASIC's policy objectives was creating an extension of the KP which would not have given more obligations to developing countries but enable more efforts from developed countries. In order for developing countries to accept any mitigation action, there was a requirement of support through funds and technology from developed countries (Sommerholt,

2017). This is ironic as China is a developed country in comparison to the rest of the members of the BASIC coalition. This is extremely problematic because it shows avoidance of external oversight and binding emission targets (Jean Gong, cited in Sommerholt, 2017).

Thus, in comparing the policy goals to the conference's purpose in terms of the policy questions, China wanted to expand the KP and emphasise the Annex 1 states' mitigation aims but did not want a legally enforceable agreement (Sommerholt, 2017). China favoured no legally binding global stabilisation objective for the developing nations but instead argued that mitigation measures for developing nations should be contingent on finance and technology for adaptation from affluent nations. In determining relative ambition, Sommerholt (2017) found that coalitions like the AOSIS and EU had more ambitious goals in their policies than China.

Within the process dimension of the framework which concerned China's extent and type of engagement, Sommerholt (2017) argued that China held a fixed and conservative position in the negotiations despite being a member of multiple bilateral and multilateral agreements. Stressing their independence and sovereignty is however a recurring theme for China in international climate change negotiations – while simultaneously positioning itself as a developing country and as part of BASIC even though they have been proven to be a strong emitter (Sommerholt, 2017). Furthermore, they were proven to be a powerful international player in the constellations of interests and power. This was seen in its integral role in the G77 coalition where China undertook roles and responsibilities which established their position as a superpower amongst the constellation of countries. Some of these roles include perceiving itself as a speaker for developing countries and exerting its leadership by demanding climate finance from developed countries be channelled to developing countries. Although China had established its position as a leader by demanding climate finance for developing countries, its refusal to establish Measuring, Reporting and Verification (MRV) mechanisms is another example of its tendency to be independent of the international climate regime (Sommerholt, 2017).

In regard to the outcome dimension, China's level of goal achievement was high because its aims were achieved in withdrawing proposed national targets and maintaining no strict MRV rules in the outcome of the negotiations (Sommerholt, 2017). Its policy objectives were also achieved which saw further financing of climate action, mandatory emissions engagement furthered for developed countries and voluntary mitigation action were pronounced for developing countries of which China



is a part of. Even at the national level, China's goal achievement was considered high regardless of what this meant for the international community and in combatting the impacts of climate change.

Therefore, although China's performance in the COP15 negotiations can be seen as problematic, it also established itself as a point of comparison for its performance in other negotiations. In COP22 in Marrakech, there were stark contrasts between China's position then and during COP15. COP22 followed the establishment of the Paris Agreement which meant that there was now a new instrument creating further obligations of member countries to the Convention. Sommerholt (2017) argued that COP22's aim to operationalise the Paris Agreement was successful as it showed that it could be implemented without the involvement of the United States. It was successful because significant contributions were made in implementing the instruments of the Paris Agreement as well as making definite choices about the usage of the adaptation fund (Sommerholt, 2017).

The quality of China's policy objectives in relation to other groups and countries showed relative ambition and commitment to reducing GHG emissions. This was shown through pledges made within the Joint US – China Climate Statement expressing commitment to cap carbon emissions around 2030, taking mitigation action for target reduction with the support of developed countries, support for developing adaptation plans, increasing the scale of financing, and transferring technology and capacity building. However, in determining the level of ambition of China's policy objectives, experts argued that it was too low to achieve the temperature cap of a maximum of 2 degrees Celsius (Joseph E. Aldy, cited in Sommerholt, 2017). Regardless, China's leadership role was more prominent in COP22 as opposed to the United States who had considered pulling out of the Paris Agreement. The success in implementing the Paris Agreement was furthermore an extension of this leadership and indicates much ambition in comparison to the United States. However, criticism of China's preferred sovereignty and rejections of any interference in terms of accountability was still an issue right up to the negotiations in Marrakech. Megan Darby (cited in Sommerholt, 2017) argued that through implementing Paris Agreement and its instruments including the Intended Nationally Determined Contributions (INDC's), China and other Like – Minded Developing Countries (LMDC) which includes China and India wanted the INDCs to be wholly determined by the nation – states themselves. Sommerholt (2017) says that reluctance for transparency shows a lack of accountability. This is concerning especially in regard to overall aims of the UNFCCC.

With regards to China's extent and type of engagement, China's fundamental role in the COP22 Marrakech negotiations through favouring the use of the Adaptation Fund for the Paris Agreement,

highlighting better operations for the NDC's, and conducting a global stocktake shows leadership and ambitions amongst Annex I countries. During the COP22 negotiations, China had criticised the United States for planning to exit the Paris Agreement while at the same time moving towards building its South – South project for climate action as an integral part of international co – operation. This not only fundamentally shows that China is establishing its position as one of the world's leading countries in delivering for climate action. Furthermore, this shows reliability as well as leadership of other developing countries as well as its intention to be a global leader for climate governance (Sommerholt, 2017). Reflecting on China's role as a superpower country and much more complex than developing Pacific Island countries, it is obvious that the extent of their reach can create ripples of change with regards to climate change mitigation and adaptation.

Thus, China's level of goal achievement in the COP22 negotiations was considered high (Sommerholt, 2017). Although there were concerns around the United States involvement with the Paris Agreement and overall climate regime, China's leadership had been exceptional in the decisions that were made regarding climate finance and capacity building. Through the South – South project as well, China had achieved leadership for developing countries who argued that “there can be no enhanced action without enhanced support” (Sommerholt, 2017). Therefore, China's policy objectives can be reflected in the international outcome of the COP22 negotiations. However, given China's leadership position in the developed world, it is difficult to assume that the same international outcome would have been achieved without actual Chinese influence. Take for instance the concerns around the United States exiting the climate regime at the time. Sommerholt (2017) alluded to the US – China deal as an integral part of negotiations which in turn would have affected international climate mitigation and adaptation outcomes. This shows that coalitions and alliances are fundamental parts of this climate change regime and is crucial to the extent that it could affect the outcomes of different decisions made regarding climate action. For the Pacific region and Samoa, it is important to understand the different complexities of these international climate change regimes that island states are a part of.

### Climate Change in the Pacific

According to the fifth assessment report of the IPCC, the Pacific region has been identified as one of the world's most vulnerable regions to the extreme impacts of climate change due to its geographical, physical, geological, and socio – economic characteristics (Nurse et al., 2014). This, along with other studies, concretely support the view that Pacific countries are amongst the most vulnerable to the consequences of climate change (de Scally & Doberstein, 2022; Finnie, 2018). It is

important and pertinent to note that the concept of vulnerability is problematic in that it diminishes the ability of Pacific peoples' active participation in mitigating and adapting to climate change (Finnie, 2018). However, it will only be used in this thesis to refer to the susceptibility of Pacific environments due to its ecological and geographical characteristics to extreme climate events.

While climate change affects everyone, the Pacific region is one of the most disproportionately affected communities in the world with impacts experienced in magnitudes Pacific peoples and environments have never experienced before (Nurse et al., 2014). Despite this fact, natural changes to the climate are something Pacific peoples have grown accustomed to (Barnett, 2011). However, what is foreign to them is the extreme exacerbation of climate change with implications detrimental not just to the natural environment, but to Pacific peoples, communities within, as well as their livelihoods. For instance, Tuvalu remains one of the most affected places in the world by sea-level rise with researches referring to climatic conditions as very hostile for residents to live in (Islam et al., 2022). The IPCC has also projected that Tuvalu would probably be the first country to sink underwater (Islam et al., 2022). These harrowing projections have come almost 30 years since extreme climate projections were made that Tuvalu, is one of the six island states that could be written off the map if sea levels continue to rise (Lewis, 1989). The implications of this alone shows that climate change is being exacerbated and efforts to combat it and slow it down are either ineffective or rendered futile. This also implies that while efforts are taken to ensure proper response to climate change, the determined causes of climate change remain the same. This calls for extensive and effective ways to mitigate and adapt to climate change.

Another example of extreme cases of climate change in the Pacific is the very real, raw, and vulnerable experience of climate change of I – Kiribati peoples. To understand some of the dire consequences of climate change on Pacific peoples, one can look at the concept and practice of 'migrating with dignity' to ascertain knowledge on the extent of climate change in the Pacific. Like Tuvaluan communities, residents of Kiribati are at the frontline of climate change experiencing changing weather patterns, diminishing landscapes, and reduced food security; rendering it almost impossible to continue their livelihoods on their fanua (land) (Yates et al., 2023). Recent studies confirm that for these reasons, I – Kiribati communities are considering resettlement and migrating to other countries (Falefou, 2017; Kupferberg, 2021). These are just some of the realities that Pacific communities face in light of climate change. It does pose the question on what systems and processes are in place to ensure that there are responses to climate change and its impacts.

At the international level, Pacific countries have become impactful players in the international climate regime, joining a plethora of actors with different interests and responsibilities regarding climate action. This is shown through a lot of Pacific countries' participation and involvement in the UNFCCC and its relevant instruments. There are many examples of Pacific countries taking charge of ambitious efforts for mitigation and adaptation to climate change. One such notable example is Fiji's involvement in the Paris Agreement which saw them become the "first country in the world to formally approve the UN climate deal" – expressing a need to prioritise tackling climate change (Cuff, 2016). Finnie (2018) further emphasises on some of these actions through examining Pacific countries' responses to climate change. Pacific countries' responses are mostly very ambitious for countries whose contribution can be measured as small in line with UNFCCC guidelines and frameworks. This has been reflected in research and literature about climate change in the Pacific (Barnett, 2005, 2011; Climate Analytics, 2015). This is indicative of the leadership role of Pacific Island countries despite limitations that Western hegemonic discourses may imply (Finnie, 2018). This relates to the engagement aspect of the effectiveness dimension framework. This also means that the effectiveness dimension framework can be applied in the context of Pacific Island countries. However, given the objectives of this paper, application of this framework to all Pacific Island countries, its institutions, and the international regimes they are a part of; will require further research. It will also mandate for a deeper dive into each country's individual participation and performance.

At the regional level and in collaboration with each other, G. Carter (2015) argues that Pacific countries have always taken a vigorous approach to establishing coalitions and alliances to ensure that their voice and contribution mattered in international climate change regime. This is ironic especially considering that Pacific countries have been proven to experience some of the worst impacts of climate change (Nurse et al., 2014). G. Carter (2015) looked at participation of Pacific Island countries in climate change negotiations and noted that of the 21 active blocs or coalitions that exist for the climate change regime, Pacific nations are only a part of about 6 blocs. This has led to further establishments of coalitions and bridge building which according to Oberthür and Groen (2015) fulfils the process dimension of the effectiveness framework. Some of these important coalitions include but are not limited to the G77 and China, the Alliance of Small Island States (AOSIS), and the Coalition of Rainforest Nations (G. Carter, 2015). However, with the new wave of Pacific diplomacy and emergence of Pacific coalitions, Pacific countries like Samoa are now a part of the Pacific SIDS coalition (G. Carter, 2015). The paucity in literature about Pacific diplomacy in international negotiations is therefore a reflection of the lacuna of Pacific coalitions. While this

further shows a lack of research dedicated to this area of climate change scholarship, it does express a need to conduct further research into the participation of Pacific countries in climate change negotiations.

## Climate Change in Samoa

Overview of the island country of Samoa

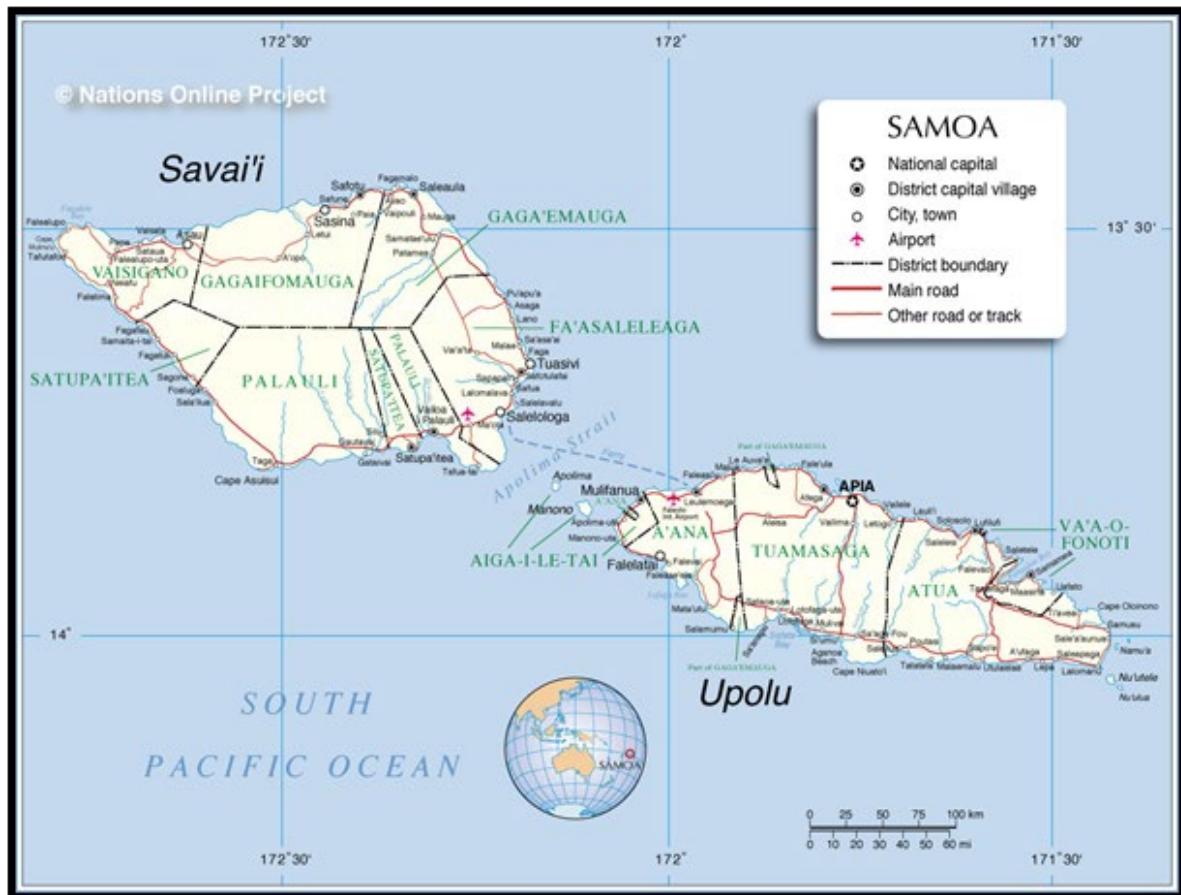


Figure 2: Political map of Sāmoa

Samoa is an island nation located in the Pacific Ocean, that is made up of nine volcanic islands: two of which are the main islands known as Upolu and Savaii (Government of Samoa: Ministry of Natural Resources and Environment, 2020). According to the national census conducted in 2016, Samoa's population was at a total of 192, 126 people and was predicted to increase by the 2021 census (Samoa Bureau of Statistics, 2016). The 2016 census also reported that more people were migrating to urban areas and the SCCP of 2020 confirmed that Upolu is more populated than any of the other islands.

Historically, Samoa has been known to be extremely vulnerable to the impacts of climate change due to its geographic make up as well as other social, economic, and political factors. This puts them in a similar position to other countries in the Pacific and other small island states (SIDS). The main economic sectors of the country include fisheries, agriculture, and tourism. Greenhouse gas emission reports over the years have outlined the insignificance of Samoa's contribution to global emissions yet suffers greatly from the impacts of increasing GHG emissions (Rasmussen & McGoldrick, 2010). Experiencing higher than average temperatures, extremely daily rainfall events, sea level rise, ocean acidification, and coastal erosion at a greater frequency is a direct result of climate change (Barnett, 2005). This has impacted on Samoa's settlements especially when 70 percent of the population and infrastructure are in low – lying coastal areas (Chock, 2009). As with other countries globally, impacts on coastal areas will further exacerbate impacts on the livelihoods of Samoan communities.

Samoa, like other indigenous communities in the world have established worldviews – especially those pertaining to the environment and climate change. This can be articulated in the Samoan worldview captured by former Head of State of Samoa Tupua Tamasese Efi in which he says that:

“I am not an individual; I am an integral part of the cosmos.  
I share divinity with my ancestors, the land, the seas, and the skies.  
I am not an individual, because I share a tofi (an inheritance)  
With my family, my village, and my nation.  
I belong to my family, and my family belongs to me.  
I belong to my nation and my nation belongs to me.  
This is the essence of my sense of belonging” (Mental Health Inquiry, 2018).

Central to this worldview is Samoan peoples' relationship with the *fanua* or the land. This means that while the impacts of climate change are seen physically, the extent to which they affect communities and livelihoods are at levels that one can understand by looking at it from a Samoan worldview. This is important especially when looking at developing and implementing methods of mitigating and adapting to climate change.

### [Samoa Climate Change Policy 2020](#)

To clearly articulate its objective to adapt to the impacts of climate change, the Samoan government established its national climate change policy in 2020 (Government of Samoa: Ministry of Natural

Resources and Environment, 2020). Within this policy, Samoa outlined its commitment to stabilise and limit GHG emissions and to contribute to the world's preventative efforts discouraging a gradual spiral towards a miserable future (Government of Samoa: Ministry of Natural Resources and Environment, 2020). This Policy not only contributes to worldwide efforts to respond to climate change and its impacts, but it showcases Samoa's intention to combat the added imposition posed by the impacts of climate change to inherent challenges already faced by the island country. This is a fundamental move by the Samoan government especially when past climate projections have now become a lived reality for Samoa (Chock, 2009). This imperative is expressed in the National Climate Change Policy (NCCP) and not only acknowledges the need for action to adapt to climate change but guarantees a future for children and generations to come.

Objectives of this policy have been purported not only to encourage local and national action but to fulfil regional and international obligations within the climate change context. At the local and national level, Samoa's ambitions are reflected in the development of innovative renewable energy technologies such as wind turbine, carbon neutral transportation, hydro energy, solar energy, biomass, and biogas (Government of Samoa: Ministry of Natural Resources and Environment, 2020). The rationale behind this Policy document is to offer a way forward for Samoa, providing a clear national mandate for the national coordination of climate change policies and actions. This proactive, whole of government Policy will allow us to have holistic and more effective impacts in our efforts to build a more resilient and sustainable Samoa. Pertinent here is the holistic and collective approaches that are necessary for climate action in many Pacific countries. This is more evident in the approach and methodology that was adopted for the development of this policy. The process entailed incorporating views, inputs and insights from development partners, national sectors, ministries, agencies, NGOs, civil society, and private sectors through a series of consultations and engagements. Furthermore, there was also a review of the existing related policies and plans including internal consultations with technical focal points (Government of Samoa: Ministry of Natural Resources and Environment, 2020). In relation to the overall purpose of the UNFCCC, Samoa shows exceptional leadership in the production of this climate change policy – and is also an indication of their level of ambition. These are important fundamental aspects of the effectiveness dimension framework.

The NCCP is guided by principles of resilience, coordination, and adherence to regional and international obligations such as those set out by the UNFCCC. Building resilience to climate change, guiding coherence in climate change adaptation and mitigation efforts, and setting strategic

outcomes is synergised within this policy (Government of Samoa: Ministry of Natural Resources and Environment, 2020). Fundamentally, the notion of sustainable development is key in this policy with its objectives serving as guiding principles in the implementation of the NCCP. Targets that this policy aim to achieve include those that fulfil Samoa's international obligations and commitments set out in the Paris Agreement and the SIDS Pathway (United Nations General Assembly, 2014)

In light of the effectiveness dimension framework, Samoa's participation through its submission of the national climate change policy requires further analysis of other submissions and events. This policy does highlight, however, the intentions of Samoa to fulfil its obligations to the Convention and by extension contribute to global climate action in mitigation and adaptation of climate change.

### Conclusion

This thesis will use the effectiveness dimension framework to analyse the different aspects of Samoa's participation and performance in the international institution of the UNFCCC and its relevant instruments. This literature review has highlighted that at the national, regional, and international levels, climate change is an issue of epic proportions which requires climate action in mitigation and adaptation to the impacts of climate change. In the case of Samoa, this chapter has identified that the impacts of climate change continue to fundamentally change the livelihoods of people and the natural environment – creating responsibility for the government to act accordingly in response. However, this review has found that there are gaps that exist with regards to climate change action through mitigation and adaptation efforts – alluding to the challenges of international negotiations and what it implies for the international climate regime. To ascertain the effectiveness of international institutions like the UNFCCC who have been established primarily for climate governance, this research will look at Samoa's climate change policies.

## Chapter 3: Methods

### Overview

This chapter will discuss the methodological processes undertaken to carry out this study. In this chapter, it will outline the research question that this thesis seeks to address as well as its objectives. Positionality is also an important aspect of any research and is one that will be included in this section. There will also be an overview of the literature that this study engaged with as well as the theoretical framework that underpins discussions in this study. Providing the steps taken to gather sources for this literature review is also included here.



Due to the nature of this current study and external circumstances by way of COVID-19, undertaking interviews or talanoa with field experts was not possible. While a specific Pacific or Samoan research methodology was not utilised, it is integral that the aim of this study is to benefit *tagatanu'u o Samoa* (Samoan peoples) and communities. The values of fa'aaloalo (respect) and tautua (service) were paramount while carrying out this study. As such, this research adheres to the fundamental pillars of all Pacific research methodologies (Sanz Sabido, 2019). This is a discursive study – so 'voices' of Pacific people or more specifically Samoan people are not part of the study design. However, the overall aim of the study is to undertake critical and robust research that ultimately benefits Samoa.

## Objectives

The overall aim of this research is to add to the growing body of scholarship pertaining to climate change and to assist in understanding Samoa's contribution to global and regional climate change policy. This will hopefully assist in informing some of the national policies that underpin responses to climate change and its impacts.

The primary objectives of this study are:

1. Examine Samoa's participation in the UNFCCC through analysing its first and second national communication, and the first and second nationally determined contribution submissions.
2. To examine its participation through its involvement and leadership in the third conference for SIDS countries as well as the negotiations pertaining to the Paris Agreement.
3. Examine the effectiveness of international institutions for climate change actions.
4. And to examine the internal processes of climate policy in Samoa with a focus on the water and energy sectors.

In meeting these objectives, this thesis will determine the 'effectiveness' of institutions put in place to govern climate change action. This thesis will argue that Samoa is effective in fulfilling their obligations to the UNFCCC but could be more effective if external funding and assistance were available to them. This shows that with regards to the Convention, Samoa's effectiveness as a party is dependent on the effectiveness of the international institution in the provision of funding and support to achieve their objectives in furthering climate action.

## Researcher Positionality

According to Bourke (2014), researcher positionality is fundamental as it allows the researcher to engage in what is called self-scrutiny, a process in which the researcher becomes aware of their relationship to the other. The other in this context is this research. Due to the nature of research, it is reasonable to expect that the researcher's beliefs, political stance, cultural background (gender, race, class, socioeconomic status, educational background) are important variables that may or will affect the research process (Bourke, 2014). Therefore, it is fundamental to this research that positionality is clearly articulated.

I am a 26 – year – old Samoan woman. I was born and raised in Samoa before moving to New Zealand in 2012. I am from the villages of Luatuanu'u and Leusoali'i located on the island of Upolu and Salelologa, Gataivai and Tufutafoe on the island of Savaii. I grew up in the village of Luatuanu'u on the east coast of the island of Upolu. I grew up in a bilingual home with both parents having gone through the Western education system and a mother who holds a university degree. Growing up in Samoa and moving to New Zealand meant that I was privileged to be exposed to both worlds. I understood a lot about the Samoan culture and its nuances and am also able to navigate the nuances of the different cultures in the diaspora. As a researcher, I am privileged in these instances because I am confident in my ability to navigate these spaces during my research. Having grown up in Samoa, I was exposed to the adverse impacts of climate change such as sea – level rise and the occasional tropical cyclones that persist today. This meant that I also witnessed how the people in my village including my family adapted to these changes at the grassroots level. However, researching these topics was not always easy to do due to the historical background of research about Samoan people (Weiner, 1983). Yet again, I am privileged in my ability to navigate this space with the utmost respect of Samoan people and its rich culture and history. Thus, it was essential that this research was responsive to Pacific ways of thinking and doing, and respectful of Samoan communities, whom are the focus of this study.

According to Tuhiwai - Smith (2021), presenting an insider and/or outsider researcher positionality is always crucial to understanding how researchers place themselves within their research. For this thesis, the researcher presents both an insider and outsider positionality. This is because at times it is too presumptuous to examine one's own beliefs and knowledge about communities or cultures, they are part of when in reality, there are complexities that need to be unpacked (Tuhiwai – Smith, 2012). Regarding this research, the researcher although shares a lot of commonalities with the communities involved does not automatically infer whole understandings of the lived realities of these communities. Thus, this study presents both an insider and outsider researcher positionality.

## Research Methods

### Document scan

After conducting a general scan of the literature, limited information was found that was specifically about Samoa's participation in the UNFCCC. The information that was available however provided historical depth and was mostly available through the UNFCCC website and through Samoa's Ministry of Natural Resources and Environment's (MNRE) website. This was important as MNRE is the leading Samoan government ministry and institution responsible for climate change negotiations and action for Samoa.

The results of the document scan showed that very limited information was available pertaining to Samoa's participation in the UNFCCC. The information that was available was either outdated or was only accessible through both MNRE and UNFCCC websites. From the UNFCCC website, these are the results that were yielded from the search using phrases such as "Samoa and the UNFCCC", "Samoa communication", "Samoa's contribution" and "Samoa and climate change".

**TABLE 1: UNFCCC relevant documents**

<b>Title of Document (s)</b>	<b>Website</b>
Samoa's First National Communication	UNFCCC
High Level Segment Statement COP 4 Samoa on behalf of AOSIS	UNFCCC
Samoa National Communication (NC) 1	UNFCCC
Samoa association with Copenhagen Accord	UNFCCC
Samoa National Communication (NC) 2	UNFCCC
Samoa's Second National Communication to the UNFCCC	UNFCCC
Samoa's Greenhouse Gas Emissions: 1994 – 2007	UNFCCC
Samoa Accepts KP Amendment	UNFCCC
National Adaptation Programme of Action	UNFCCC
SIDS Conference Samoa	UNFCCC
3 <sup>rd</sup> Conference on Small Island Developing States	UNFCCC

Statement by Samoa at the high-level segment at COP 16	UNFCCC
Statement by Samoa at the high – level segment of COP17	UNFCCC
Samoa Submits its Climate Action Plan Ahead of 2015 Paris Agreement	UNFCCC
Statement by Secretary General for the COP 21 High – Level Segment	UNFCCC
Samoa First NDC	UNFCCC
Samoa – High Level Segment Statement COP 25	UNFCCC
Samoa – High – Level Segment Statement COP 26	UNFCCC
Report on Samoa’s current situation and the needs on Technology Transfer	UNFCCC
NWP Samoa workshop	UNFCCC
Gap Analysis on Loss and Damage from Climate Change Final Report	UNFCCC
Samoa workshop information sheet	UNFCCC
Solar Photovoltaic Site Boosts Clean Energy in Samoa	UNFCCC
Samoa – Education for Sustainable Education	UNFCCC
Statement by Honourable Fiame Naomi Mataafa	UNFCCC
Funding Opportunities for Island States at Samoa Meet	UNFCCC
Gap Analysis on Loss and Damage from Climate Change 2015	UNFCCC
Tropical Cyclone Evan in Samoa	UNFCCC
Increasing taro crop diversity	UNFCCC
Statement by Honourable Fiamē Naomi Mataafa Deputy Prime Minister of Samoa	UNFCCC
Samoa 2003 – 2007	UNFCCC
Emissions Summary for Samoa	UNFCCC
Mapping exposure to sea level rise	UNFCCC

Combining traditional knowledge and meteorological forecasts 2017	UNFCCC
Samoans devise means to mitigate disasters	UNFCCC
ICT and Climate Change in the Pacific Islands	UNFCCC
Coastal zone management: Issues and Adaptation Approaches	UNFCCC
National Communications Support Programme	UNFCCC
Pacific Islands Renewable Energy Investment Programme Announced	UNFCCC
Role of NSOS in Climate Change Reporting in Aid and the Pacific	UNFCCC

Regardless, the results produced documents that were useful for analysis and crucial for supporting further analysis of those documents. For this study, the main documents extracted for analysis were the national communications, the nationally determined contributions, the SIDS and PA relevant documents. After analysis of these documents, it was found that the rest of the documents on the UNFCCC website pertaining to Samoa could be used for further comparative analysis.

Furthermore, the objectives of this thesis dictated that there is a need for further exploration of Samoa's climate change sector through analysis of the MNRE as the ministry responsible for climate change policies and action. After taking a brief look at the MNRE website, it was found that there were very limited resources widely and publicly available that could elicit useful information regarding this research. The scarcity in information that is available was becoming a common problem. Nonetheless, this research aimed to analyse information that is available and accessible. From analysis of the submissions to the UNFCCC, there were integral aspects of each submission that highlighted the water and energy sectors in Samoa as some of the most vulnerable sectors to the impacts of climate change. The Samoa Water Authority (SWA) and Electrical Power Corporation (EPC) are the two sectors that are responsible for water and electricity respectively in Samoa. Yet again, the persistent issue of paucity of information specifically that pertaining to the works of each of these sectors remains. Nonetheless, it was fundamental that this thesis explored and analysed the information that is available especially with regards to understanding the effectiveness of local institutions that has been established by the Samoan government to look after climate change policies and activities.

To take a closer look at research and literature that is available about MNRE’s role through SWA and EPC’s respectively, it was important to conduct an information search on each of their websites. From the MNRE, EPC, and SWA websites, these were the results. It is important to note that within these institutions, there is a fundamental lacuna of information that is not readily accessible.

**TABLE 2: MNRE, SWA and EPC relevant documents**

<b>Title of Document (s)</b>	<b>Website</b>
First Annual Joint Water Sector Review	MNRE
Third Annual Joint Water Sector Review	MNRE
MNRE Annual Report 2012 – 2020	MNRE
National Water and Sanitation Baseline Survey 2019	MNRE
Samoa Water and Sanitation Sector Newsletter 2010 – 2020	MNRE
Water and Sanitation Sector Plan 2012 – 2016	MNRE
Water and Sanitation Sector Plan 2016 – 2020	MNRE
Water and Sanitation Sector: Capacity Building Plan	MNRE
Water for Life: Water Sector Plan and Framework for Action 2008 – 2012	MNRE
Water Resources Management Act 2008	MNRE
2021 – 2024 Corporate Plan 2021 – 2024 Fuafuaga Autasi	SWA
Samoa Water Authority Act 2003	SWA
Annual Reports 2008 – 2020 (Samoan and English versions)	EPC
Statement of Corporate Objectives 2017 – 2020	EPC

## Methods of Analysis

### Document analysis – initial

After scouring through the UNFCCC and MNRE websites for the relevant documents, the document analysis procedure took place as an initial tool of reviewing and evaluating information contained in those documents. According to Bowen (2009), document analysis requires that data be examined

and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge. The analytical process involved finding, selecting, appraising or sense – making, and synthesising data contained in the documents (Bowen, 2009).

This was the process for the documents obtained from UNFCCC, MNRE, SWA and EPC websites. Through initial reading, a second reading and analytical reading while reflecting on the objectives of this study, each document was analysed. However, through a continued search for relevant literature looking at party countries' participation in the UNFCCC, it was found that there was an existing framework that has been used to evaluate both the institution and a country's participation in the international climate regime. One such framework is known as the effectiveness dimension framework. This tool provided another layer of analysis which was crucial in examining Samoa's participation in the Convention.

#### Effectiveness dimension framework

This study adopted the effectiveness dimension framework to determine the effectiveness of the institutions that were put in place to support Samoa in its activities towards combatting climate change. For each document and event, the effectiveness dimension framework was used to ascertain the quality of policy objectives, determine the extent and type of engagement, and reveal the goals achieved. In doing so, it establishes the level of effectiveness of institutions that Samoa is a part of.

As aforementioned, the effectiveness dimension framework was designed to determine the effectiveness of EU countries in international institutions and Sommerholt (2017) tested it on China's participation. This framework although not specifically designed for island countries, it was appealing because it had been applied to a larger, more complex country like China. The multi – layered, multi – levelled complexities of the UNFCCC in comparison to Samoa as a small island state poses the question of how a country, who has been a party to this international institution is doing in terms of performance and participation. This creates the rationale for application to a country like Samoa. In comparison to China, this poses the question of whether a small island development country would produce similar arguments and achieve the same results.

#### Ethical considerations

As this study centred around Pacific peoples and specifically the island country of Samoa, the study was conducted in line with the Health Research Council Pacific Health Research Guidelines, which

outlined key principles that can be utilised to reinforce the cultural and ethical appropriateness of research involving Pacific peoples in New Zealand (Meo - Sewabu et al., 2017).

### Implications of COVID – 19

It does not come as a surprise that COVID-19 has had implications on the world of research. It is the same case for this study. Prior to the writing of this thesis, the researcher had initially planned to adopt the talanoa research methodology as another avenue for acquiring and engaging with information needed to inform this research. Unfortunately, due to the impacts of COVID – 19, engaging with participants in talanoa on an online setting was not possible. Engaging with people via zoom takes away the significance of face to face talanoa that Pacific peoples have proven to be accustomed to and an effective way of bringing about in – depth conversation and transformative action.

## Chapter 4: Samoa's participation through submissions to the UNFCCC

### Overview

This chapter takes a closer analytical look at the participation and involvement of Samoa on the international stage through the documents submitted to the UNFCCC. The UNFCCC was signed by signatories including Samoa at the 1992 Earth Summit in Rio and was entered into force on the 21<sup>st</sup> of March 1994 (Saifaleupolu, 1999). Joining or being a party to this Convention meant being held accountable by international obligations pertaining to climate change and the environment. As a



party to the UNFCCC, it was a requirement to submit what is known as a national communication as part of its obligations and fulfilment of commitments made under the Convention (Pathak, 2013).

Article 4 of the UNFCCC stated that parties were periodically required to submit reports that contained information pertaining to: national GHG inventory, national circumstances, measures to facilitate climate change adaptation and mitigation, and identify obstacles in funding, technology, and capacities (Pathak, 2013). Key purposes that national communications sought to fulfil included providing a standard to which party countries could adhere to in terms of implementing obligations and commitments to reduce greenhouse gas emissions (Saifaleupolu, 1999). Fundamentally, national communications were mechanisms in which progress of parties to the convention were recorded. However, the frequency, level of detail, and requirements varied according to the group each country belonged to, whether they were in Annex I or Non – Annex I (Pathak, 2013). This means that requirements and level of accountability differed for each country which implies that the processes were flexible and perhaps non mandatory despite its established criteria. Nonetheless, it is imperative to this research to ascertain what Samoa’s participation in the UNFCCC looked like through documents like the national communications.

These national communications were however eventually succeeded by what is now referred to as Nationally Determined Contributions (NDC). INDCs otherwise known as NDCs are submission made by countries that shows how they have tailored their contributions to their own national priorities, capabilities, and responsibilities (Höhne et al., 2016). Levin et al., (2015) argued that these individual measures by individual countries can create the basis for collective action and depending on ambition, can create a pathway towards a low-carbon and climate-resilient future. Therefore, this chapter will analyse Samoa’s first and second national communications to the UNFCCC as well as its latest submissions by way of the NDCs. Using the effectiveness dimension framework, this chapter will look at the quality of Samoa’s policy objectives, the extent and type of engagements they had as well as its levels’ goal achievement.

### Case Study 1: Analysis of Samoa’s First National Communication to the UNFCCC

Samoa’s first national communication to the UNFCCC was prepared under directions from Samoa’s National Climate Change Country team using guidelines from the convention ( . This project was funded by the Pacific Islands Climate Change Assistance Project (PICAA) – Global Environment Facility (GEF) fund and executed by the South Pacific Regional Environment Programme (SPREP); showcasing evidence of aiding Pacific Island countries to meet obligations to the convention. According to the report, this was a fundamental part of Samoa’s efforts to adhere to its

responsibilities to the convention as well as exemplifying leadership especially in its role as the chairman of the AOSIS at the time (Saifaleupolu, 1999).

Samoa, a non-Annex I country's decision to become a party to the UNFCCC marked a significant move by the island country in joining the international community in the fight against climate change. It was also evidence of Samoa's intention to contribute to actions taken to combat climate change. From the outset, the national communication identified two important aspects that needed to be addressed. On one side, there is the acknowledgment of the need to reduce GHG emissions as well as identifying constraints to Samoa's response to the onslaught of the impacts of climate change. On the other hand, a significant portion of the national communication alludes to the significance of funding or external assistance to support implementations of the UNFCCC. This fundamentally shows that Samoa echoed the intentions of the international community in adapting to and mitigating the impacts of climate change. The main features of the GHG inventory in accordance with the project guidelines outlined by the IPCC, the vulnerability and adaptation assessments conducted by relevant Samoa governmental ministries were highlighted in the national communication (Saifaleupolu, 1999).

This document also provided a comprehensive outline of Samoa's national circumstances through details about its geography and geology, the climate, the population trends, the economy, and a focus on particular sectors; agriculture, fisheries, forestry, water supply and resources. In doing so, Samoa fulfilled its obligations as per the instructions of submitting national communications. It was submitted that Samoa's economy relied heavily on two major sources of income which were foreign aid and remittances. Samoa's reliance on external support compounds here as its implementations of the UNFCCC were also dependent on external funding and assistance. In terms of population size, Samoa had experienced increasing trends in the population which consequently also led to an increase in urban migration (Saifaleupolu, 1999). Urban migration impacted heavily on the natural environment in urban areas as more people created pressure on the environment. Looking at its agricultural and fisheries industries at the time indicated that the government had undergone regulation reform to ensure mechanisms in place to protect these resources were effectively enforced. This was majorly due to transformations of the economy from subsistence to cash oriented as well as the rapid population expansion at the time (Saifaleupolu, 1999).

Pertinent to this research however was Samoa's water sector. According to the submission, there were major constraints to the water supply and water resources in Samoa. Some of these constraints

included the high permeability of most Samoan rocks, the diminishing forest due to deforestation, land tenure over land with water resources, inappropriate pricing due to the absence of policies for effective cost of recovery, and the excessive use of piped water. It is clear from these findings that Samoa was experiencing challenges in its different sectors that served as barriers to the implementations of its obligations to the UNFCCC. The implications of such on the quality of the national communication can be further understood through unpacking each document in detail using the tools of the effectiveness dimension framework.

## Quality of Samoa's Policy Objectives

### *In Relation to UNFCCC's Aim*

Article 2 of the UNFCCC describes the ultimate objective of the Convention and its related legal instruments. Samoa's first national communication reaffirms that the ultimate objective of the convention was to:

“Reduce the atmospheric concentrations of greenhouse gases to a stable level within a specific timeframe to ensure no adverse human – induced interference with the climate system” (Saifaleupolu, 1999).

Whilst there is a specific focus here on the reduction of GHG emissions here, Article 2 of the Convention dictates that the:

“Ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilisation of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.

Oberthür and Groen (2015) had argued that in the context of international institutions, the overall purpose of the UNFCCC provides a suitable internationally recognised standard. However, drawing on Sommerholt's (2017) analysis of China's performance in the UNFCCC, “any related legal instruments” .... that “the parties may adopt” (UNFCCC, 2022b) suggests that compliance to the treaty is on a voluntary basis despite its intention and purpose for it to be legally binding. The use of

the phrase ‘parties may adopt’ has the implication of establishing a loophole that means requirements under the Convention and its instruments are non-mandatory. This creates leeway for countries to act independent of their obligations and commitments to binding international treaties like the UNFCCC.

At the national level, Samoa’s objectives for its first national communication were to enable the achievement of goals such as: organising climate change and sea-level rise related constraints, defining Samoa’s individual and joint activities specifically designed to combat climate change and sea-level rise impacts, impressing on external assistance including finance and technology to support implementation of the instruments of UNFCCC, convincing the developed world that Samoa, and all similar countries – geographically and economically – are extremely vulnerable to adverse impacts of climate change and sea level rise despite its insignificant GHG emissions (Saifaleupolu, 1999). Samoa, as an actor, in this instance, had established policy objectives that aim at the core purpose of the institution in question. However, as Oberthür and Groen (2015) have argued, operationalising some of the purposes of the international institution like the UNFCCC is not always straight forward. This can be seen in some of the challenges and limitations in achieving the policy objectives. Nonetheless, this is not enough to prevent making assessments based on policy objectives (Oberthür & Groen, 2015).

The national communication had outlined that Samoa had already taken positive mitigation and adaptation actions to implement the aims and objectives of the UNFCCC. First of these implementations was the compliance to develop draft policies for 12 priority areas that required urgent attention including population, water, land-use, and waste. In doing so, they showed collective commitment to the objectives of the UNFCCC as well as the KP when it was part of international climate obligations. The projects that were implemented in fulfilment of the UNFCCC obligations were either through national measures or jointly with external assistance offered by these two key international instruments (Saifaleupolu, 1999).

Mitigation projects aimed at fulfilment of the UNFCCC were done in the following areas:

- Through assistance from the World Bank for infrastructure projects, the government of Samoa had ensured that its assets; both infrastructure and natural were safely protected from the impacts of climate change through installation of seawalls and enhanced storm surges that were majorly supported by local communities.
- Within policy and research, Samoa’s commitment to the objectives of the UNFCCC and its related KP instrument was also reflected in the development of

environmental policies and undertaking joint research in various aspects of the environment. The National Environmental Management Strategies 1993 report for Samoa indicated the need to formulate enlightened policies in 12 priority areas including water and waste management. Overall, the increase in policies and research helped address some of the gaps in information .

- In terms of regulations, there were suggestions regarding the development of regulations like the Customs Department Act to provide import control of appliances which included ozone depleting substances which at the time of the national communication were just suggestions. Regardless, it was a national policy objective which relates directly to the overall objective of the UNFCCC institution.
- The Food Security Project was established with assistance from the Food and Agricultural Organisation of the United Nations (FAO) assured the availability of sufficient local food items all the time.
- Under the New Zealand bilateral assistance programme, the Community Forestry Project was conducted by the Ministry of Agriculture, Fisheries and Farming (MAFF) to develop community capacity in managing their own forests and forest products .
- Planning to conduct an agricultural census towards the end of 1999 with the hopes of it providing useful information was outlined by the Department of Statistics (DOS) and MAFF.
- With assistance from funding provided by the World Bank, the asset management project highlighted the need to provide better management mechanisms for the government's infrastructure assets.
- Within education, the topic of environmental science was considered for the school curriculums for junior, secondary school, and at the tertiary level (Saifaleupolu, 1999). Despite awaiting approval at the time, the government of Samoa had indicated that this was still a positive move as it helped raise public awareness and help enhance how much Samoa had come to understand its vulnerabilities to climate change (Saifaleupolu, 1999).

In developing mitigation policies, the government and relevant ministries received unrestrained support from key stakeholders which boosted such policies to be integrated into organisations' key plans and implementation strategies. As mentioned before, Samoa welcomed the continuing assistance from, and the opportunity to work collaboratively with, the global community to raise awareness of climate change, and to promote cost-effective and culturally acceptable adaptation and

mitigation procedures. Mitigation activities undertaken by Samoa to implement the objectives of the UNFCCC was done in close collaboration with government ministries, non-governmental organisations, private businesses, and the local community (Saifaleupolu, 1999).

In the implementation of projects to raise awareness of climate change and promote adaptation, Samoa fulfilled their international obligations under the convention. In addition, at the time of the submission of the national communication, a range of sectoral adaptation measures were assessed and evaluated. These measures are outlined in the national communication. They include but are not limited to devising a suitable integrated coastal zone management plan, community involvement and awareness about sustainable use of water, and proper methods of forest management (Saifaleupolu, 1999).

Furthermore, another example of fulfilling these obligations is conducting a Greenhouse Gas (GHG) inventory which highlighted potential sources for reducing emissions like sinks.

Although GHG emissions in Samoa were regarded as relatively insignificant as opposed to the rest of the world, Samoa clearly expressed their intention in acknowledging that it is an ethical consideration and responsibility to contribute to efforts in reducing global GHG emissions (Saifaleupolu, 1999). Delving deeper into what was highlighted in the GHG inventory, it was found that though emissions were insignificant in comparison to the rest of the world, there were still increasing trends of emissions between the years 1994 and 1997 (Rasmussen & McGoldrick, 2008). This contradicts ethically with what Samoa had intended to do in terms of GHG emissions. Concerns about these trends were raised accordingly in the national communication calling for non-complacency in addressing such issues (Saifaleupolu, 1999). This is significant because issues as such would have persisted without the proper processes to address them. However, what was fundamentally highlighted in the GHG inventory section of the national communication were the constraints and limitations that were present at the time which undermined the conducting of the inventory. The issues associated with the conducting of the GHG inventory consequently implicated the national communication.

Therefore, to understand the role of the inventory as part of the national communication and ultimately obligation to the convention, it is crucial that these issues are discussed. One of the major issues that was evident throughout the national communication was the constraints present in data quality, quantity, and its management (Saifaleupolu, 1999). For instance, the data collection phase was particularly difficult because of the inadequacy and poor quality of the available data. It was

also reported that the only sector with good quality data at the time was the energy sector whose data is sourced from accurate and up – to – date databases of the Customs Department. The lack of quality data from other sectors would have rendered the inventory incomplete and inaccurate. This would have been problematic not just at the national level but also regarding the fulfilment of obligations to the convention through records of GHG emissions. At the community grassroots level, there was some push back in the initial stages of the inventory process. This would have been problematic for the inventory due to the lack of cross – sectorial participation in the process especially considering that the energy sector had the only good quality data available. Regardless, this was rectified by persistent consultation and effective programmes that raised awareness on the impacts of greenhouse gas emissions (Saifaleupolu, 1999).

This problem was compounded by issues that were raised regarding transfer of technology which was an indispensable part of the problem. The lack of technical equipment with the capacity and capability to improve data storage and easy management exacerbated issues that already existed in data processes. Data that was also prescribed by the IPCC guidelines were evidently not available at the country at the time. Yet again, this is a reflection on the systems in place for data collection, management as well as the lack of resources overall to effectively manage data. These concerns were expressed in both the GHG inventory and again in the national communication which further emphasised the need for provision of quality data and efficient data management. Furthermore, missing from the inventory was the contributions to the greenhouse effect from other ozone depleting substances as well as other features that would form an integral part of the inventory. This would have effectively undermined the purposes that the inventories were supposed to serve. Nonetheless, the inclusion of the inventory in the national communication can still be seen as a great starting point of Samoa’s efforts to fulfil its obligations to the convention. Concretely, the national communication affirmed that despite its limitations, submitting the inventory and outlining its shortcomings was in fact an underlying rationale for future actions pertaining to reducing greenhouse gases (Saifaleupolu, 1999). In doing so, Samoa reaffirmed its aspirations for providing an optimum environment for its people.

#### *In Relation to other Actors and Nation – States*

In terms of relative ambition, Samoa’s policy objectives shows that they are very ambitious in achieving its obligations under the UNFCCC and its related instruments. For instance, it was reported that though emissions of GHG in Samoa were determined to be relatively insignificant in comparison to the rest of the world, ethically, the Samoan government believed that it is imperative for Samoa to produce the best for its people in terms of a favourable environment (Saifaleupolu, 1999). This

means that in comparison to other parties' policy objectives especially high emitters, Samoa is highly ambitious regardless of its contribution to emissions. However, in order to draw specific and detailed comparisons to the objectives pursued by other actors, further research needs to take place.

### *Samoa's Extent and Type of Engagement*

Samoa's participation in the production of the GHG inventory, conducting a vulnerability and adaptation assessment, and ultimately the submission of the national communication is its way of establishing its engagement and activity in international negotiations. This is in line with what Oberthür and Groen (2015) argued to be the determining factors of the type of engagement a country could have. Years prior to its ratification of the Convention and by extension the submission of this national communication, Samoa joined the Alliance of Small Island States (AOSIS) which was established in 1990 (G. Carter, 2015). This coalition continues to be the premier bloc in the formal negotiations that Pacific countries are a part of – united by the common immediate threat posed by climate change (G. Carter, 2015). Whilst joining the AOSIS shows a move to establish important coalitions, it is also evidence of where Samoa is positioned in terms of the international constellations of powers and interests. In comparison to more prominent coalitions like the G77 and China, Samoa's position and engagement might not mean that they effectively and directly influence negotiations. Regardless, within the Pacific region and the AOSIS, Samoa positions itself in a leadership role to influence further action amongst small island states and nations.

### *Fit of Engagement*

The initial national communication was representative of Samoa's own efforts as a Convention member – state as well as its current role at the time as the Chairman of the AOSIS (Saifaleupolu, 1999). Samoa's focus on producing the national communication regardless of its continued need for funding and external assistance effectively shows their established position within the small island states group. Samoa's persistence to produce the national communication effectively outlining policy objectives that fulfils its obligations to the Convention is further example of this leadership.

The aims and rationale of national communications are to provide elements of information to the COP as per Article 4 of the Convention – rendering them an effective tool and means for the implementation of the instruments of the UNFCCC (Financial and Technical Support Programme of the UNFCCC, 2009). The module for preparing national communications for non – Annex I parties indicated that these reports were integral for these countries in meeting their reporting requirements (Financial and Technical Support Programme of the UNFCCC, 2009). Samoa in



producing the national communication was contributing to the aims of the COPs represented in these reports. This again shows participation in the international climate change process especially given that these reports are shared during the COPs to ensure presentation of information in a “consistent, transparent, comparable and flexible manner” (Financial and Technical Support Programme of the UNFCCC, 2009a). Achieving these aims through national communications showcases Samoa’s commitment to effective participation and leadership. The implications of being Chairman of the AOSIS at the time shows effective leadership amongst small island states. At the international level however, Samoa shows its reliance on external funding from for instance developed countries to meet its obligations. Regardless, producing this first national communication is a step forward in terms of solidifying participation in the international climate change processes. Thus, Samoa holds a weak – reformist stance where they are proactive and engage in coalition (Oberthür & Groen, 2015) by getting involved in AOSIS and being the chairman of this bloc. This shows leadership despite of its position at the international level and in comparison, to China. Also, pertinent here is the collective work taken by key stakeholders to ensure that obligations to the convention were fulfilled. What is also clearly identified here is the support of funding in the production of this national communication. This is not particular to just regional collaboration. Within Samoa itself, the national communication was produced by the collaborative efforts of the national climate change team with the assistance and support of the Division of Environment and Conservation (Saifaleupolu, 1999).

### Goal Achievement

In terms of assessing goal achievement, it is important to identify Samoa’s main policy objectives with respect to the major agenda items of the negotiations in question (Oberthür & Groen, 2015). As there are no actual negotiations involved with regards to the submission of national communications, unpacking the outcome dimension would require further research. This will include taking a closer look at how further outcomes of the international institution can be traced back to Samoa’s actual influence. With regards to the extent of engagement, it is manifested that Samoa as a developing country alone needs external funding and assistance to submit its national communication and further implement the instruments of the UNFCCC. This means that goal achievement may be considered to be at a medium level given that Samoa’s policy objectives rely heavily on the assistance of external actors. In terms of influencing the international outcome of these national communications, there is no evidence that pertains to a system that keeps track of these outcomes. Determining whether the international outcomes are direct results of the identified

objectives presented in this national communication therefore requires further research and analysis.

Thus, this national communication fundamentally portrayed that Samoa in fulfilling its obligations to the UNFCCC, had taken actions to mitigate the impacts of climate change through initiatives like the examples listed above. Therefore, Samoa's first national communication to the UNFCCC had clearly articulated its commitment in fulfilling its obligations under the UNFCCC. Samoa had acted prudently in a timely manner and outlined their vision regarding preparedness to mitigate the adverse impacts of climate change. This raises the question of what extent to which Samoa had honoured this vision in practice. Concretely, the national communication could not defer from the fact that the vision and implementations of the UNFCCC were contingent on external resources. Furthermore, other constraints to fulfilling Samoa's international obligations include lack of data and poor information management, inadequate physical resources, and lack of qualified human resources (Rasmussen & McGoldrick, 2010). Yet again, this has fundamentally shown that at the time, to continue to implement these projects, Samoa needed support not only to implement the UNFCCC but also assistance with reporting accurate and credible information. This compounds with the paucity of information where implementation of such projects was concerned which exacerbated the challenges faced by countries like Samoa in fulfilment of its UNFCCC obligations.

#### Case Study 2: Analysis of Samoa's Second National Communication to the UNFCCC

Samoa's second national communication to the UNFCCC presented quite similar characteristics to the first national communication in which it provided a comprehensive update of the work Samoa had been doing in fulfilling its obligations to the convention. This is concerning because the second national communication was submitted to the Convention in 2010 marking 10 years since the initial national communication. However, it does not prevent this paper from ascertaining the effectiveness of institutions by looking at the second national communication document. A crucial aspect of the report to make note of was the role of the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) in the provision of funding for preparing this report. This funding assisted the MNRE in preparing this report in collaboration with other key stakeholders and ministries (Rasmussen & McGoldrick, 2010). This shows that cross – sectoral collaboration had also taken place in preparation for the submission of this national communication.

National circumstances were provided in this national communication as well. This includes outlining the geography and geology, the climate of Samoa and other important information that were required by the criteria for national communications. As predicted in the first national

communication, there was going to be an increase in the population which meant further pressures were added to the environment . The 2.2 percent increase from the 2001 census according to the report, created a higher degree of urgency to adapt and mitigate the impacts of climate change. Despite this increase in population, the process of emigration had apparently slowed things down meaning much could be done to address issues around overwhelming population pressures (Rasmussen & McGoldrick, 2010). This would have signalled continued commitment by Samoa to not only fulfil its obligations to the convention but contribute to global goals in responding to climate change.

Reports about the circumstances of the relevant sectors in Samoa were also provided in this national communication. Highlighted was the continued existence of traditional farming, the depletion of forests, and the establishment of 11 fish reserves by village communities. For Samoa's water system, it was reported that though 95% of the population receive water exclusively from wells, springs, and small rainwater reservoir, only a small proportion of the population received treated water. There was a total of 22 water schemes in Samoa, 18 of them were in Upolu and 4 in Savaii. Within the waste management sector, it was reported that managing dump shifted from an old system to one that adopted the Fukuoka method of waste disposal with the assistance of the Japan International Cooperation Agency (JICA). This method has been proven to be effective and has helped Samoa manage waste more efficiently along with the introduction of other regulatory measures (Rasmussen & McGoldrick, 2010). In essence, this shows that Samoa was not just working to respond to climate change at the grassroots community level and regional level, they were also supported by international co – operation of countries like Japan.

### Quality of Samoa's Policy Objectives

#### *In Relation to UNFCCC's Aim*

Regarding Samoa's obligations pertaining to GHG emissions, a national greenhouse gas inventory was prepared which covered emissions in the years between 1994 and 2007. There was a specific focus on the years 2000 to 2007 which included revision of the results from the first inventory. It was also prepared in line with the 2006 IPCC national inventories' guidelines. Though the IPCC guidelines provided a comprehensive overview of potential sources of emissions, not all of them were applicable to Samoa (Rasmussen & McGoldrick, 2010).

In terms of adaptation, Samoa had done considerable amount of work with respect to its obligations under the UNFCCC. Samoa's implementations of its obligations to the UNFCCC in the years 2000 to

2007 included developing a Climate Risk Profile (CRP) which analysed current and future climate risks for Samoa based on historical climate data and outputs from global climate models (Rasmussen & McGoldrick, 2010). Analysing the likelihood of all relevant climate – related risks was an important part of the vulnerability assessment. With regards to the aims of the overall institution of the UNFCCC, Samoa is fulfilling its obligations to the instruments of the Convention.

For the overall implementation of Samoa’s adaptation activities, the second national communication further reported that the MNRE was the agency responsible for developing strategies, policies and coordinating adaptation measures. This was integral as past adaptation efforts were fragmented by individual sectors implementing their own measures without reference to an overarching context. This means that delegating MNRE as the main agency responsible for climate change adaptation in Samoa would have been a way of harmonising all efforts and encouraging cross – sectoral approaches. Implications of this change on adaptation efforts is evident in the activities that were implemented. It is important to note here that Samoa had no specific legislation dealing with climate change adaptation (Rasmussen & McGoldrick, 2010).

Relevant policies and legislations that were key aspects of these adaptation activities were summarised in the report. They included but are not limited to:

- Strategy for the Development of Samoa (SDS) 2008 – 2012 which outlined a five – year programme aiming to achieve Samoa’s development priorities that included cross – sectoral adaptation activities pertaining to climate change.
- A national climate change policy which was approved in the early 2000s was reported to have aimed at providing a national framework to adapt to climate change include the implementation of the National Adaptation Programme of Action, promotion of cross – sectoral adaptation and technology transfer, integration of climate change considerations into national planning and environmental policies. At the regional level, this included implementing the Pacific adaptation to climate change project and provision of financial resources to support adaptation (Rasmussen & McGoldrick, 2010).
- The NAPA prioritised the water sector and 8 other sectors (Leavai, 2005). This plan was then endorsed by the government of Samoa and recognised as the country’s national adaptation programmes that future adaptation activities could proceed from (Rasmussen & McGoldrick, 2010). This project recognised that immediate

action must be taken to adapt to the adverse impacts of climate change (Leavai, 2005).

- As aforementioned, the CRP became the core scientific tool that was used for the vulnerability and adaptation efforts which evaluated the likelihood of all relevant climate-related risks based on observed climate data and estimates of future changes (Rasmussen & McGoldrick, 2010).

With regards to mitigation, it was identified that key sectors with critical technology needs are energy, agriculture, land use and waste management. According to the report, Samoa's most promising mitigation option at the time was expansion of its energy sector to establishing hydropower generation capacity (Rasmussen & McGoldrick, 2010). Other mitigation activities and strategies included:

- Raising awareness about climate change was a key strategy that saw the MNRE conducting seminars, workshops, community consultations as well as the institution and establishment of a National Climate Change Awareness Day.
- The establishment of the Climate Change Communication Strategy in 2006 was done in collaboration with SPREP. This aimed at raising awareness and helping to improve local expertise on climate change through training locals on applying CRP, vulnerability and adaptation assessments, and communications.
- The Strategy for the Development of Samoa was in addition about commitment to making significant GHG reductions to be achieved through renewable energy use as well as raising awareness of the importance of greenhouse gas abatement . This was also developed along with the National Strategy for Greenhouse Gas Abatement which focused on eight key areas through GHG abatement and supporting global action to reduce GHG emissions (Rasmussen & McGoldrick, 2010).
- The National Climate Change Policy was also the national framework for mitigating climate change which was adopted by the Cabinet in June 2007. The overarching vision of this policy was to enhance the quality of life for all through access to reliable, affordable, and environmentally sound energy services and supply. The policy included several measures which were of relevance to mitigation. Examples include developing indigenous energy resources, developing renewable energy sources and technologies, and improving the efficiency of electricity production, transmission, and distribution.

- There was also the development of policies and law relating to forests fundamentally addressing forest depletion issues and promoting forest conservation instead. This included passing of a motion to ban all commercial logging observations in Samoa by the government early 2007 and this was given legal effect by the Forest Resource Management Bill (Rasmussen & McGoldrick, 2010).

#### *In Relation to other Actors and Nation States*

In terms of relative ambition, Samoa yet again shows that they are very ambitious in fulfilling its obligations to the UNFCCC and its relevant instruments. This is despite the ongoing challenges that is presented by the need for funding to implement other activities. Like the former national communication, Samoa's second national communication shared similar concerns in that data quality and data management was still very poor. Though some highlights of the GHG inventory were the updated emissions accorded to the energy sector, the break down was in the details of other sources of emissions from within the sectors. This is concerning as GHG inventories will need to have produced accurate information to allow for complete assessments of trends and importantly for effective abatement strategies . These trends monitor the progress of countries like Samoa in cutting down GHG emissions, thus achieving its contribution in achieving global GHG emission goals (Rasmussen & McGoldrick, 2010). Without effective data management though, lack of quality data is inevitable and therefore impacts on this process. This also has the implication to undermine the ambitions of countries like Samoa to fulfil obligations to the UNFCCC. It is also an indication that between the first and national communication, not much had been done to address the processes conducted to acquire data. What this suggests for the quality of Samoa's policy objectives in relation to other actors and states is that there is not enough to analyse and make the comparison to the objectives pursued by other actors.

#### *Extent and Type of Engagement*

The process dimension of the effectiveness dimension framework concerns Samoa's participation in engaging in outreach to other parties. Oberthür & Groen (2015) argued that in order to establish a party's position in the constellation of interests and power, it is integral to look at coalitions, alliances and or bridge building. In the case of Samoa, by conducting the GHG inventory, the vulnerability and adaptation assessment, Samoa was engaging in the processes of making submissions and thus participating in the UNFCCC.

Furthermore, the national communication reported that Samoa joined a number of regional policies and strategies regarding mitigation and adaptation to climate change. This is representative of its

integral role as an active participant in Pacific Island regional affairs. In doing so, they have joined the Pacific Plan for Strengthening Regional Cooperation and Integration (PPSRCI) which focused on the promotion of environmentally sound energy options and facilitated international financing of action for climate change. Samoa also signed up to be part of the Pacific Island Framework for Action on Climate Change which was approved by Pacific leaders in June 2005 regulating regional activities that aimed at global GHG reductions with expected outcomes to be achieved by 2015 (Rasmussen & McGoldrick, 2010). These examples are representative of Samoa's engagement at the regional level and can therefore be considered as engagement.

In addition, Samoa's adoption of the Pacific Island Energy Policy in 2004 meant a focus on crucial mitigation goals. This included efficient power generation, implementing environmentally clean and efficient transportation, development of renewable energy and improved energy efficiency. Other examples of Samoa's engagement at the regional level is the adoption of the Solid Waste Management Strategy which promoted recycling and reduction of the amount of waste going to landfill which in turn contributed to GHG abatement (Rasmussen & McGoldrick, 2010).

### *Fit of Engagement*

Whilst this national communication has yet again shown Samoa's ambitious efforts to fulfil its responsibilities to the Convention, fulfilling such obligations were still plagued by the presence of limitations. The report clearly identified the lack of sufficient funding at the local level as well as support from international partners as one of the major barriers preventing other implementations (Rasmussen & McGoldrick, 2010). Yet again, absence of funding clearly correlated with the slow progress of some adaptation projects fundamentally affecting Samoa's efforts to fulfil its obligations to the convention. In distinguishing its fit of engagement as shown by the first national communication, it is established that Samoa is still in a reformative position with regards to climate change negotiations. As long as external assistance and funding was integral to the implementation of majority of Samoa's policy objectives, Samoa establishes itself as a party in need of resources from leading developed countries for instance like China and the United States.

### *Goal Achievement*

Samoa's level of goal achievement as indicated by the second national communication can then be considered to be at medium level due to its continued need for external assistance and funding. The second inventory concluded that Samoa's GHG emissions had increased by approximately 113% since the 1994 base year (Rasmussen & McGoldrick, 2008). This was still concerning given that only a

minor part of the emissions could be attributed to economic development even with the inclusion of other industrial processes in the inventory (Rasmussen & McGoldrick, 2010). It was however recorded that the transport and livestock industries contributed to most of Samoa's emissions (Rasmussen & McGoldrick, 2008). Another significant finding from this inventory was that 95% of Samoa's emissions came from about six sources which were the road transport, livestock farming, nitrous oxide from agricultural soils, electricity generation, other energy consumption, and wastewater (Rasmussen & McGoldrick, 2010). As a result, the inventory included recommendations to improve data acquiring and management processes. Recommendations of the inventory are pertinent here because it allows for tracking progress in the development of national communications and ultimately, fulfilling the obligations to the convention. The recommendations made regarding GHG inventory include establishing a database that could record emissions annually, investigate ways that the inventory could be detailed, the inclusion of local GHG sources as part of the inventory (Rasmussen & McGoldrick, 2010). The implications of such on processes regarding tracking Samoa's annual GHG emissions would have made abatement processes more effective. Despite the rise in Samoa's emissions reflective of the rise in global emissions, Samoa was still considered one of the lowest contributors to GHG emissions (Rasmussen & McGoldrick, 2008). This means that the international outcomes are not always reflective of Samoa's actual influence.

What was fundamentally implicated by this process is the increase in climate-related risks as a result of global warming which showed vulnerability amongst key sectors in Samoa (Rasmussen & McGoldrick, 2010). In particular, the water supply and quality were one of the sectors that was identified by this assessment to be most vulnerable to climate change. It was recorded that natural events like El Nino oscillation had led Samoa's water supply to be rationed as well as the depletion of water reservoirs. This meant that priority adaptation measures included upgrading and climate – proofing water shortage systems to secure supply of high-quality drinking water. This is in addition to adaptation measures above and other planned adaptation activities were all a contribution to enhancing climate resilience at the country level. Essentially, this means that despite setbacks in terms of funding and the need for technology, Samoa still acted on the intention of not only fulfilling their obligations to the UNFCCC, but to contribute to the overall adaptation to the adverse impacts of climate change. This can be seen not just at the community level but all the way to the international level. Concretely, this shows that Samoa's participation in the UNFCCC can be traced at multiple levels with multiple facets.



Concretely, these mitigation activities showcase Samoa's effective participation and fulfilment of its obligations to the UNFCCC. Establishing such policies and implementing them not only contributes to Samoa's independent actions to combatting climate change but it also signalled a great deal of effort gone in to adhering to its international obligations. However, like the concerns reported in the first national communication, there is still a growing paucity of information regarding the effectiveness of such initiatives and how it had successfully fulfilled Samoa's obligations to the UNFCCC. Nonetheless, these national communications have shown Samoa's participation in the UNFCCC and the efforts they have taken to fulfil its international obligations. Once again, Samoa demonstrated its willingness to participate in these global processes and were quite timely in doing their national communication. Yet again, this was indicated in the multilayered and multileveled participation of Samoa in implementing adaptation activities and mitigation efforts. Thus, this signals the need to investigate what a third national communication would look like in reflection and comparison to the first two documents. In doing so, this would track progress of Samoa's participation in the convention after submission of the second national communication. However, this was not the case after COP21 where the Paris Agreement was signed and adopted by member countries which effectively replaced the Kyoto Protocol, an important part of the original UNFCCC agreement (UNFCCC, 2015). Prior to the Paris Agreement though, Samoa was part of another important part of international negotiations, albeit not directly climate change related, but very much helped inspire some events of the Convention (United Nations General Assembly, 2014). This was the third conference of small island developing states which was hosted by Samoa in 2014.

### Case Study 3: Analysis of Samoa's Intended Nationally Determined Contribution (INDC)

In this document, the government of Samoa presented its NDC as well as information that facilitated the clarity and understanding of their contribution to the objectives of the convention. This NDC was prepared using UNFCCC 2015 guidelines and the GHG inventory was updated using latest available data (Government of Samoa, 2015). This fundamentally shows Samoa's continuous engagement at the international level on issues around climate change. NDCs in contrast to national communications required countries to outline and communicate their post – 2020 climate actions every 5 years. This is much different to the 10 years between the national communications. As per Article 4, paragraph 2 of the Paris Agreement, countries are required to prepare, communicate, and maintain NDCs which should embody efforts by each country to reduce national emissions, adapt to the impacts of climate change (UNFCCC, 2021).

Other rationale for NDCs is to communicate the ambitious efforts of countries to address the impacts of climate change. In contrast to national communications, NDCs are nationally determined in order for countries to put forward their ambitious contributions that their national circumstances can allow. According to the UNFCCC (2021) website, NDCs contain information on targets, policies, and measures for reducing national emissions on adapting to climate change impacts. Furthermore, NDCs are said to may also contain information regarding finance, technology, and capability building that are purported to achieve ambitious climate action.

In comparison to the first and second national communications, Samoa's INDC was quite short and lacked the comprehensive depth the previous documents had. For instance, there was a dearth of detailed information about national circumstances as well as other information regarding each important sector. This may very well be attributed to the limited time that Samoa was given to submit the NDC. What also distinguished the NDC from the first and second national communications was the lack of information of any assistance Samoa may have received in writing the report. This also includes any information alluding to any ministries and departments that worked collaboratively to produce this report. Therefore, it is sufficient to say that the document reflected this. Nonetheless, the report still contained sufficient information that showcases the substantial amount of work that had been done at the national level within the energy sector to facilitate the formulation of Samoa's NDC (Government of Samoa, 2015).

## Quality of Samoa's Policy Objectives

### *In Relation to UNFCCC's Aim*

It was again presented in this submission that Samoa's contribution to the high levels of emissions overall was still negligible and deemed insignificant in comparison to the world (Government of Samoa, 2015). Regardless, Samoa continues to ramp up its efforts to reduce GHG emissions for three reasons. These reasons are to contribute to global efforts to reduce emissions, and to demonstrate to the global community the extent to which Samoa is venturing towards to ensure they do their part in addressing climate change. Furthermore, by recognising the potential for reduction of its emissions, the Samoan government is supporting its development vision of improved quality of life for all. Again, in comparison to the previous national communications, there is a lack of information regarding a process of conducting a GHG inventory which would inform this NDC. Perhaps this could be attributed to the time constraints presented in preparation of the report. One thing that was highlighted was that data from the 2007 inventory were still used as baseline for targets set for Samoa's emissions. This is concerning and may be perceived as failing to uphold the internationally recognised standard of producing GHG inventories to showcase levels of emissions and thus not fulfilling its obligations to the Convention. However, what has been proven quite consistently throughout these submission documents is the lack of funding and limited stakeholder support that exists for countries or small island states like Samoa.

According to the NDC, the focus on the energy sector is prompted by the rationale that GHG emissions data in 2007 recorded the sector as being accountable for 50 percent of total GHG emissions. The lack of information regarding GHG inventories conducted in Samoa after 2007 is again implicated here. This raises the question of whether some of the recommendations raised in the second national communication to improve GHG inventory processes have been effectively implemented. Despite the lack of information in this regard, it is important to look at Samoa's efforts recorded in this NDC even if the specific focus is on the energy sector.

Targets set out in the NDC were specific towards the energy sector with a special focus on the electricity sub – sector . It was recorded that 26 percent of electricity was generated from renewable energy sources in 2014.

Renewable energy contributed 48% of total electricity requirements in 2007, however by 2014, renewable energy sources including solar photovoltaic, wind and hydropower plants contributed only 26 percent. This drop in hydropower contribution was a direct consequence of the destruction of hydropower plants by Cyclone Evan in 2014 . Not only does this highlight the vulnerability of

Samoa's infrastructure but it also highlighted the frequency of extreme climatic events because of climate change (Government of Samoa, 2015). This does imply the need for mitigation and adaptation actions to rectify some of these issues.

Therefore, Samoa's ambitions to fulfil its international obligations were demonstrated through the targets set for its electricity subsector which included adopting a 100 percent renewable energy target for electricity generation through to the year 2025. This commitment was however reliant on two conditions. One of them was Samoa firstly reaching the 100 percent renewable electricity generation target in 2017 and the other was receiving international assistance to maintain this contribution through to 2025. Overall, the implementation period set out to be achieved through this NDC was from the year 2015 to 2025. Samoa's NDC recognised key aspects of their contribution that were indicative of how they were fulfilling their obligations to the UNFCCC. Like the first and second national communication, Samoa in this NDC acknowledged that to achieve some of the targets set, it was necessary to remove existing barriers that prevented them from doing so. These barriers include lack of funding that would contribute to human capacity, technology, and capital investment (Government of Samoa, 2015). Yet again, the challenge of funding and technology continues to persist throughout the years.

Much of the INDC alluded to the mitigation activities undertaken by Samoa in implementation of its goals and its obligations to the convention. One key implementation is the development of the Strategy for Development of Samoa planned for the years 2012 to 2016. Highlighted in this strategy were key plans for development across priority sectors with the main goal of boosting productivity for sustainable development. These plans included the need for increased investment in renewable energy as some of the main strategic outcomes as well as the political commitment to mainstream climate change issues. To do this, Samoa planned to drive several actions that are not only aimed at mitigating the impacts of climate change but also accelerating efforts to reduce GHG emissions. Other ongoing and planned activities associated with this strategy targeted building resilience, disaster risk reduction and adapting to the adverse effects of climate change (Government of Samoa, 2015).

Other key policy level actions and development projects that were put in place for achieving renewable energy targets included the following:

- The Samoa Energy Sector Plan 2012 – 2016 was a key guiding document for the energy sector working towards the theme of “sustainable energy towards self – sufficiency. This policy’s objectives were to deliver outcomes that were consistent with the Strategy for Development of Samoa – working towards the overarching goal of increasing energy self – sufficiency.
- The Electricity Act of 2010 introduced key regulatory changes that allowed the private sector to be involved in generating electricity and selling it back to the utility (Asian Development Bank, 2014). This was effective as it allowed independent power producers (IPPs) to build and operate renewable energy power plants and sell electricity to the grid (Government of Samoa, 2015).
- Other key policies include the Greenhouse Gas Abatement Strategy, the Climate Change Policy of 2007, and the draft Energy Efficiency Act (Government of Samoa, 2015)

#### *In Relation to Other Actors and Nation States*

Therefore, in relation to other actors and nation states, Samoa’s policy objectives are very ambitious and not only particular to fulfilling its commitments to the Convention but in ensuring that it is responsive to the impacts of climate change experienced by Samoan communities.

#### *Extent and Type of Engagement*

Preparation and submission of this NDC also shows commitment to the objectives and obligations to the convention despite the almost inevitable limitations presented during the process. According to this report, this NDC focused on mitigation due to the short time frame given to prepare the report which meant that no comprehensive stakeholder consultations took place. However, there was an expressed intention to revise and update this document where and when it was necessary. The implications of such on the NDC and consequently on effectively fulfilling obligations to the convention are clear. If consultations had taken place, this NDC would have provided more robust information with regards to the implementations of Samoa’s obligations to the UNFCCC. The lack of stakeholder consultations meant that there was a lack of information that would underpin the submission and ultimately fulfil the objects of the convention. Regardless, it was clearly conveyed throughout this document that Samoa’s intention to commit to the convention is showcased through its ambitious goals to reduce GHG emissions within the electricity sub sector (Government of Samoa, 2015).

Furthermore, this NDC had outlined that Samoa had received significant donor assistance through grant financing that enabled the implementation of other projects. These projects were a combination of both the renewable energy projects and energy efficiency measures like grid connected solar photovoltaic projects, wind, and hydro power projects to rectify the impacts of Cyclone Evans, bioenergy projects and overall energy efficiency projects. This would have signalled improvements specifically within the energy sector not just at project level but also at regional level with the assistance of grant funding. However, the NDC had also concluded that future related projects would still need similar financing support (Government of Samoa, 2015).

### Goal Achievement

For adaptation projects, the vulnerable sectors such as agriculture, coastal infrastructure, health, forestry, meteorology, tourism, and water, which identified as priority sectors in the 2005 National Adaptation Programme of Action (NAPA) had successfully implemented their adaptation projects with external financial support (Government of Samoa, 2015). As the NAPA was developed in 2005 and identified these key sectors as ones requiring immediate adaptation needs, successful implementation would have meant effectively implementing the obligations of the UNFCCC. Though the focus of this NDC is on the mitigation efforts undertaken by Samoa, the successful implementation of these projects implies the need to build on this platform for adaptation objects at a future stage. Though one can argue that successful implementation of the NAPA could suffice as high level of goal achievement, it is too presumptuous to attribute broader international outcomes to successful implementation of national policy objectives.

Like mitigation activities, implementation of adaptation projects was also dependent on external financial assistance in order to build climate resilience, disaster risk reduction and adaptation projections (Government of Samoa, 2015). Yet again, in terms of goal achievement, Samoa can be considered to have been at medium level because international outcomes may not always be reflective of the policy objectives that are implemented at national level. Overall, the limitations of submitting this INDC include the short time frame allocated which did not allow for a comprehensive national consultation process. Other limitations that were again highlighted in this document was that majority of the implementations of adaptation and mitigation efforts were still contingent on external financial support from the international community.

## Case Study 4: Analysis of Samoa's Second Nationally Determined Contribution

Samoa's second NDC was submitted in July of 2021 with financial support from international organisations like the German Cooperation, Australian AID, and the NZ Aid programme (Government of Samoa, 2021). The implementing partners were the Regional Pacific NDC Hub and the Global Green Growth Institute (GGGI) who also worked with other organisations like SPREP, UNDP and the Castalia firm.

In the preparation of Samoa's second NDC, there was a review of the targets set out in the first NDC and the mitigation and adaptation opportunities it presented for the latter NDC. These opportunities implied for the second NDC included identifying climate change mitigation and adaptation investment projects that were underpinned by data sets, strategies, and robust scholarship as well as cross-sectoral engagement with key stakeholders (Government of Samoa, 2021). This shows that Samoa has prepared its latest NDC in evaluation of previous NDC as well as national communications.

Like the first and second national communications, Samoa's second NDC also outlined national circumstances alluding to its geographical characteristics, climate profile, population profile, as well as highlights of its socio-economic background. Highlighted in this section was Samoa's ongoing vulnerability to the adverse impacts of climate change as well as the decline in economy activity caused by the COVID-19 pandemic (Government of Samoa, 2021). In comparison to national circumstances outlined in previous documents, this section of this NDC was still very informative, albeit lacking the comprehensiveness exhibited by previous submissions.

### Quality of Samoa's Policy Objectives

#### *In Relation to UNFCCC's Aim*

This NDC is distinctive because a specific section comprehensively outlined the provisions of the Paris Agreement that each of the mitigation and adaptation actions Samoa is taking fulfils. This distinguishes this NDC from previous submissions because it expressly states which of Samoa's international obligations under the UNFCCC are implemented. For instance, relevant strategies and plans that will be discussed later like the climate change policy and SDS was outlined as examples of what explicitly fulfils Samoa's obligations under Article 4, paragraph 6 of the Paris Agreement. According to the NDC, this clause requires parties to provide relevant information pertaining to policies and measures as components of NDCs (Government of Samoa, 2021).

As per Article 4, paragraph 6, the Convention dictates that:

“developed country parties should continue taking the lead by undertaking economy – wide absolute emission reduction targets. Developing country parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy – wide emission reduction or limitation targets in the light of different national circumstances” (UNFCCC, 2015).

This means that the focus of NDCs should be on providing the mitigation efforts that contributes towards reduction and limitation of emissions in light of a country’s national circumstances. As opposed to previous submissions to the UNFCCC, this NDC is associated with what is referred to as the NDC Implementation Roadmap and the NDC Investment Plan. These two projects set out the practical steps and tangible projects to mitigate GHG emissions across the different sectors (Government of Samoa, 2021). This already distinguishes this NDC from its predecessors because these two documents implies that Samoa is undertaking a more vigorous approach in tracking its implementation progress as well as financing of these projects. These two documents are informed by the recommendations from the review of the first NDC as well as results of stakeholder consultations (Government of Samoa, 2021). Ultimately, these stakeholder consultations helped build recommendations, processed validation, and effectively endorsed the second NDC. Concretely, this means that a cross-sectoral approach was present in the preparation period as well as in the write up of this report. This ambition thus reflects the urgency of the Paris Agreement. It is also a reflection of Samoa’s leadership and commitment to its obligations to the convention.

Evident throughout this NDC was the use of the 2007 GHG inventory as the base year for the targets set for the implementation of this NDC. According to the government of Samoa, the 2007 base year was chosen to make use of the most recent comprehensive GHG inventory. This affirms the relevance and significance of the previous GHG inventory for future actions of Samoa. What it also shows is the lack of any information regarding implementations of the recommendations outlined in the second national communication submitted in 2007. This may be concerning given that it has been 14 years since the 2007 inventory. Regardless, the second NDC had indicated that Samoa was currently updating its GHG inventory in accordance with the IPCC guidelines for national greenhouse gas inventories as well as the 2019 refined guidelines of this process (Government of Samoa, 2021).



Nonetheless, the development of this NDC focused on opportunities to reduce emissions in the energy sector (including electricity, land transport, maritime transport, and tourism), the waste sector, and the AFOLU sector (which consists of the agriculture and forestry sectors). With regards to IPPU, Samoa did not develop a GHG emissions reduction target for this sector due to previous baseline data indicative of the low emissions from these products. Lack of quality data was yet again presented as an issue here. This is crucial because one commonality between these submissions is the lack of quality data to fully outline Samoa's GHG emissions as well as dearth of information to underpin further actions to combat climate change.

For mitigation actions, Samoa aims to reduce overall GHG emissions with sector specific mitigation targets. Samoa aims to reduce its overall GHG emissions by 26 percent in 2030 compared to 2007 levels of emissions. Underscored in this section is the use of the 2007 GHG inventory as baseline data with specific references to the energy sector as being accountable for 50 percent of emissions. Within what is now known as the AFOLU sector, 38 percent of emissions recorded in 2007 derived from the agriculture and forestry sectors. Regarding waste and IPPU emissions, only 12 percent could be attributed to them. Therefore, the focus of mitigation is on these three sectors. For the energy sector, Samoa is setting a reduction target of 30 percent by 2030 in comparison to 2007 levels. Within the waste and AFOLU sector, reducing GHG emission targets are set at 4 percent and 26 percent respectively (Government of Samoa, 2021).

These mitigation targets are further explained in the NDC which showcases overall targets within each sector, the means of reaching this target and the requirements that should be fulfilled to achieve this target. For example, within the energy sector, an overall target of reducing GHG emissions by 30 percent in 2030 has been set. The means of achieving this target is to reach 100 percent renewable electricity generation by 2025, implement energy efficiency programmes, establish grid stabilisation, and network loss reduction programmes. Under requirements, Samoa has expressed the need for external financial support and technical assistance to improve mitigation actions as well as meeting upfront costs of each project. For the waste sector and AFOLU sector, these same concerns are manifested in the requirements needed to achieve some of its targets. Thus, this creates a great sense of urgency for Samoa's financial partners to provide funding to enable the implementation of the mitigation projects and consequently adaptation actions.

In order to increase resilience to the effects of climate change, Samoa's National Climate Change Policy 2020 to 2030 offers the foundation for both national adaptation and mitigation efforts. Samoa has also developed community integrated management (CIM) plans which identify prioritised

adaptation actions by all of Samoa's 368 villages to enhance their climate resilience. These two documents show that Samoa's plans for adaptation are not only restricted to be achieved at the national level but at the grassroots community and village level as well. According to this NDC, this was built on Samoa's successful implementation of its NAPA in 2005. This is crucial because it effectively shows that previous adaptation policies have worked and essentially has the potential to inform future adaptation projects. According to the second NDC, this is what prompted the development of the national climate change policy and the community integrated management plans (Government of Samoa, 2021).

In addition to the above plans, Samoa also communicated quantitative targets for adapting to climate change in the marine and AFOLU (Agriculture, Forestry and Other Land Use) sectors (Government of Samoa, 2021). These objectives are outlined below:

- Within the marine sector, there is an objective to expand the area of mangrove forests in Samoa by 5 percent in 2030, relative to 2018.
- Within the AFOLU sector, targets for expansion of agroforestry were set at an additional 5 percent of agricultural land.
- Furthermore, other aims were set to manage forests sustainably and increase total forest cover by 2 percent by 2030.

Therefore, Samoa's adaptation actions are clearly focused on these three sectors with more information set out in the developed policies that are associated with further policies deemed significant in actions taken to combat climate change. Examples of these key strategies include the overarching national planning documents such as SDS 2016 and Samoa 2040. The SDS outlines the strategy for Samoa's overall development based on the four pillars of sustainable development which are economic, social, infrastructure and the environment. Complimenting this strategy is the Samoa 2040 strategy which focuses on Samoa's growth in relation to the Sustainable Development Goals. Overall, these adaptation targets are also set to contribute to overarching mitigation (Government of Samoa, 2021).

#### *In Relation to Other Actors and Nation States*

Samoa has set the implementation period of its NDC to be from the 1<sup>st</sup> of January 2022 to the 31<sup>st</sup> of December 2030 (Government of Samoa, 2021). This clearly shows Samoa's intention for the next decade to respond to the adverse impacts of climate change. It also demonstrates Samoa's level of commitment at multiple levels from collaboration at the national, regional, and international levels.

Making accurate comparisons to the policy objectives pursued by other actors requires further research.

#### Extent and Type of Engagement

Concerning the process dimension, Samoa's extensive collaboration at the national, regional, and international levels through coalition meeting participations and stakeholder consultations is evidence of its level of engagement. Emphasis on the need for continued collaboration shows the extent to which Samoa is willing to engage with to ensure achievement of its goals. In regards to Samoa's position in the international constellation of powers and interests, Samoa maintains its ambitious objectives and leadership despite them being a non – Annex I country as well as a SID party.

#### Goal Achievement

However, this NDC has identified that achievement of mitigation and adaptation targets are conditional on external financial support. Further limitations are implications of other events including Cyclone Evan in 2012, Cyclone Gita in 2018, the measles epidemic in 2019 and the COVID-19 pandemic. These events have had considerable impacts on the poverty rates in the country. This has meant that achieving the targets set out in this NDC will require investment of large proportions in finance, capacity building and technology investment. This can be achieved with successful coordination and consultation between relevant stakeholders which this NDC has clearly articulated is one of the driving aspects for successful implementation of previous implementation goals. Thus, despite these limitations, Samoa has shown ambition to achieve its mitigation and adaptation goals regarding climate change. These goals are focused on sectors including agriculture, health, tourism, forestry, and water as well as coastal infrastructure and marine ecosystems (Government of Samoa, 2021). Yet again, Samoa's level of goal achievement cannot be determined until further assessment and research can be conducted.

## Chapter 5: Samoa's participation through international events

### Overview

This chapter will look at Samoa's participation through international negotiations such as its contribution to the Paris Agreement as well as its integral role in hosting the third conference for Small Island Developing States (SIDS). Using the effectiveness intervention framework, this chapter will unpack what Samoa's participation looks like with regards to the Convention and its instruments.

### Case Study 5: Analysis of Small Island Developing States (SIDS) Conference 2014

Historically, small island states were recognised internationally in two instances. First was at the 44<sup>th</sup> session of the UN General Assembly in 1989 where the vulnerability of small islands and coastal areas were recognised to be a significant challenge.

At the 1992 UN Conference on Environment and Development (Earth Summit) in Rio de Janeiro, SIDS were yet again brought to the fore of international attention regarding sustainable development.

The conference adopted the Barbados programme of action also known as BPOA for the sustainable development of SIDS which a 14 – point programme that identified priority areas and specific actions

necessary for addressing the special challenges faced by SIDS. Some of the priority areas included climate change and sea-level rise (Earth Negotiations Bulletin, 2014).

The theme of the third international conference on SIDS which took place in Samoa from the 1<sup>st</sup> to the 4<sup>th</sup> of September 2014 was “The Sustainable Development of SIDS through genuine and durable partnerships” (United Nations Sustainable Development, 2014). This took place in parallel with other partnership dialogues on the themes of sustainable economic development, climate change, and disaster risk management, social development, health and non-communicable diseases, youth and women, sustainable energy (Earth Negotiations Bulletin, 2014). Reports that were produced about the conference recorded 21 heads of states and government and 3500 delegates took part in what is known as a crucial turning point in negotiations between SIDS and the international community (Earth Negotiations Bulletin, 2014).

Some of the key outcomes of this conference was underscoring that success required long-term commitments and partnerships. This was compounded by a request from SIDS for partners to be more disciplined by fulfilling long – standing commitments to SIDS. This request was supported and affirmed by the UN Economic and Social Council President which further emphasises on the role of the international community in relation to supporting SIDS. Despite such, the SIDS were still lauded for all their innovative solutions despite limited resources. Yet again, this called for investment and cooperation as key to partnerships. Furthermore, other UN agencies and international organisations highlighted examples of the work they were doing to support SIDS. In doing so, they are fundamentally responding to some of the requests highlighted earlier in the conference. Examples of such assistance and cooperation includes the World Bank Group (WBG) announcing enhanced financial support to meet SIDS’ needs, including access to new funds, and technical support. In addition to this announcement, GEF announced a commitment of US 256 million for SIDS for the period 2014-2018, a 9 percent increase from the previous four-year period (Earth Negotiations Bulletin, 2014).

### *Quality of Policy Objectives*

#### *In Relation to UNFCCC’s Aim*

The objectives of the UNFCCC were achieved through the notable approval of the SIDS Accelerated Modalities of Action document otherwise known as the Samoa Pathway (United Nations General Assembly, 2014). The document was negotiated during the preparatory process at UN Headquarters in New York and was adopted without further discussion during the closing plenary on Thursday 4<sup>th</sup>

September 2014 (Earth Negotiations Bulletin, 2014). The Samoa Pathway document was lauded during this conference for providing new thinking on models of future cooperation and highlighted the call for special attention to data collection and statistics. Furthermore, the Pathway emphasised that adaptation to climate change represents an immediate and urgent global priority. They acknowledged the integral role of the UNFCCC as the primary international intergovernmental forum for negotiating the global responses to climate change and noted that there is a significant gap between the aggregate effect of mitigation pledges by parties in terms of global annual emissions of greenhouse gases by 2020. Thus, the pathway urged developed country parties to increase technology, finance, and capacity building support to enable the increase in mitigation ambition and adaptation actions on the part of developing country parties (Earth Negotiations Bulletin, 2014).

#### *In Relation to Other Actors and Nation States*

In terms of ambition, Samoa shows very ambitious efforts by leading and facilitating the SIDS conference. As the conference also highlighted improving data collection and statistics, Samoa in relation to other actors and nation states show ambition and leadership within the AOSIS. Achieving the objectives of the coalition is therefore further example of Samoa's leadership and ambition in comparison to other actors and nation states.

#### *Extent and Type of Engagement*

During the proceedings of the conference, the Prime Minister of Samoa expressed the need for the 21<sup>st</sup> meeting of the COP to the UNFCCC to be one of hope and ambition in the form of a climate treaty. He emphasised that the designation of the year 2014 as the international year of SIDS was the first time where a group of countries had been accorded such recognition. Therefore, adopting the Samoa Pathway just before COP21 is a unique occurrence in the UN context (Earth Negotiations Bulletin, 2014). This shows effective leadership to the extent that they will lead climate action on climate change mitigation and adaptation amongst small island states.

#### *Goal Achievement*

A high level of goal achievement can be considered for Samoa in this instance because at COP21, 196 parties to the convention adopted the Paris Agreement: a legally binding international treaty on climate change (UNFCCC, 2015). This treaty was considered a landmark agreement in multilateral climate change negotiations because for the first time, a binding agreement unifies nations into a common cause which was to undertake ambitious efforts to combat climate change (Hoad, 2016). The international outcome can be compared to the identified objectives of the SIDS conference.

During the negotiations of the SIDS conference, Pacific Island leaders had expressed the objective of forming a climate treaty which can then be identified in the establishment of the Paris Agreement (Earth Negotiations Bulletin, 2014). The question of whether the international result might be accomplished regardless of Samoa's actual influence needs to be further evaluated. Even if the same result may have been reached without Samoa's influence, Samoa's participation in the negotiations in various roles would have surely resulted in more impactful participation.

#### Case Study 6: Analysis of Samoa's participation in the Paris Agreement (PA) negotiations

Further to Samoa's participation in the UNFCCC is its signing of the Paris Agreement as a Non-Annex party on the 22<sup>nd</sup> of April 2016 (UNFCCC, 2016). The central aim of the agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees (Hoad, 2016). In addition, the agreement seeks to increase the ability of countries to respond to climate change, contribute to GHG reduction and develop climate-resilient pathways (UNFCCC, 2015). To achieve these goals though, the agreement impresses on the provision of financial resources and a new framework for technology to help support developing countries with achieving their own national objectives (UNFCCC, 2015).

In terms of the effectiveness dimension framework, there is not enough research available to make full assessments of Samoa's participation and determine the effectiveness of the UNFCCC as the international institution. What is available is research of the instances in which Samoa has tried to implement the objectives of the UNFCCC through the Paris Agreement.

However, joining the Paris Agreement shows a commitment by Samoa to continue being part of the convention and fulfil its obligations. The implications of these goals on Samoa's efforts to fulfil its obligations to the convention and combat climate change are clear. As the first and second national communications have clearly outlined, some of Samoa's greatest needs are the provision of financial resources and technology to assist in adaptation and mitigation efforts (Rasmussen & McGoldrick, 2010; Saifaleupolu, 1999). To fully comprehend the extent of the impact of the Paris Agreement on Samoa's participation, this would require analysing national communications that followed COP21. However, it has now been established that national communications were effectively succeeded and replaced by what is now known as nationally determined contributions (NDCs).

NDCs are a huge part of the Paris Agreement which requests each country to outline and communicate their post – 2020 climate actions known as their NDCs. Communicating these climate

actions is significant in the determination of whether the global population will achieve its long-term goals of reducing GHG emissions. NCDs are submitted every five years to the secretariat of the convention and successive NCDs should present progression in comparison to the previous NCDs (UNFCCC, 2015). This means that party countries like Samoa in provision of its NCD submissions indicates an attempt to show progress from their previous goals. As seen in this analysis, Samoa has actively participated in the submission of NCDs and even prior to that with the national communications.

Concerning the process dimension of the framework, it was established that through the SIDS conference in 2014, the AOSIS' objective was to establish the need for a climate treaty or an international binding agreement that will unify countries in undertaking ambitious efforts to combat climate change (AOSIS, 2018). This conference had shown Samoa's leadership – thus indicates a high level of ambition. Post – 2015 and the Paris Agreement, the extent and fit of engagement can be seen further in Samoa's recent appointment as the chairman of the AOSIS. According to a speech by the current Prime Minister of Samoa, the Pacific SIDS coalition had “placed confidence in us to lead for the coming two years” (Mata'afa, 2023). In the constellation of powers and interests, this is a fundamental move especially with the backing of the Pacific SIDS coalition. In fulfilling its obligations to the UNFCCC, Samoa continues to be an impactful player amongst other actors in maintaining and implementing the focus of the AOSIS. This includes focusing on climate change and sustainable development issues such as negotiations and processes – all of which converge on fulfilling and achieving the objectives of the UNFCCC and its related instruments. These instruments for Samoa are in the form of the SDG's, the Paris Agreement and the Samoa Pathway (Mata'afa, 2023). Mata'afa (2023) further argues that to achieve these, Samoa will uphold the mandate of the AOSIS which is to advocate for the alliance's interests on the global stage and secure global commitments and agreements. Through this, Samoa expresses great ambition and leadership amongst SIDS to achieve the objectives of international institutions responsible for climate action in climate change mitigation and adaptation. In the international constellations of powers and interests, it is established that Samoa's successful implementation of the objectives of the UNFCCC is reliant on other actors and nation states' support. This however does not mean that Samoa has not engaged in good faith to ensure that they meet their objectives to the Convention.



## Chapter 6: Samoa's participation through its water and energy sectors

### Overview

This chapter will focus on two important sub – sectors within Samoa's climate change sector using the effectiveness dimension framework to analyse its effectiveness as reflected in its climate change policy and the work of its water and energy sectors. In analysing the participation of Samoa through taking a closer look at these two sectors, this thesis will further argue that Samoa through the implementation of its national institutions is effective in fulfilling its obligations to the Convention.

The Samoa Water Authority (SWA) and Electrical Power Corporation (EPC) are the two sectors that are responsible for water and electricity respectively in Samoa. As outlined in the documents analysed in the chapter before, the water and energy sectors have been identified to be some of the vulnerable areas impacted by climate change. The government also identified these two sectors as the focus of some of the mitigation GHG targets set in the communications submitted to the UNFCCC. Therefore, this section will outline how these plans could be achieved and what processes are in place to ensure they can be achieved. This section will look at electricity as one of the sub – sectors of the wider energy sector for analysis. Before delving into unpacking what these plans are, it is crucial that this chapter outlines the historical background and legislative framework that are the basis of the work implemented by these two sectors. To do this, it is important to look at the government structure of Samoa and how MNRE as the ministry or institution at the national level responsible for its climate change policies operates in relation to these two subs – sectors.

### Snapshot – Government structure of Samoa

The Ministry of Natural Resources and Environment otherwise known as the MNRE is the national institution responsible for the implementation of Samoa's climate change policies. In the implementation of policies and activities pertaining to climate change mitigation and adaptation, MNRE co – exists with 14 other governmental ministries – collaborating on policies and research to inform development and activities (Ministry of Natural Resources and Environment, 2010). There are multiple legislations that dictate the operation of the MNRE as well as different strategies that mandate its activities. However, with regards to the water and energy sectors, the Ministry of Public Enterprises (MPE) is the institution that both SWA and EPC sit under (Ministry for Public Enterprises (Samoa), 2023). The discrepancies in the literature about the government institutions that these sub – sectors sit under also does not prevent this research from making assessments. What it does mean though is that whilst MNRE is responsible for the implementation of climate action in climate change

mitigation and adaptation, it works closely with other governmental ministries to do so. Despite this fact, MNRE is still regarded as the institution responsible for climate change action and therefore its objectives serve as the threshold that this thesis can make effectiveness assessments on in relation to the EPC and SWA sub – sectors.

### Electrical Power Corporation (EPC)

Historically, generation of electricity in Samoa has relied on two main sources: hydro and diesel-fuelled thermal power plants. EPC was established on the 19<sup>th</sup> of December in 1972 under the EPC Act 1972 which has since been amended consistently right up to 2010 (Lee - Hang, 2016). The amended Electricity Act which came into effect in December 2011 has paved way for independent producers to generate and sell electricity to EPC (Asian Development Bank, 2014). The Electricity Act of 2010 is the legally binding document whose relevant provisions state that the objectives of the EPC are:

- To promote economy, efficiency, reliability, and affordability of electricity provided by service licenses.
- To assure the safeguarding of the environment.
- To promote the prevailing national energy policies
- And to promote the prevailing national policies on combatting climate change (Electricity Act, 2010).

In 2013, the Electrical Power Corporation (EPC) in Samoa also outlined their vision as taking measures to ensure that clean energy sources are affordable and provide sustainable electricity supply for the people of Samoa (Ainu’u, 2013).

The Annual Report released for the years 2011 to 2012 also expressed EPC’s mission:

“to provide and maintain quality electricity services through innovative, sustainable and environmentally sound practices in developing renewable energy sources, generation and distribution infrastructure network, in partnership with customers and stakeholders, to support the development of Samoa (Ainu’u, 2013).

### Quality of Policy Objectives

To ascertain the quality of policy objectives, Oberthür & Groen (2015) had alluded to the aims of the international institution as the recognised standard. In this case, this assessment will be made based

on the overall aim of Samoa's national climate change policy 2020 with MNRE as the institution responsible for the implementation of this overarching policy.

#### *In Relation to the institutions' aim*

With regards to the aims of the MNRE representative in the NCCP 2020, the policy objectives of the EPC according to the statement of corporate objectives released for the years 2017 – 2020 fulfils their objectives under the national climate change policy (Lee - Hang, 2016). The relevant overall objectives of the MNRE through NCCP are to:

“implement mitigation measures to reduce greenhouse gas emissions include matters relating to nationally determined contributions by updating and digitising the national GHG inventories targeting the main sources of GHG emissions in the energy sector” (Ministry of Natural Resources and Environment (Samoa), 2020).

EPC's most recently available policy objectives for the years 2017 to 2020 showed that one of EPC's strategic focus was continuous research on potential renewable energy technologies (Lee – Hang, 2016). At the national level, this contributes to the above objective of the national climate change policy. However, due to the absence of available data pertaining to objectives post – 2020, an accurate assessment regarding the quality of policy objectives in relation to the aims of the MNRE through the NCCP may not be achieved. Regardless, assessment based on the objectives for the years 2017 to 2020 is still very relevant and is indicative of EPC's objectives at the time.

At the international level, research on potential renewable energies also contributes to the achievement of objective 7 of the NCCP 2020 which states that Samoa being a party to the Convention aims to have effective co – ordination and representation at the national, regional, and international levels (Ministry of Natural Resources and Environment (Samoa), 2020). This shows that to the international level, the objectives of Samoa's MNRE institution relates to that of the Convention.

#### *In Relation to Other Actors*

In terms of relative ambition, EPC in its service to Samoa as indicated by the objectives outlined during the year 2017 – 2020, is ambitious in its efforts to be the leading provider of sustainable and affordable electricity supply not just for Samoa but in the Pacific region (Lee - Hang, 2016). Furthermore, to achieve the above policy objective, the key performance indicator is the production of electricity that is 100 percent dependable on renewable energy sources by June of 2017 (Lee –

Hang, 2016). Although further assessment is required to determine the level of achievement, the level of ambition is clear here with regards to the aims of national institutions and ultimately, the objectives of the Convention. Thus, in relation to other actors, Samoa's level of ambition is high in this regard.

#### *Extent and Type of Engagement*

National coordination and co – operation are notions that Samoa's governmental ministries are accustomed to especially in achieving policy aims and objectives. This was also seen in the work undertaken to submit the national communications and NDCs. EPC, in the implementation of its objectives for the years 2017 – 2020 had employed legislative, regulative, and governmental policy mandates to ensure achievement of its responsibilities to Samoa (Lee – Hang, 2017). Through participation in each of these strategies and regulations, EPC is fundamentally engaging in the collaborative work needed to ensure that there is contribution to the mitigation objectives of first the NCCP and second the overall UNFCCC.

#### *Fit of Engagement*

EPC as the government mandated provider of majority of the electricity in Samoa therefore is in a position of leadership not only because of their ambition but because of their ability to execute policies. In comparison to Independent power Producers (IPP), EPC is funded by the government and its relevant ministries (Lee – Hang, 2017). This means that IPPs need further funding and support to ensure that they too can produce power for the rest of the country. This fundamentally shows that with regards to the effectiveness dimension framework, EPC's position of leadership extends to the degree that they are fundamental in the mitigation projects for the energy sector.

#### *Goal Achievement*

EPC's level of goal achievement cannot be ascertained in this instance due to the lacuna of information available that one can use to make comparisons. In a broader sense, it is sufficient to say that given the resources available to countries like Samoa and therefore to institutions like the MNRE, EPC's level of goal achievement can be considered low regarding achieving 100 percent renewable energy by the year 2017 (Government of Samoa, 2021). Nonetheless, the absence of further information for instance the Statement of Corporate Objectives for the years 2021 – 2024 shows that much is to be considered here.

## Samoa Water Authority (SWA)

Samoa Water Authority (SWA) was established in September of 1993 and has been the major water service provider for Samoa; responsible for distributing treated reticulated water through an expanded and reliable network (Samoa Water Authority, 2021). Similar to the EPC, SWA also sits under the Ministry for Public Enterprises (MPE) with established and direct links to MNRE. Replaced by the Samoa Water Authority Act of 2003, about 85 percent of the total population are now being serviced by this sector while the other 15 percent are looked after by independent village water schemes otherwise known as District Water Committees (Samoa Water Authority Act, 2003). Other than the corporate plans rolled out every four years and the governing legislation, there is a paucity of information regarding policies and projects implemented by SWA in Samoa. This does not assume that there are no projects implemented by SWA. Its main web portal only consists of general information and the two publications of the SWA 2003 Act and the corporate plan put in place for the years 2021 to 2024 (Fruean, 2020).

According to the Samoa Water Authority (2020), clean drinking water is a basic requirement of a developing country and SWA has set about replacing and further developing Samoa's reticulated water infrastructure. This work has been done despite Samoa's status as a low income, developing, and a tropical island environment (Samoa Water Authority, 2020). Historically, SWA has made significant progress in replacing aged infrastructure which contributed to unreliable water supply for many people; and in expanding its production capacity to reach areas which have not had reticulated water before (Fruean, 2020). Due to majority of Samoa's water sources being rivers or bores, SWA has built its system of treatment plants and supply pipelines (Samoa Water Authority, 2020). In addition, it has also built a wastewater treatment plant to treat and dispose sewage from the Apia town area and the national hospital (Samoa Water Authority, 2020). In 2008, Samoa developed a national standard for drinking water effectively establishing laboratory facilities and testing regimes to ensure it meets those (Samoa Water Authority, 2020). From the outset, SWA is ambitious in developing and expanding networks to ensure that it meets the water needs of people. With regards to the adaptation aspect of climate action, SWA has been instrumental in improving services to meet the changing lifestyles of people (Samoa Water Authority, 2020). However, this has also brought challenges in terms of sustainability of water supply, reticulation of water, water conservation and financial stability (Samoa Water Authority, 2020). Despite these challenges though, the current context of the SWA is established here.

The provisions of the legislation that mandates SWA and its operations that are relevant to this research are available in section 9 of the Act. Pertinent to his research is the functions of the SWA to:

- Encourage and require the responsible use of Samoa’s water resources; and
- To be environmentally responsible in the performance of all its activities; and
- To assist in protecting, managing, and conserving Samoa’s water resources, and
- To assist in the formulation of national policies relating to the use and control of Samoa’s water resources (Samoa Water Authority Act, 2003).

In presenting its corporate plan for the years 2021 to 2024, Fruean (2020) argued that the vision sets the long – term objectives of the authority especially in light of the tangible threats presented by climate change on water security. The aims of the SWA are therefore to ensure that its infrastructure and operations are resilient to the effects of natural disasters and severe weather conditions (Fruean, 2020). Whilst EPC’s climate change objectives centred around GHG reduction and in doing so contribute to mitigation of climate change, SWA’s focus is on adaptation in terms of water resources.

The identified new vision for the SWA is now:

“to be a sustainable water and wastewater utility provider founded on excellence” (Fruean, 2020).

This is integral because SWA’s mission is to effectively manage the provision of safe, reliable, and sustainable water services (Fruean, 2020). Therefore, with the availability of the SWA corporate plan for 2021 to 2024, one can make assessments based on the effectiveness dimension framework.

### Quality of Policy Objectives

In regard to the standard of institutions as dictated by Oberthür and Groen (2015), the overall purpose of the MNRE as indicated by the NCCP is what is relevant for this assessment.

### *In Relation to the Institution’s Aim*

The policy objectives of the EPC in accordance with the statement of corporate objectives published for the years 2021 to 2024 fulfil their goals under the national climate change policy, which is relevant to the objectives of the MNRE represented in the NCCP 2020.

The relevant objectives of the MNRE as an institution which is presented in the NCCP is to “implement adaptation measures to protect Samoa from the impacts of climate change” and to “effectively mainstream climate change adaptation and mitigation into national planning, implementation and monitoring processes” (Ministry of Natural Resources and Environment (Samoa), 2020).

The relevant policy objectives of SWA as outlined in its corporate plan are to finalise and implement a climate change adaptation risk matrix and plan, implement the risk management plan for disaster recovery of assets and water service vulnerable to disaster, and to liaise with the MNRE on necessary improved catchment management practices (Fruean, 2020). This is in response to the threats posed by climate change and the frequent occurrences of natural disasters impacting on catchments by producing unacceptable water quality (Fruean, 2020). This fulfils SWA’s responsibilities under the NCCP and its relevant instruments. These policy objectives are also indicative of relative ambition to implement climate action through adaptation within the water sector to the impacts of climate change.

#### Extent and Type of Engagement

SWA’s participation in liaison with the MNRE and other governmental organisations, consultation with communities, and raising awareness within high schools (Fruean, 2020) shows engagement in accordance with the framework. For the Samoan overall water sector, SWA’s leadership and ambition shows the extent to which they are responsible for sustainability and adaptation of water in Samoa.

#### Goal Achievement

As the policy objectives are outlined for the years 2021 to 2024, it is not possible to determine the level of SWA’s goal achievement in accordance with the effectiveness dimension framework. Further assessment is needed to ascertain the level of goal achievement. Nonetheless, by looking at SWA’s policy objectives with regards to national objectives for climate change shows a definitive focus on implementing adaptation measures to the impacts of climate change on the water sector.

## Chapter 7: Discussion

### Overview

This chapter provides a discussion of the analysis in relation to the objectives and aims of this thesis. This section will discuss the ‘effectiveness’ of Samoa as a party to the Convention and the UNFCCC as the international institution for climate action as well the ‘effectiveness’ of local institutions and other sub – sectors at the national level. Based on the context provided by the literature review, this section will outline the key points that derived from the research process and analysis and discuss how it satisfies the different requirements of the effectiveness dimension framework.

### Quality of Policy Objectives

Analysing the policy objectives for each case study shows that Samoa, a party to the UNFCCC and its related mechanisms, has very ambitious objectives. Samoa's ability to uphold its Convention responsibilities is demonstrated by its first and second national communications. As expressed by these two submissions, Samoa's policy objectives were pertinent and indicative of the Convention's overarching goals. This was illustrated not only through national policies relating to climate change adaptation and mitigation, but also through measures taken to guarantee that obligations under the Convention are met. Both national communications showcased multiple policies whose objectives were to implement climate action through mitigation and adaptation to the impacts of climate change. This is further reflected in the policy objectives identified by the INDC and second NDC. This specifically claims that Samoa's policy objectives as per its first and second national communications and NDCs fulfil its duties with respect to the UNFCCC's overarching goal as stated in Article 2 of the Convention. Samoa demonstrates its goals for using mitigation and adaptation measures to achieve its obligations under the Convention by conducting a GHG inventory and carrying out vulnerability and adaptation assessments.

However, provisions of the Convention also dictate that the UNFCCC also have related instruments that party countries “may adopt” (Leggett, 2020). The implications of this may be non – mandatory and can therefore be considered contradictory to the purpose of instruments like the Paris Agreement to be legally binding (UNFCCC, 2015). Oberthür and Groen (2015) also argued that it is difficult to operationalise some of the objectives of the UNFCCC because it is not always straightforward and sometimes the purposes are contradictory. Perhaps this alludes to a more fundamental international systematic issue of which would require further investigation. Nonetheless, Samoa, in the quality of its policy objectives satisfies the requirements of the



effectiveness dimension framework. Ultimately, these policy objectives are put in place to ensure that there is contribution to Samoa's responses to the impacts of climate change.

Furthermore, the UNFCCC states that its overall purpose is to “stabilise GHG concentrations in the atmosphere... such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change” (Oppenheimer & Petsonk, 2005). Because the UNFCCC also state that objectives are to be achieved over time, this leaves room for countries to develop policy objectives based on their own time frames. This is problematic especially given the increasing momentum of climate change and its impacts on communities.

Regardless, in international negotiations, Samoa's policy objectives can be considered to be very ambitious especially concerning its leadership role and exceptional contribution in the negotiations for the Third annual SIDS conference and Paris Agreement. This is despite its position as a SID country which research has continuously shown contributes very little to the causes of climate change (Saifaleupolu, 1999). At the national level, establishment of institutions that are responsible for climate governance of certain sectors also show that Samoa is effectively participating in the Convention. The policies of the water and energy sectors are not just related to the overall aim of the climate change sector in Samoa but fundamentally fulfils the obligations to the UNFCCC. Thus, despite the absence of information regarding the policy objectives of other actors and nation states, Samoa maintains its ambition on the basis that it fulfils its commitments to the Convention and its relevant instruments.

### Extent and Type of Engagement

Regarding the process dimension of the framework, Oberthür and Groen (2015) clearly identified engagement as participation in aspects such as meetings, consultations and by extension bridge – building or coalition building. G. Carter (2015) argued that in terms of international negotiations, there is a need for one – voice climate diplomacy. Samoa has actively engaged not just in meetings but in public and wider community consultations, as well as coalition or bridge building negotiations. This was shown through collaboration at the local, national, and regional levels to implement policy objectives (Saifaleupolu, 1999; Government of Samoa, 2015; Government of Samoa, 2021; Rasmussen & McGoldrick, 2010). At the national level, there is a synergy between government ministries, NGOs, and other relevant stakeholders when it comes to engaging about different climate policies. The implications of this could be beneficial for the international climate regime.

Samoa, as a non – Annex I country is proving to be a valuable example or case study of effective contribution through engagement. Its role in SIDS and the wider AOSIS also shows its position in the international constellation of powers and interests. The persistent need for funding and external assistance does not overshadow the effectiveness of Samoa’s participation in the Convention.

This means that Annex I countries need to be more effective and proactive in supporting Pacific countries like Samoa to have a stronger voice in international climate negotiations. Dupont (1996) also stated that alliances and coalitions are powerful parallels to international negotiation processes. The implications of improving coalition relations are fundamental to Samoa having a better position in the international constellation of power and interests – thus creating a better degree of influence in engagement. Since Samoa is a member to several coalitions including the most powerful G77 and China, the functions of coalitions is therefore to act as a means for maximising bargaining power for its member and manage complexity of processes (Dupont, 1996). Therefore, the onus then falls on the international community and specifically the Convention to ensure that SIDS countries like Samoa are given the resources and funding to maximise its capabilities. In the context of the UNFCCC as the regime for climate governance, this responsibility also falls on them. To be more effective, it is crucial that the Convention seeks to address finance and technology challenges that will see SID states like Samoa have more meaningful impacts on the international stage and in accordance with the effectiveness dimension framework. In determining the extent, a party’s engagement matched its position in the international constellation of interests and power (Oberthür & Groen, 2015), one can establish the argument that despite Samoa’s position in the international constellation of interests and power, they have been very ambitious and effective in their engagement.

### Goal Achievement

In relation to goal achievement, it is sufficient to say that it has been well established through this research that goal achievement has been at medium level for Samoa as a whole. This is because Samoa’s actual influence is not always reflective of international outcomes. However, one can argue that these outcomes are determined by international measures of success and therefore may not always fully capture the realities of Samoa’s level of achievement. This research has concretely established that while goal achievement is at medium level, a higher level of goal attainment is contingent on external funding and assistance.

Taking a closer look to the GHG inventories that supported the first and second national communication, it is evident that Samoa’s emissions reductions are not as effective as their policy

objectives have aimed to be. It is sufficient to say that international literature on emission levels continue to rise despite ongoing systems being in place to ensure that they can be reduced to a level that allows future generations to thrive. Höhne et al. (2006) concretely argues that the experiences of the international community in the past on mitigation commitments show that pledges made by countries, though diverse, are often ambiguous and need to be clarified. Some pledges were also primarily driven by discussions between EU and USA countries and never changed (Höhne et al., 2006). Thus, the issue of meeting mitigation commitments is a characteristic of the international climate change regime and therefore not particular to Samoa.

The INDC identified the success of the NAPA (Government of Samoa, 2015) but it does not necessarily affect the level of goal achievement as the way the effectiveness dimension framework has been applied here is not consistent with assessing achievement over longer periods of time. With the newly updated NDC's however, it is possible to assess goal achievement based on previous submissions of NDCs especially now that it occurs every 5 years (Levin et al., 2015). This mandates shorter time frames for party countries to work towards. These instances reaffirm that effectiveness is not wholly dependent on a country's goal achievement but on the international outcomes of a party's policy objectives (Oberthür & Groen, 2015). Sommerholt (2017) had argued that effectiveness cannot be defined by goal achievement alone. Thus, in the case of Samoa, the level of goal achievement does not equate to effectiveness or lack thereof.

## Chapter 8: Conclusion

In conclusion, as measured by the effectiveness dimension framework (Oberthür & Groen, 2015), Samoa is effective in its participation and performance in the UNFCCC and its relevant instruments. This thesis demonstrates that in spite of the well – established need for external funding and assistance, Samoa is effective in the quality of its policy objectives in relation to fulfilling its commitments to the UNFCCC. This thesis has argued that Samoa’s climate policy objectives have a high level of ambition – thus rendering it effective. In satisfying the process dimension of the framework, engagement by Samoa and its local institutions took place at the national, regional, and international levels. This fundamentally shows that Samoa’s level of ambition matches its leadership and participation whilst engaging with relevant stakeholders. This thesis has also found that despite Samoa’s position in the international constellation of powers and interests, their level of ambition and leadership is evidence of a party to the Convention, fulfilling its obligations. This also shows that Samoa continues to engage in good faith with regards to its commitments and responsibilities under the UNFCCC regime. What was also evident is the extent to which Samoa can influence other countries within the coalitions they are a part of, particularly AOSIS. The implications are clear. For countries like Samoa to improve its engagement, there is a need for developed countries to get more involved by way of assistance and funding.

Thus, in examining Samoa’s participation through close analysis of the submissions made to the UNFCCC, this thesis concludes that Samoa is effective in upholding its obligations to the Convention irrespective of the challenges that present themselves during each negotiation. In relation to the negotiations, this thesis concludes that Samoa was also effective in international negotiations such as the Third SIDS conference and Paris Agreement. This is reflected in Samoa’s high levels of goal achievement during the negotiations for these two conferences. However, this thesis maintains that goal achievement does not necessarily equate to effectiveness. In examining the effectiveness of Samoa’s water and energy sub – sectors, this thesis has found that adjusting the effectiveness dimension framework for local institutions still produces similar arguments and results. Thus, despite the limited information available, this thesis has ultimately identified that Samoa and its local institutions for climate change is only as effective as the UNFCCC and its relevant instruments. It seems that the efficacy of the international institution therefore correlates with the effectiveness of party countries’ participation or performance. This means that Samoa requires a great deal of funding and external assistance to improve policy objectives and attain a higher level of goal achievement. From the UNFCCC, there needs to be more vigorous approaches to mobilising countries to reduce emissions and provide more funding for countries to achieve their policy

objectives. In doing so, countries will have the higher chances of goal achievement but in a broader sense, establish effective contribution to climate action through mitigation and adaptation to the impacts of climate change. Ultimately, this thesis has achieved its overall objective of being both *manu* and *logologo* – echoing the grievances of Pacific leaders for effective climate action to take place. In the analysis of major policy documents submitted by Samoa as a party to the UNFCCC, this thesis concurs that further research is needed to create more robust evidence that will help inform better climate policy objectives and demand climate action.

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