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Multi-level Governance of Climate Change Adaptation: United Nations Negotiations and Adaptation Project Implementation in Nicaragua and Samoa

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MULTI-LEVEL GOVERNANCE OF CLIMATE CHANGE ADAPTATION: UNITED NATIONS NEGOTIATIONS AND ADAPTATION PROJECT IMPLEMENTATION IN NICARAGUA AND SAMOA

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An Abstract of the Thesis Presented
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Abstract

The rapid entry into force of the Paris Agreement reaffirmed, with certainty, that the international community would continue its efforts to mitigate greenhouse gas emissions and adapt to climate change impacts opening a new era of international cooperation on climate change. This thesis explores how both negotiations around climate change adaptation and adaptation project implementation have evolved in this post-Paris Agreement era (from adoption in December 2015 to present). Using the United Nations Framework Convention on Climate Change's (UNFCCC) Adaptation Fund as the central lens, the chapters explore international negotiations around the Fund as well as two Adaptation Fund funded projects—one in Nicaragua and the second in Samoa. This research which traverses the levels of governance from international to local prompts an examination of how exactly adaptation stakeholders and institutions work across and between governance levels and scales. Thus, the framework of multi-level governance is used as a way to unpack the interactions and structures involved in the Adaptation Fund and its funded projects.

At the international level negotiations around the Adaptation Fund, we find that developing countries use the Adaptation Fund as a tool to defend justice-based norms in a UNFCCC system that has rapidly transition to a more liberal-based norm structure with the introduction of the Paris Agreement. Developing countries' ardent and almost unanimous support for the continuation of the Adaptation Fund under the Paris Agreement throughout the duration of the negotiating process (2015-2018) provides insights into their efforts to defend and promote justice-based norms. We explore how this unwavering support for the Adaptation Fund could impact Fund structures, operations, and on-the-ground project implementation (looking to the national and sub-national levels).

We then trace the Adaptation Fund from negotiations to project implementation. These projects inherently present a multi-level governance challenge because they are developed at the national level, funded and monitored at the international level, and ultimately implemented in communities. It is well understood that these levels of governance exist and function within this overall system of climate adaptation. However, the synergies that facilitate effective adaptation and the barriers that inhibit smooth multi-level governance of adaptation are not well understood in the literature. Chapter 3 and 4 presents evidence from Adaptation Fund projects in Samoa and Nicaragua to highlight areas where multi-level governance had been leveraged to enhance the governance of adaptation as well as areas of the projects where this has not occurred. They further examine the trade-offs inherent in efforts to work across governance scales and levels in conducting climate adaptation.

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LIST OF ABBREVIATIONS

ABU	Argentina, Brazil, Uruguay
AFB	Adaptation Fund Board
AOSIS	Alliance of Small Island States
APA	Ad Hoc Working Group on the Paris Agreement
CBDR	Common but differentiated responsibility
CDM	Clean Development Mechanism
CIM	Community Integrated Management plan (formally Coastal Infrastructure Management plan)
CMA	Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
COP	Conference of the Parties
CSSP	Civil Society Support Program
EU	European Union
FAO	Food and Agriculture Organization
FATPs	Farm Agro-ecological Transformation Plans
FOCJ	Functional, overlapping, competing jurisdictions
FSLN	Frente Sandinista de Liberación Nacional (Sandinista National Liberation Front)
G77	Group of 77
GCF	Green Climate Fund
GEF	Global Environment Facility
IPCC	Intergovernmental Panel on Climate Change
LDCs	Least Developed Countries

LDCF	Least Developed Countries Fund
LTA	Land Transportation Authority
MARENA	Ministerio del Ambiente y los Recursos Naturales (Ministry of Environment and Natural Resources)
MLG	Multi-level governance
MNRE	Ministry of Natural Resource and Environment
MOF	Ministry of Finance
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NGO	Non-governmental Organization
NIE	National Implementing Entity
PPCR	Pilot Program for Climate Resilience
RINGO	Research and Independent Nongovernmental Organization
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCCF	Special Climate Change Fund
SDGs	Sustainable Development Goals
SDS	National Strategy for Development of Samoa
SIDS	Small Island Developing State
SPREP	Secretariat of the Pacific Regional Environment Programme
STA	Samoan Tourism Authority
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

CHAPTER 1

THESIS INTRODUCTION

Current state of the international adaptation conversation

Buzzwords abound in the world of climate change policy research and practice. At United Nations climate change negotiating sessions, catchy words and phrases ranging from "we are all in the same canoe" to "transformational change" reverberate across panel introductions and 3-minute plenary hall intervention with the intent to convey a concise and consistent message. While these are key communication and political strategy tools, they are rarely clearly defined once you start searching for the details. Yet, some of these buzzwords still become integrated into substantial international decisions.

Transformational adaptation is among the most recent wave of phrases evoked in the halls of the United Nations Framework Convention on Climate Change (UNFCCC) annual Conference of the Parties (COP). The idea of transformational adaptation builds from climate adaptation which is generally understood as "adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts" (UNFCCC 2019). Transformational adaptation is used as a rallying call to increase funding and scale up projects for adaptation, and it has also been integrated into language of the major UNFCCC funding mechanisms—the Global Environment Facility (GEF), the Adaptation Fund, and the Green Climate Fund (GCF). The IPCC Special Report on Global Warming of 1.5°C highlights that, in some regions, incremental adaptation will not sufficiently address impacts, so "transformational adaptation would then be required" (2018).

In the literature, transformational climate adaptation has been juxtaposed with coping or reactive adaptation and incremental adaptation. Coping is defined as reactionary steps to decrease vulnerability to impacts that have occurred (Chhetri et al. 2019). For example,

individual subsistence farmers deepening their wells during times of extended drought until they reach water. This effort is not a long-term solution and it does not address the root of the problem, but it does allow them to have water for the household and crops in the immediate future. Incremental adaptation is considered to be changes made within the context of the existing system (Kates et al. 2012). In this case, farmers might work together and with other regional stakeholders to come up with a water strategy that might include increasing capacity to catch and hold rainwater in tanks and introduce more efficient irrigation systems for crops.

In contrast, transformational adaptation aims to change the system rather than work within its current bounds (Richards and Howden 2012 in Chhetri et al. 2019). Transformational adaptations are "those that are adopted at a much larger scale or intensity, those that are truly new to a particular region or resource system, and those that transform places and shift locations" (Kates et al. 2012, 7156). In the example of the farmers dealing with drought, transformational adaptation may include subsistence farmers completely changing the crops they grow in favor of new crops better suited to the new climate conditions, farmers relocating to an area more suited for their crops, and/or the government implementing country-wide regulations on water or on industrial farm's water and land use.

However, how these different forms of adaptations interact and the distinctions between them are not well defined. When does something change from being incremental to transformational? How is transformation measured and what are its outcomes? Are coping, incremental, and transformational adaptation discrete or continuous? So, while the end goal of transformation has been articulated by UN delegates and multilateral climate funding mechanisms alike, the paths to transformational outcomes are murky at best. At present, definitions of what exactly constitutes transformational climate adaptation are being

conceptualized and simultaneously tested as billions of dollars are distributed each year for climate adaptation projects around the world.

Since transformational adaptation is a growing focus of the adaptation funding community, it is particularly important to consider in the context of internationally funded projects implemented in developing countries—the priority of the UNFCCC funding mechanisms. Internationally funded climate adaptation projects add layers of complexity to transformational adaptation because of the structures and expectations established at the international level. A central question about the push for transformational adaptation from the UNFCCC funding mechanisms is, does this form of adaptation encourage top-down adaptation focused on national and international actors who then dictate the system change to the sub-national level? It is easy to see transformational adaptation as the role of the national and international level because transformation is defined as system change at scale. For example, new national policy, relocation, or reshaping norms might all ultimately happen at the national level in order to reach a threshold of actual system change. Further, the current dominant funding arrangements, in which international funds are funneled to national government, could reinforce a focus on national level centered transformational adaptation.

Yet, a long history of international development funding and projects demonstrate that this is an insufficient approach (Adams 2009). So, if transformational adaptation is the focus of international climate project funders, it is imperative to explore how they can support transformative adaptation that revisits power dynamics to address root vulnerabilities rather than entrench top-down systems (Bahadur and Tanner 2014, Eriksen et al. 2016). Further, how do the projects intentionally involve stakeholders at the sub-national level in the transformation

process? Eriksen et al. (2016, 529) argues that these decisions will either "open up or close down space for transformational adaptation."

Multi-level governance of climate change adaptation

An emerging theme from the literature is that governance impacts the processes or paths to transformational adaptation (Pelling et al. 2015). Park et al. (2012) indicate that incremental or transformational adaptation initiated at one level will likely be dependent on what is happening at other governance levels. Chhetri et al. (2019) suggests that multiple jurisdictional levels of governance must be involved in transformational adaptation from the local to the international level. Many case studies in the literature highlight that different scales and levels were involved in the making of both incremental and transformational adaptation (Hadarits et al. 2017, Ripple et al. 2016), but these efforts did not seem to be deliberate.

This thesis argues that intentional and strategic multi-level governance may be a critical tool for effective implementation of internationally-funded climate adaptation projects. Multi-level governance is conceived as each level of governance constantly interacting with the others in order to function effectively, but at the same time, independently making decisions and implementing policy (Cole 2011, Keskitalo 2010, Ostrom 2012, Stephenson 2013). As a prerequisite to building a further understanding of transformational adaptation—the current focus of advocates and funders—we must first understand the systems that exist now and the extent to which they embrace or set a side governance which includes stakeholders and institutions across levels and scales.

Multi-level governance is cited as particularly valuable in situations where "there will be limits to adaptation and a need for more fundamental shifts in strategy that require new ideas and practices" (Olsson et al. in Armitage and Plummer 2010) because it creates channels of

communication and coordinated efforts that facilitate knowledge sharing, dispute resolution, and increased adaptive capacity (Berkes 2009). This thesis explores two case studies of adaptation projects to understand the extent to which multi-level governance is intentionally used as well as the resulting outcomes in an effort to inform this broader conversation about the ways that this form of governance can be applied to internationally-funded climate change adaptation projects.

Specifically, the case studies (Chapter 3 and Chapter 4) examine the extent to which power, resources, and decision-making capabilities are shared across levels and scales. While many international sustainable development projects have demonstrated an ability to share project responsibilities across jurisdictional levels (i.e., tell local governments to manage project installation, give the responsibility of project monitoring to community groups, outsource project oversight to a multilateral organization), there are far fewer examples that achieve distribution of power, especially away from the national government. This analysis explicitly looks to find where power (in the form of money, decision-making power, and inclusion in the duration of the project) is distributed and the actions that distributed power facilitates.

The significant push for transformational adaptation demands a path to get there, and multi-level governance may be one important piece in the puzzle to build into this path.

Thesis overview

The thesis focuses around the UNFCCC's Adaptation Fund. The Adaptation Fund is a small funding mechanism which aims to support concrete adaptation projects in regions of developing countries highly vulnerable to the impacts of climate change. The Adaptation Fund is a useful tool to study multi-level governance because it was created by countries working together at the international level and has a Board which functions at the international level. The Fund works with national level governments to support projects, and it has also pioneered ways

to work more directly with sub-national entities within countries. With most projects, the national government received the funding and implements the project in communities at the local level. The projects are then monitored and reported on back to the international level while the local level holds the long-term responsibility for project sustainability.

In Chapter 2, I examine the international negotiations around the Adaptation Fund at the UNFCCC. Looking at all major negotiating sessions since the Paris Agreement, this chapter paints a picture of the Adaptation Fund's challenges and opportunities in this new era of international climate cooperation. In particular, the chapter looks at how developing countries use the Adaptation Fund as a tool to promote justice-based norms in an internationally system that has increasingly shifted to liberal-based norms. The embeddedness of justice-based norms in the Adaptation Fund implies that countries would also require its governance to be inclusive and participatory. This sets the stage for exploring the extent to which this transcends the levels of governance in Chapters 3 and 4. We ask the question, do adaptation projects actually share power, resources, and decision-making authority across levels (i.e., evoking justice-based norms) or do they devolve disempowered responsibility?

Chapter 3 takes a deep dive into multi-level governance and provides a categorization of features of multi-level governance present in the adaptation literature. Then, I look at two country-wide adaptation initiatives in Samoa, funded by the Adaptation Fund and the World Bank respectively, to examine the extent to which these features are apparent in the projects. The chapter concludes by discussing the trade-offs inherent in a multi-level governance system.

Chapter 4 discusses an Adaptation Fund project in Nicaragua which aimed to decrease the impacts of flooding and drought in a section of the country's dry corridor. This chapter explores aspects of the Nicaragua project through the lens of multi-level governance with a

particular focus on understanding stakeholders' perceptions of the project's impact and learning to what extent the project catalyzed further adaptation efforts in the region as planned in the project proposal. Since the majority of Adaptation Fund projects are still in process, the completed Nicaragua project provides a first sense of post-project sustainability.

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CHAPTER 2

SAVING THE ADAPTATION FUND: ON THE EVOLVING POLITICS OF CLIMATE ADAPTATION FINANCE UNDER THE UNFCCC

Abstract

The rapid entry into force of the Paris Agreement reaffirmed, with certainty, that the international community would continue its efforts to mitigate greenhouse gas emissions and adapt to climate change impacts. Yet, structures created under the Kyoto Protocol, like the Adaptation Fund, were left in a state of unprecedented ambiguity because parties had to actively approve the continuation of these structures under the Paris Agreement, or risk seeing them fade into UNFCCC history. This juncture presented a unique window to explore the political economy of climate change finance—how countries and negotiating blocs reacted to and shaped a narrative of the Adaptation Fund's uncertain future. Drawing on narrative political analysis of negotiating texts and observations at COP meetings, we find that developing countries use the Adaptation Fund as a tool to defend justice-based norms in a UNFCCC system that has rapidly transition to a more liberal-based norm structure with the introduction of the Paris Agreement. Developing countries' ardent and almost unanimous support for the continuation of the Adaptation Fund under the Paris Agreement throughout the duration of the negotiating process (2015-2018) provides insights into their efforts to defend and promote justice-based norms. We explore how this unwavering support for the Adaptation Fund could impact Fund structures, operations, and on-the-ground project implementation. This chapter has been revised and resubmitted to the journal Global Environmental Politics with Dr. Cindy Isenhour as a co-author.

Introduction

Institutional norms and the political economy of climate change finance

The planet has already warmed approximately 1.0°C above pre-industrial levels (IPCC 2018). More warming is anticipated, even if all countries act upon their Paris Agreement mitigation commitments. While climate change adaptation had historically been seen a minor consideration when compared to mitigation, countries leaders are now framing adaptation as urgent and essential in light of the warming and resulting climate impacts already occurring around the world. Approaches to adaptation are as diverse as the regions impacted by climate change. Yet, increasingly many adaptation actions, especially in developing countries,[1] are influenced by international funders providing support for climate adaptation projects. Many of these funds stem, either directly or indirectly, from United Nations Framework Convention on Climate Change (UNFCCC) negotiations.

Given the UNFCCC's role in shaping global adaptation goals and rhetoric, it is important to explore the processes which ultimately produce these outcomes. The Paris Agreement and the negotiation of its rulebook warrant particular attention because they have become a central frame through which to view climate action across countries. The adoption of the Paris Agreement rocked the historic format of international agreements on climate change. Rather than focusing on commitments from industrialized, developed countries, the Paris Agreement draws on country-specific commitments from every member country. In doing so, countries moved away from the UNFCCC's tenant of differentiation, and towards liberalization following in a lineage of global environmental agreements that have embraced neoliberal reforms (Ciplet and Roberts

[1] The language of "developing country" and "developed country" is used throughout the article to mirror, not endorse, the language used under the UNFCCC.

2016). These neoliberal reforms tend to more equally distribute the responsibility for addressing climate change across countries regardless of actual responsibility for causing the problem.

As Ciplet and Roberts (2016) highlight, this shift towards neoliberal norms did not occur without contestation. In this context of broad sweeping liberalization across international environmental institutions, this article examines the Adaptation Fund under the UNFCCC which appears to be one of the last enclaves where developing countries are working to defend more justice-based norms against the full integration of neoliberal reforms. This makes negotiations around adaptation finance some of the most contentious under the UNFCCC (Moore 2012).

Adaptation finance and the Adaptation Fund

The Adaptation Fund was established in 2001 by the leadership of developing countries under the UNFCCC's Kyoto Protocol (Richards and Schalatek and 2017). The Adaptation Fund is charged with "financing projects and programmes that help vulnerable communities in developing countries adapt to climate change...based on country needs, views, and priorities" (Adaptation Fund 2018). While intensely debated, as this paper will demonstrate, the Adaptation Fund only represents a small sliver of overall climate finance. Significant international funding has been allocated to climate change projects for over 25 years (Figure 1). Since 1992, the Global Environment Facility (GEF) has funded over 1,600 projects with a climate change focus (GEF 2019). The Green Climate Fund (GCF), established in 2010, represents the most recent effort under the UNFCCC to accumulate and distribute funding for climate mitigation and adaptation projects in developing countries. The global finance goal for the GCF is US$100 billion per year by 2020, and, as of April 2019, the GCF boasted over US$2 billion of funding currently supporting project implementation (GCF 2019).

In December 2018, the World Bank Group announced that it would increase its direct adaptation climate finance to US$50 billion between 2021 and 2025 which represents a two-fold increase relative to the adaptation funding they distributed from 2015 to 2018. The World Bank Group also announced that every project proposal, regardless of sector or region, must include climate change considerations in order to receive their funding (World Bank 2019). In addition to multilateral financing, the European Union, EU member countries, and the European Investment Bank collectively contributed EUR 20.4 billion towards public climate financing for developing countries in 2017 alone (European Commission nd). The landscape of climate finance is vast and on an upward trajectory.

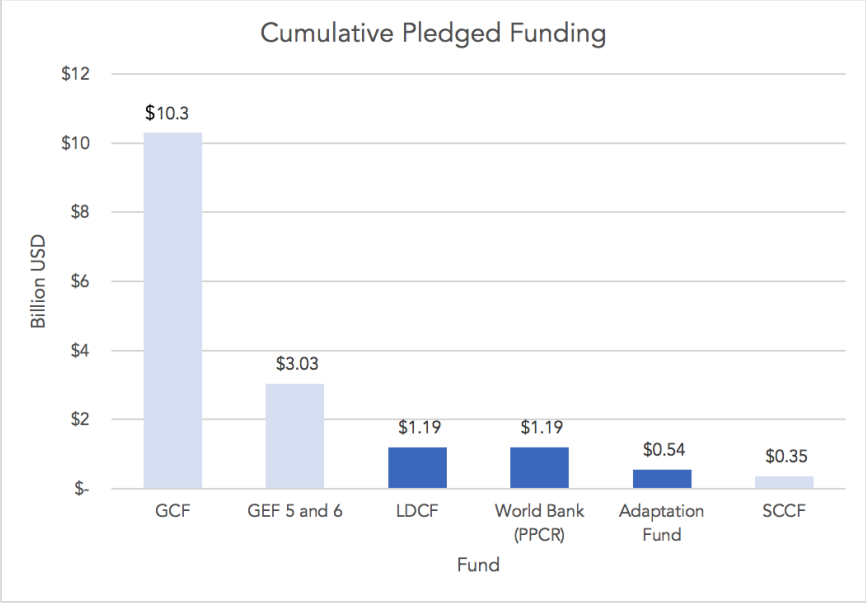

Figure 1: Funding pledged to some of the major climate funds since their inception with the exception of GEF which only shows GEF 5 and 6. The dark blue bars represent funds that support just adaptation. The light blue bars are funds that support both adaptation and mitigation or mitigation only. Figure is adapted from World Resources Institute (2017) which based data on GCF 2016, GEF 2014, and World Bank 2016.

Despite all of these powerhouse funds, the Adaptation Fund has also carved out a niche in the international climate finance architecture. The Fund is small by comparison with about 90 projects funded over a 10-year period and between US$10-60 million allocated towards new projects at each quarterly meeting between June 2014 and July 2018 (Grimm et al. 2018).

Despite its relatively modest funding capacity, developing countries at UNFCCC negotiations associate significant value with the Adaptation Fund.

As the Fund approached 10 years of financing 'concrete' adaptation projects, it was propelled into uncertainty by a Paris Agreement decision that opened the continuation of the Fund up for debate at future negotiations. This article documents the significant efforts of developing countries to "save" the Adaptation Fund and ensure its continuation under the Paris Agreement. While the Adaptation Fund is a relatively small piece of the total climate adaptation finance landscape, developing country delegates spent considerable time, effort, and political capital defending the Fund—an expenditure that could be seen as disproportionate to the financing provided. These efforts could certainly be seen as irrational; and thus, raise questions about why delegates would exert so much effort on a Fund that promises relatively few economic returns. Studies of international climate negotiations have long been dominated by rationalist theories which assume that state actors engage in cost-benefit analyses to inform competitive behaviors intended to maximize utility through negotiations. However, we argue that rationalist perspectives—already critiqued on empirical and theoretical grounds (Dorsch & Flachsland 2017, Edenhofer et al. 2015, Stevenson 2013, Moore 2012)—offer limited insight into developing country efforts to save the Adaptation Fund.

By contrast, this article fuses political economic and constructivist approaches. This orientation understands efforts to save the Adaptation Fund as both a reflection of structural inequalities in the global political economy and as a related effort by the Fund's proponents to defend normative structures linked to justice.

Theoretical framing

Institutional norms

Constructivist scholars have argued that studies of global environmental politics need to ask more questions about how problems are framed and by whom (Vanhala and Hestbaek 2016) as well as how these framings help to establish, reproduce, or defend norms in global environmental politics (Moore 2012). Norms, considered the standard acceptable set of behaviors in a given context, become deeply embedded in systems, and are, therefore, important to understand because they shape the possible dynamics between actors. Recognizing that norms are not interpreted in identical ways by all actors, we can learn about the evolution of global environmental policy by attending to their framing and contestation. Asking how some norms become institutionalized in fields of power while others fade away is instructive.

This article focuses specifically on the idea of justice-based norms under the UNFCCC. As described by Lebel et al. (2017) and Ciplet et al. (2013), the UNFCCC established an initial structure to support justice considerations in addressing climate change (i.e., common but differentiated responsibility, historic responsibility, respective capacity). A justice lens[2], defined as "the moral permissibility of a distribution of benefits and burdens," allows the consideration of how responsibility for climate change ought to be addressed without the influence of dominant politics and power structures (Grasso 2010, 29). Maintaining justice-based norms in the UNFCCC negotiations, specifically on adaptation finance, is the idea of ensuring that developing countries, that are not responsible for the problem and that are already disproportionately impacted by it, do not also end up with the burden of paying for adaptation and mitigation.

[2] It should be acknowledged that this conceptualization of justice is rooted in Western philosophical tradition and is used because its principles are most widely applied within the UNFCCC processes (which may be an issue of justice in it of itself) (Grasso 2010).

The negotiation and adoption of the Paris Agreement can be seen as the most recent wave of norm defining and refining under the UNFCCC. Several scholars have noted that the Paris Agreement prioritization of voluntary but universal action was based more centrally on liberal, rather than justice-based norms (Ciplet and Roberts 2016). Specifically, all countries are now responsible for mitigation commitments, instead of just the countries historically responsible for the causing the problem (i.e., developed, industrialized countries). The migration away from justice-based imperatives is also demonstrated by developed countries unwillingness to fulfill their funding obligations on mitigation or adaptation—chiefly the US$100 billion pledged to the Green Climate Fund in Copenhagen in 2009. This represents the essence of deeply entrenched trust issues between developed and developing countries in the context of the UNFCCC negotiations.

Despite an overall shift away from justice-based norms, Adaptation Fund negotiators continue to evoke justice as a main frame through which to understand differences around the Fund. Throughout the Fund's history, it has been at the center of this debate. For example, at SBI 24 in May 2006, Grasso (2010) describes a negotiating session on the Adaptation Fund in which the G77 and China emphasize "their determination to insist on every possible occasion that they must be included in decision-making on sensitive issues and have their positions acknowledged" (Grasso 2010, 108). This represented a demand for inclusion of "fairness criterion" in the process and decisions (Grasso 2010, 108). As Moore writes, "adaptation is an area of policy closely related to the questions of justice and fairness raised by the uneven distribution of climate change impacts and responsibility for the problem. As such, it offers an ideal opportunity to study the process of norm selection and evolution in international climate change policy" (2012, 33). As the Adaptation Fund is reconfigured under the Paris Agreement, we note a particularly opportune

moment to understand how justice-based norms are articulated, negotiated, and institutionalized during a time of rapid change.

Political economy

Political economic approaches also draw our attention to the political field within which these negotiations take place. Justice-based norms have long played a part in global environmental politics, and particularly in the UNFCCC. Norms linked to common but differentiated responsibilities (CBDR) are embedded in Article 3.1 of the UNFCCC (Grasso 2010, Lebel et al. 2017). Despite the dominant narrative of CBDR across the UNFCCC, it does not settle negotiations around adaptation finance—namely who provides adaptation finance; how are involved institutions structured and governed; and how are specific projects implemented, monitored, and evaluated?

The inherent political nature of and unsettled norms around climate adaptation finance are fueled by a history of stark power and resource differentials between developing countries—only in a position to request money—and developed countries—largely in control of the money and decision-making about fund expenditures. This power differential is baked into the political economy of international climate negotiations (Stevenson 2013). Drawing on Newell and Paterson's (1998) conceptualization of the political and economic dynamics that shape countries' negotiating positions, this article contributes to our understanding of the political economy of climate adaptation finance through an examination of "the process by which ideas, power and resources are conceptualized, negotiated, and implemented" by the parties negotiating the continuation of the Adaptation Fund since the Paris Agreement (Tanner and Allouche 2011, 1).

Ultimately, while what happens to the Adaptation Fund might have minimal repercussions on the overall climate finance landscape, we argue that the debate has significant

implications for understanding the ongoing role of justice-based norms in adaptation finance and the newest wave of tensions between developed and developing nations as liberal norms become more prevalent in the post-Paris Agreement era.

In the following sections, we describe a short history of the Adaptation Fund. Then, we unpack the Paris Agreement decision on the Adaptation Fund in 2015 and trace the evolution of the UNFCCC negotiations on the Adaptation Fund from 2015 to 2018. Next, we analyze developing and developed country reasoning behind their positioning on the Fund. The article then explores the impacts of international norm development and developing-developed country dynamics on next steps for the Adaptation Fund in the Paris Agreement era.

Background

A brief history of the Adaptation Fund

In 2001, the Least Developed Countries (LDCs) organized to form a negotiating bloc based on the need to secure more support for adaptation under the UNFCCC (Ciplet et al 2013). At COP7 in Marrakech, the LDCs successfully pushed for the creation of the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), and the Adaptation Fund. While the donor countries largely had control over how the LDCF and the SCCF would be structured and housed, they had less control over the Adaptation Fund. This is primarily because the Adaptation Fund was to be partially funded by share of proceeds from the Clean Development Mechanism (CDM), not directly from developed countries' donations. Developing countries felt real ownership over the CDM funds because they came from mitigation projects implemented in developing countries (Muller 2007). Additionally, because the Adaptation Fund

was created under the Kyoto Protocol, which the US never ratified, the US did not have a strong voice in the development of the Fund[3] (Ciplet et al 2013).

Developing countries leveraged their relative power via negotiating blocs including the LDC group and the G77 and China bloc to have a say in the formation of the institutional structures and governance of the Adaptation Fund. As Ciplet et al (2013) describe, developing countries ensured that the Board would have a majority representation from developing countries, they established the idea of direct access, and they emphasized Fund transparency. Ten of sixteen Adaptation Fund Board members must be from developing countries, and, within those 10, there are reserved seats for members of the LDCs and the small island developing states (SIDS) (Lebel et al 2017). They also emphasized the need for social and environmental safeguards to ensure that projects supported by the Fund are not causing inadvertent harm to the communities or environment in which they take place. Developing countries worked to set up the Fund to mirror their expectations and funding needs. As Moore (2012) highlights, the Adaptation Fund's development stands out as a "substantial departure from the historical norms of development that it represents." We see developing countries using the Adaptation Fund as a tool to reshape norms from its inception. This suggests that the Adaptation Fund is a critical place to look to in order to understand evolving norms around developing-developed countries relationships on adaptation finance today.

The Adaptation Fund debate in the post-Paris Agreement era

While the entry into force of the Paris Agreement did usher in overall certainty that the international community had renewed its efforts to manage climate change, some structures

[3] It is worth noting that, given US ratification of the Paris Agreement, an Adaptation Fund under the Paris Agreement would mean the US now have an official say in the structure and function of the Fund. This is a change from the Adaptation Fund under the Kyoto Protocol where the US had decreased involvement because they never ratified the Protocol.

under the UNFCCC were simultaneously thrown into a realm of uncertainty. In particular, it was unclear whether structures created under the Kyoto Protocol would be continued under the Paris Agreement. The Kyoto Protocol's second commitment period ends in 2020, and parties to the UNFCCC needed to decide what pieces of the Protocol would be transferred, in some manner, to the Paris Agreement and what elements would fade into UNFCCC history. This marked a critical moment for how norms, established under the Kyoto Protocol, would be continued or revisited in the era of the Paris Agreement. This transition period is of particular relevance when studying the divisions between developed and developing countries because of the Kyoto Protocol's role in entrenching the differentiation between these two groups.

The Adaptation Fund, which was created under the Kyoto Protocol, has emerged as one of the centerpieces of the debate over what should be moved under the Paris Agreement. The decision, adopted by the COP alongside the Paris Agreement (Draft decision 1/CP.21), states that the COP "decides that the Green Climate Fund [(GCF)] and the Global Environment Facility [(GEF)], the entities entrusted with the operation of the Financial Mechanism of the Convention, as well as the Least Developed Countries Fund [(LDCF)] and the Special Climate Change Fund [(SCCF)], administered by the Global Environment Facility, shall serve the Agreement" (United Nations 2015, 8). The term *shall serve* holds legal weight and means that these funding mechanisms will be used under the Paris Agreement as the primary forms of managing funds for mitigation and adaptation.

The Adaptation Fund was called out in a separate decision which says the COP "recognizes that the Adaptation Fund may serve the Agreement, subject to relevant decisions by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol [(CMP)] and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

[(CMA)]" (United Nations 2015, 8-9). The term *may serve* implied that while the parties had not excluded the Adaptation Fund from serving the Paris Agreement, they put the matter up for negotiations at future meetings. According to Gastelumendi and Gnittke (2017), parties said they could not make the decision for the Adaptation Fund to serve the Paris Agreement for legal reasons—the CMP, not just the COP, needed to be involved in determining the Adaptation Fund's role under the Paris Agreement. However, Gastelumendi and Gnittke (2017) also suggest that the delayed Adaptation Fund decision was politically driven, although the details of specific party-political positions are not well documented due to the lack of transparency during the Paris Agreement negotiations (Dimitrov 2016). Through this distinction between the Adaptation Fund and all the other UNFCCC-related climate funds, the debate over the fate of the Adaptation Fund in the post-Paris Agreement era was born.

Two previous events compounded Adaptation Fund advocates' concerns about the future of the Fund: the creation of the Green Climate Fund (GCF) in 2010 (Kuyper et al 2018) and a collapse in the price of carbon in 2012 (Climate Finance Advisory Service 2017; New Climate Institute and Germanwatch 2017; Weikmans 2017). First, the GCF was set to support 'transformative' mitigation and adaptation projects, so it seemed that the mandate would partially overlap with that of the Adaptation Fund. As a result, there were conversations about dissolving the Adaptation Fund into the GCF; however, no decisions have been taken to move in this direction yet (World Resources Institute 2017). Those parties who see the Adaptation Fund as filling a specific niche within the international climate finance architecture see even these initial conversations as threats to the work of the Adaptation Fund.

The CMP originally structured the Adaptation Fund to be partially funded by a share of proceeds from the CDM. The idea was to invest the returns from mitigation into adaptation

projects (Winkler and Depledge 2018). According to Weikmans (2017), 190 million dollars flowed to the Adaptation Fund from the mechanism between 2009 and 2015. However, the price of carbon credits dropped from US$20 in 2008 to below US$3 in 2012 (Weikmans 2017). Thus, in the past six years, this 'innovative source of funding' has all but dried up. Now, the Adaptation Fund is largely dependent on donations from developed countries, making its funding sources aligned with that of the other large climate funds (i.e., less unique). These funding concerns meant that developing country interests in defending the Adaptation Fund had already started to solidify leading up to COP21.

Following the entry into force of the Paris Agreement on November 4, 2016, the COP established the Ad Hoc Working Group on the Paris Agreement (APA). The APA initially had six Agenda Items (called Agenda Items 3-8), which were constructed as a framework to establish the 'Paris Rulebook.' However, it was quickly recognized that an agenda item would need to be exclusively dedicated to resolving the issue of the Adaptation Fund, so APA Agenda Item 8A was created to specifically focus on "matters related to the Adaptation Fund." Scholars have highlighted the emergence of the Adaptation Fund negotiations as a "flash-point around finance" (Winkler and Depledge 2018, 142) and "a contentious question" (Voigt 2017, 360) illustrating how this small fund evolved into a prominent concern. While other Agenda Items focused on broad topics such as emissions accounting, NDCs, and adaptation communication, Agenda Item 8A represented the negotiating area with the narrowest focus under the APA.

Methodology

This article employs narrative political analysis as described by Wagenaar (2011) to analyze post-Paris Agreement negotiations under the Ad Hoc Working Group on the Paris Agreement (APA), the Conference of the Parties serving as the Meeting of the Parties to the

Kyoto Protocol (CMP), the Subsidiary Body for Implementation (SBI), and the Subsidiary Body for Scientific and Technological Advice (SBSTA). The main data source is observations and associated notes from authors' attendance at COP21 (Author 1), COP22 (Author 1), COP23 (Author 1 & 2), and COP24 (Author 1 & 2). Specifically, authors attended negotiating sessions on adaptation topics each day of the COPs, totaling 44 days of observation, and took close notes to capture each delegate's comments over the course of the entire negotiating session. These notes are complemented by notes produced by the Research and Independent NGO (RINGO) constituency group at COP23, SB48, and COP24 on adaptation-related negotiating streams. The RINGO group provides three sets of notes on almost all APA meetings which allowed for comparison and confirmation of information captured at each of these sessions.

Together with these in-person notes, we reviewed all publicly available UNFCCC party submissions, informal notes, and decisions on the UNFCCC website about the Adaptation Fund from 2015-present. The document review also included a review of relevant materials generated by the Adaptation Fund Board available on the Adaptation Fund website. In addition, we held informal conversations with adaptation negotiators at COP21-24; however, formal interviews were not conducted because adaptation negotiators did not have time for extended interviews. While we recognize that these interviews would provide additional nuances to the data, the goal of this paper is to observe the developing-developed country dynamics on display during the official negotiations to understand public-facing adaptation finance norm development. Similar to Nelson's (2016) approach to studying African countries positions at UN climate and environment meetings, this article draws on negotiation observations and public party submissions to the UNFCCC to study this element of global environmental politics.

We analyzed these data using qualitative thematic analysis techniques designed to unpack UNFCCC party positions on the Adaptation Fund. As Blaxekjaer and Nielsen (2015, 754) suggest, the narrative political analysis approach "allows us to understand the arguments (strong rhetoric) of these political groups and examine how these arguments are also expressed and reaffirmed in narrative form as identity through the very organization of the political group, thus also reinforcing an identity-based imperative for certain action." This process aligns closely with our efforts to more deeply understand the norm building project around adaptation finance. Specifically, we explore Moore's characteristics of norms that are more likely to become institutionalized which include:

> "The authority or perceived legitimacy of the actor promoting the norm; the degree to which the norm "fits" or resonates with the dominant norm-complex; the skill of norm articulation by the norm-entrepreneur; the material environment of natural, human, and technological resource distribution among states; and the norm's fit with key actors' identities" (Moore 2012, 33).

Dimitrov suggests that "understanding the diplomatic process is necessary for explaining the outcome" (2016, 2). Through reconstructing narratives during this set of UNFCCC meetings, we work to understand normative structures around climate adaptation finance to gain insight into the trajectory of adaptation and climate finance in the Paris Agreement era.

Research Findings & Discussion

The Adaptation Fund negotiations from COP22-COP24

The below outline of country positions from COP22 to COP24 pays particular attention to how these shared positions are central to norm development. We argue that while norms around adaptation finance pre-Paris Agreement were still a contested space (Moore 2012),

developing countries[4] in the post-Paris Agreement phase are broadly working to preserve justice-based norms to the greatest extent possible under the Paris Agreement using the Adaptation Fund as one of their primary tools. Their efforts are grounded in the historic dominant norm-complex of common but differentiated responsibility which is closely tied to their identity within the UNFCCC negotiations.

COP22.

During the negotiations, developing countries crafted a narrative that the very future of global climate adaptation rested on the shoulders of a continued Adaptation Fund. This intentional framing seems to point to substantial skill on behalf of developing country negotiators looking to expand the importance of the Adaptation Fund from a small entity to a defining statement of the UNFCCC's principles. In an informal consultation, a delegate from the Philippines remarked that the Adaptation Fund "is absolutely essential for developing countries," and a representative from Egypt stated, "Not allowing the Adaptation Fund to serve the Paris Agreement would kill adaptation" (APA8A Informal Consultation, 11/10/2016). These comments push the connectivity between the Fund and the broadest conceptualization of climate adaptation. While the developed countries reaffirmed their general support of the Adaptation Fund, as illustrated by a comment from the US delegation, "we all agree that we need to enhance the Adaptation Fund and increase direct finance. [This is] not [an] argument about [the] importance of adaptation" (APA8A Informal Consultation, 11/10/2016) —the industrialized countries were not rushed to make decisions on the Fund's future at COP22. Developing

[4] When examining negotiating positions in the context of developed and developing countries, it is essential to note that the divisions between and within developed and developing country negotiating blocs are not simple, rather they are dynamic, evolving, and have, in some cases, even splintered into competing factions on many issues under the UNFCCC (Ciplet and Roberts 2017). However, regarding the Adaptation Fund's continuation, the largely unified positions of the developed and developing countries, respectively, are particularly pronounced as demonstrated in the following sections.

countries clearly harnessed the narrative on the Fund. COP22 ended with a decision that the Adaptation Fund *should*, not *shall*, serve the Paris Agreement, which was not the ideal outcome for developing countries. However, it was the first step towards 'saving' the Adaptation Fund which quickly evolved to represent the preservation of justice-based norms under the UNFCCC.

COP23. This ardent and almost unanimous support from the developing countries only intensified leading up to and during COP23. A delegate representing the Alliance of Small Island States (AOSIS), for example, argued, "the Adaptation Fund is a highly important component of the finance architecture. [We] highlight [the] comparative advantage of the Fund to leverage finance. [We] focus on country ownership…The Adaptation Fund is critical" (SBI Report on the Adaptation Fund, 11/7/2017). A representative from the Least Developed Countries (LDC) bloc expressed, "we believe that the Adaptation Fund is a Fund we are proud of because it has provided a lot of support to our member states" (SBI Report on the Adaptation Fund, 11/7/2017). At the closing plenary of COP23, multiple high-level delegates from the SIDS, such as the president of Tuvalu and the Vice President of Micronesia, dedicated part of their three-minute interventions to highlight the importance of the Adaptation Fund to their countries. This persistent narrative from so many actors in the UNFCCC system, again, suggests the Fund's close association with salvaging justice-based norms.

Developed countries continued to express support for the Adaptation Fund, but, through looking at the broader political context, we see that developed countries also understood that holding out on this decision provided them significant negotiating leverage in this, and other areas, of the COP (Winkler and Depledge 2018). Meanwhile, the time and political capital invested in this issue by developing countries, especially the G77 and China, the LDC bloc, and the Africa Group, was significant, particularly considering the relatively modest levels of

funding available through the Fund. Ultimately, the developing countries were successful, and the parties finalized the CMP decision that the Adaptation Fund *shall* serve the Paris Agreement. However, this agreement still required a partner decision from the CMA expected to come at COP24.

COP24. COP24 focused on technical negotiations around significant elements of the Paris Agreement which culminated in the Paris Rulebook. Discussions on the Adaptation Fund were no exception with the negotiations intended to focus on the function and future of specific mechanisms within the structure of the Fund. However, as countries negotiated details of the Adaptation Fund's transition to the Paris Agreement, the same blocs as in prior years continued to intervene with their high, but not substantive, praise for the work of the Adaptation Fund. For example, the representative from the G77 and China stated,

> I am making this intervention because…the G77 has always valued the important role that the Adaptation Fund has played and continues to play in supporting developing countries in terms of the adaptation side of things. We also value their innovativeness. [It is] unique in that it is one of the only funds that provides full grant funding (CMP Agenda Item 7 Informal Consultation, 12/5/2018).

A Malawi delegate on behalf of the LDCs echoed this sentiment in their comment, "The LDCs see the Adaptation Fund as one of the most, very key funds. It was established to support developing countries. We want to see the Adaptation Fund move forward as soon as we can and that it is serving the Paris Agreement as soon as we can" (APA Agenda Item 8A Informal Consultations, 12/6/2018). These comments reaffirm countries' dedication to the Fund's existence, but they did not serve to move negotiations forward on the specific technical issues at hand. All negotiators in the room are well aware of developing countries' support for the

Adaptation Fund, so it is of note that developing countries continue to spend their limited time and political capital on their overarching statements of support rather than advancing their ideal outcomes on the technical issues. This may signal a continued focus on norm defining instead of issue resolution.

Some substantive negotiations did take place with much of the focus on the complementarity of the Adaptation Fund and the Green Climate Fund. Delegates suggested options ranging from the funds having clear communication with each other to the Adaptation Fund being accredited as a GCF entity. These vastly different proposals highlight that the exact future of the Fund is still uncertain, despite the decision at COP23 that the Adaptation Fund *shall serve* the Paris Agreement. One delegate working closely with the Adaptation Fund expressed that while her organization often provides critiques of the Fund's work to urge them to improve, "At this COP, we are just focused on saving the Fund" (Personal communication, 12/6/2018). A clear and delineated relationship with the GCF, practically speaking, will be essential for countries to efficiently access resources for climate adaptation efforts, so this will be an area to watch looking ahead to COP25.

From COP22-COP24, developing countries successfully crafted a narrative around the Adaptation Fund that made its continuation, in its current form, a referendum on justice-based norms under the UNFCCC. It is unknown if the Fund would have continued regardless of this significant political investment on behalf of the developing countries. Yet, we clearly see that their work to frame the Adaptation Fund translated into setting "standards of justice or fairness" which ultimately impact the international laws governing climate change (Moore 2012). The next step is to understand why these countries pushed the Adaptation Fund to the forefront of the

global climate change agenda as their tool to preserve justice-based norms within the realm of climate change adaptation in the context of a highly uneven political field.

Why save the Adaptation Fund?

According to our analysis of the interventions during the post-Paris Agreement negotiations, there are four central reasons, cited by developing countries, for their support of the Adaptation Fund: 1) the sense that the creation of the Adaptation Fund in the early 2000s was a "developing country win" which should be sustained and maintained as a key area where fairness principles have been ingrained in the UNFCCC process; 2) frustration with other funds perceived to be less accessible; 3) the Adaptation Fund's unique traits such as the safeguard program, direct access, and country ownership of the projects; and 4) their assertion that funded projects have been successful. This set of assertions support the idea of the Adaptation Fund as a mechanism not only to safeguard justice-based norms, but also to flatten power hierarchies within the adaptation finance negotiations under the UNFCCC.

A developing country win. In the post-Paris Agreement world that introduced substantial uncertainty for the Fund's future, developing country parties saw the Adaptation Fund as a priority for overall adaptation negotiations. To abandon it would be to abandon a symbol of developing country power in the international system and a real tool that worked to place developed and developing countries on more equal footing in adaptation finance negotiations and practice. As illustrated above, it would also mean the loss of a critical tool used to establish justice-based norms within the UNFCCC.

At COP23, the Bahamas on behalf of G77 and China reminded the parties, "it goes without saying, [the] Adaptation Fund is something that developing countries have very strong feelings towards" (SBI Informal Consultation on the Adaptation Fund, 11/7/2017). In their

proposed draft decision text at SB48, the bloc of Argentina, Brazil, and Uruguay suggest that the first substantive text reads, "Highlighting the importance of the Adaptation Fund as a key and innovative funding institution of the Convention and Kyoto Protocol, and of the work it has done for supporting developing countries with regards to adaptation, including through enhanced direct access modalities" (ABU Submission to APA8A, 5/1/2017). The political environment in which the Fund was created, in the late 1990s and early 2000s, was not welcoming to the idea of increasing developing country power to have a say in the Fund's structure and governance. Yet, developing countries overcame this hurdle, in part because they could point to justice-based norms around differentiation. This 'win' to have a Fund that presented a more evenly distributed power structure appears fresh in the minds of developing country negotiators and continues to play a decisive role in how parties negotiate on the Adaptation Fund today—17 years after its creation.

Frustration with other funding mechanisms. Developing country parties' support for the Adaptation Fund is also born out of frustration with other climate change adaptation funding options, especially the Green Climate Fund It should be noted that developing country negotiators provide high praise for the GCF as a concept. For example, the Philippines on behalf of the G77 and China stated that "GCF is clearly a part of COP and is very dear to the developing countries" (GCF and GEF Contact Group, 11/10/2016). However, delegates also highlight that its implementation has introduced challenges for developing country governments. There is a feeling that the GCF does not adequately prioritize adaptation. Even at COP23 in 2017, when it was already agreed that the Adaptation Fund would be maintained, "G77 countries argued against the plans to include the Adaptation Fund in the Green Climate Fund, as they feared adaptation finance might be downplayed in the latter" (Kuyper et al 2018).

The Philippines emphasized this during a meeting on the Report of the Adaptation Fund Board at COP23 stating, "this is a Fund that we feel, for developing countries, is a necessary one. More and more it is the *only* Fund that we can have grants for adaptation very clearly. And many countries can only get grants—they can't do co-financing" (CMP Contact Group on Report of the Adaptation Fund Board, 11/9/2017). Here, the Philippines delegate demonstrates that developing countries ought to have grant support not only because loans and co-financing are overly burdensome, but also because it is the obligation of developed countries to provide funding given their disproportionate responsibility for the problem. Thus, it is a call for recognizing differentiated capabilities and obligations embedded in the concept of justice-based norms.

At COP23, parties expressed that the GCF has yet to perform to the standards they have come to expect from the Adaptation Fund. Specifically, Ghana on behalf of the G77 and China explained that the National Adaptation Plan (NAP) readiness process under the GCF has presented challenges especially in the form of process delays. The delegate explained, "[our] objective here today is that we get some sort of confidence that we can leave, and countries will be able [to] access money as easily as possible" (Informal Consultation on the NAPs, 11/7/2017). Egypt affirmed the position of the G77 and China and suggested that the GCF has issues with exclusivity. The delegate from Bhutan explained that they faced similar challenges accessing funding through the GEF. Developing countries use these concerns to elevate the Adaptation Fund as the only fund that is currently adequately serving their interests. In the broader political economic context, we see developing countries demonstrate an obligation to ensuring fair climate finance for their countries. Thus, we can interpret the above statements in three primary ways. This rhetoric may be employed to build up this articulated difference between the funds to

make a broader point about climate finance, not because they do not like the GCF in practice. Alternatively, developing countries see it as critical to preserve the fund that is working especially while the newer GCF addresses it growing pains. The third option is that it is some combination of politically driven rhetoric to shape the narrative around the Adaptation Fund as well as genuine concern about losing the benefits of the Fund.

The unique traits of the Adaptation Fund. Developing countries further express that the structure and governance of the Adaptation Fund are favorable because they ensure direct access, country ownership, orientation towards smaller projects, and experience with different types of funding. The Adaptation Fund is touted as the first climate funding mechanism to provide direct access which means that once a country has an accredited national implementing entity (NIE), the country can access support directly from the Adaptation Fund without using a third party such as the multilateral organizations (i.e., UNDP, UNEP, etc.). While the GCF has adopted the direct access idea from the Adaptation Fund, country argue that the process is not yet refined and not all funds under the GCF can be granted through a direct access mechanism. In the negotiations, developing country representatives affirmed their appreciation of the direct access modality. Uganda stated on behalf of the LDCs, "Many LDCs have benefited from [the] Fund especially through the direct access modality that we have always cried out for" (SBI Review of the Adaptation Fund, 11/7/2017). A G77 and China delegate also remarked, "The direct access modality is working, is achieving results, and it is, in fact, a tool that is working as we hoped" (SBI Review of the Adaptation Fund, 11/7/2017). Direct access, developing country parties argue, results in more country ownership of the projects and thus more effective adaptation outcomes.

Parties also see the Adaptation Fund's positioning as a 'small project funder' to be advantageous. The GCF is designed to deal with larger projects that address either mitigation, adaptation, or both, so, the developing country parties argue, the GCF meets a different need than the Adaptation Fund. Finally, the Adaptation Fund has significant experience managing 'innovative sources of funding' for adaptation. While the share of proceeds from the CDM has basically collapsed, the Fund still has years of experience working with that funding source. Developing countries suggest that this means the Adaptation Fund can be more agile in working with new 'innovative sources of funding' that the Parties might recommend in the future (New Climate Institute and Germanwatch 2017). Given the confluence of these Adaptation Fund characteristics, parties argue that the Adaptation Fund plays a unique and complementary role to the other major funding mechanisms—the GEF and the GCF.

Interestingly, while parties highlight these features as a way to differentiate the Adaptation Fund, it also demonstrates that they were not able to exert the influence of Adaptation Fund structures and governance onto the newer GCF. For example, while the GCF does have some direct access options as described above, it does not have the majority developing country representation on the Board. The fact that the Adaptation Fund's justice-based structures were not entirely replicated under the GCF emphasizes this broader movement towards liberal based norms. Thus, another political reason why developing countries continue to grasp onto these unique characteristics of the Adaptation Fund.

A record of success. Finally, developing countries suggest that, in addition to the historical and functional reasons to continue the Adaptation Fund, its effectiveness is also paramount. Counties articulate the Fund's effectiveness in two main ways throughout the negotiations. First, they suggest that the demand on the Fund, meaning the number of proposals submitted, shows that

countries find the funding and the resulting projects to be valuable; therefore, demand continues to rise. Bahamas on behalf of the G77 and China, shared that "the experiences so far have been *extremely* positive. The Fund has never been more in demand in acting on its mandate" (SBI Review of the Adaptation Fund, 11/7/2017). A Germanwatch report confirms this intervention, and states, "near- and medium-term funding needs of the Adaptation Fund can be projected in the order of US$130 million annually, only for the Adaptation Fund's national programmes" (New Climate Institute and Germanwatch 2017).

Second, Negotiators also highlight the Fund's effectiveness through alluding to the results from work happening on the ground. In expressing their gratitude for the Report on the Adaptation Fund presented at COP23, Argentina expressed that it "really captures how essential [the Adaptation Fund] is for catalyzing adaptation" (SBI Review of the Adaptation Fund, 11/7/2017). The European Union joined the choir of praise for Adaptation Fund projects implemented so far stating, "[We have] high appreciation for the work of the Adaptation Fund. It has been shown now for several years that it performs well on concrete adaptation actions, [we are] particularly very happy with that, especially because the EU is the biggest financier of the Fund" (SBI Review of the Adaptation Fund, 11/7/2017). The overall message coming out of the post-Paris Agreement negotiations on the Adaptation Fund is that the Fund works especially in the eyes of the developing country representatives.

In analyzing these negotiating sessions, it is central to acknowledge that the UNFCCC is both a political and a policy process. Thus, country representatives are motivated by not only policy goals, but also political positioning. Applying a political economic lens, we see that while there is meaning within the actual words stated, as analyzed above, there is also underlying motivation in these methods of positioning discussed here. We argue that the motivations are

stemming from a strong desire to preserve justice and fairness based on differentiation in the UNFCCC system which countries feel helps to flatten power structures which historically placed developed countries in control. The next section of the article discusses how the race to preserve justice-based norms in the UNFCCC may have implications on the long-term trajectory of the Adaptation Fund's projects.

Next steps for the Adaptation Fund

At SB48 in May 2018, COP24 in December 2018, and SB50 in May 2019, parties were faced with starting to establish how the Adaptation Fund would serve the Paris Agreement. Several parties suggested that this process of operationalization creates a window of opportunity for parties to make substantive changes to the Fund's operations. Possible areas of reform could be the secretariat arrangement, trusteeship, revision of Fund safeguards, new sources of funding, and the composition of the Adaptation Fund Board (Climate Finance Advisory Service 2017).

But other parties, including Saudi Arabia on behalf of the Arab Group, and the bloc of Argentina, Brazil, and Uruguay urged the Parties not to make changes to the Fund because "it has been enormously successful in its current form" (APA8A Informal Consultation, 5/4/2018). Saudi Arabia further stated that the objective during the transition time is to "do no harm to the existing Fund" (APA8A Informal Consultation, 5/7/2018). Indeed, there was a strong sentiment that the Fund works as is and the parties should not point out faults or tamper with it. In terms of norm development, opening these areas up for debate would welcome alternative norms to be formed around the Adaptation Fund. Thus, we can interpret that some developing country parties may also have this additional motivation to confirm that the Fund is 'fit for purpose' in its current form to prevent new norm cultivation.

At COP24 and SB50, counties engaged in negotiations around the composition of the Adaptation Fund Board under the Paris Agreement. Opening discussions on the Board composition brings to light efforts to introduce a new power dynamic in the governance of the Fund and is a prime example of developed countries trying to negotiate away from justice-based norms. When the Adaptation Fund was under the Kyoto Protocol, non-Kyoto parties could not serve on the Board, namely the United States. Once the Fund has been moved to the Paris Agreement, new parties will be able to serve on the Board. Developing countries, who currently have a mandated majority of seats on the Board, would like to maintain its composition especially during the transition time. However, countries, such as Switzerland, suggested that a new spot should be created on the Board now for a non-Kyoto country party to be a part of the transition period decisions. This became a major flashpoint in the negotiations.

Interesting, when asked what the practical implications of an adjusted Board composition means for the day-to-day function of the Adaptation Fund, the current chair of the Adaptation Fund stated that while it is a political matter that he cannot comment on, "the Adaptation Fund Board has not once voted, all decisions have been made by consensus, so one could argue that the composition doesn't matter in that sense because all decisions have been consensus" (COP24 Side Event, 12/6/2018). This reinforces that politics and power structures are shaping the COP24 negotiations on Board composition rather than pragmatic decision making based on the actually implications for the Adaptation Fund.

These negotiations demonstrate the event with the decision that the Adaptation Fund "shall serve the Paris Agreement," the Fund is not yet *saved*. The tenants of the Fund are still open for debate, and thus, we see that developing countries continue to feel pressure to defend the Fund in order to protect the remnants of justice-based norms under the UNFCCC.

Conclusion

As global environmental governance continues to shift towards more liberal norms, the Adaptation Fund represents one of the last strong-holds of justice-based norms. The upcoming negotiating sessions will reveal the extent to which these norms will be enhanced, stay the same, or be eroded through revisions of the Fund's structure and governance. Thus, political economy continues to be a critical tool to employ as power dynamics will be central to how these policy changes take shape. Will the historically rooted justice-based norms defended by the developing countries prevail or will traditionally dominant power (i.e., the United States, the EU, Switzerland, etc.) succeed in putting themselves at the center of control of the Fund?

Tracking this trajectory guides our understanding of the future of the rapidly-growing climate finance sector. This includes the priorities of the funds, the rules that will govern how funding is distributed, and the way that projects are monitored and evaluated. Future research in global environmental politics will be necessary to unpack how norms at the international level—be it justice-based or liberal norms—differentially impact project planning, implementation, and long-term sustainability. After all, the effectiveness of projects to increase community resilience to the impacts of climate change must remain the central goal of this entire effort despite the politics.

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CHAPTER 3

MULTI-LEVEL GOVERNANCE OF CLIMATE CHANGE ADAPTATION: A CASE STUDY OF COUNTRY-WIDE ADAPTATION PROJECTS IN SAMOA

Abstract

Countries across the Pacific region have experienced a surge in internationally funding for climate adaptation initiatives. In the Independent State of Samoa, two major projects—funded by the Adaptation Fund and the World Bank Pilot Program for Climate Resilience (PPCR)—have supported adaptation planning and activity implementation in most villages across the country. These country-wide initiatives range from conducting LiDAR studies and updating Community Integrated Management (CIM) plans to installing rainwater catchment and storage tanks and reforesting water catchment areas. These projects inherently present a multi-level governance challenge because they are developed at the national level, are funded and monitored at the international level, and ultimately implemented in communities. This chapter explores the extent to which interactions across governance levels and scales advance effective adaptation to climate change. Based on in-country interviews, site observations, and observations of the Adaptation Fund's terminal evaluation process, this chapter presents evidence from these major adaptation initiatives in Samoa to highlight where multi-level governance had been leveraged to enhance the governance of adaptation as well as areas of the projects where this has not occurred. It further examines the trade-offs inherent in efforts to work across governance scales and levels in conducting climate change adaptation. This chapter has been submitted as a chapter in the Handbook "Managing Climate Change Adaptation in the Pacific Region" which is published by Springer as a part of the book series, "Climate Change Management." Anama Solofa will be a co-author for her contribution during the fieldwork stage of the project.

Introduction

Pacific Island countries are on the front lines of climate change impacts. At a 1.5°C temperature rise above pre-industrial levels, the Intergovernmental Panel on Climate Change (IPCC) projects that small islands will experience freshwater stress, coastal flooding, negative impacts on marine ecosystems, and migration induced, at least partially, by sea level rise (Hoegh-Guldberg et al. 2018). In fact, island states such as Samoa are already experiencing some of these changes. In Samoa, since 1950, annual maximum temperatures have increased by about 0.22°C each decade (MNRE 2011). Sea level rise in Samoa, at 4 mm per year since 1993 (MNRE 2011), is above the global average of 2.8-3.6 mm per year. Additional impacts include ocean acidification which is particularly detrimental to corals, shifting rainfall patterns (i.e., less rain in the dry season and more rain during the rainy season), and more intense tropical cyclones (MNRE 2011).

These external forces compel Pacific Island countries to place climate change at the core of their national priorities and to advocate for swift and robust international action to curb greenhouse gas emissions. Yet, many of the impacts listed above must be addressed regardless of future greenhouse gas mitigation efforts because livelihoods, healthy ecosystems, and assets are at stake. Adaptation efforts initiated around the Pacific Islands region range from incremental steps to more transformational change. Some countries in the region have already started to develop relocation strategies to prepare for worst case future climate scenarios. For example, Fiji has initiated discussions on building relocation into their National Climate Change Policy, and Kiribati has already developed a "migration with dignity" policy (Yamamoto and Esteban 2017, 146). Given that Pacific Island countries, and developing countries more broadly, are largely not

responsible for the cause of these impacts, funding for adaptation is expected to come from high-emitting developed countries.

Significant international funding has been allocated to climate change projects, especially mitigation projects, in developing countries for over 25 years. Donor entities include the World Bank, developed countries and their international development agencies, the European Union, non-governmental organizations, UN programmes and offices, and funding mechanisms under the United Nations Framework Convention on Climate Change (UNFCCC). According to the UNFCCC Standing Committee on Finance's 2018 assessment of climate finance flows, from 2015-2016 multilateral climate funds—which include the Adaptation Fund and the Green Climate Fund (GCF) —provided an average of US$1.9 billion for climate mitigation and adaptation (UNFCCC 2018). By comparison, bilateral climate finance provided US$31.7 billion and multilateral development bank climate finance summed to US$24.4 billion. All three categories continue to primarily fund mitigation with between 21 percent and 29 percent of funds allocated to adaptation (UNFCCC 2018). This extensive funding apparatus, coupled with the latest reports from the IPCC detailing the wide-reaching extent of climate change impacts, suggest that international funding for climate mitigation and adaptation projects in developing countries will continue to be a central feature of international climate governance.

The projects stemming from these funding apparatuses inherently present a multi-level governance challenge. In the case of climate change adaptation projects, they are often developed by national level ministries or multilateral development organizations (i.e., UNDP, UNEP, World Bank, etc.). Project proposals are reviewed by international panels and funding is distributed based on internationally determined rubrics and standards. Funding moves back to countries, usually to the national government, where it can be administered in a multitude of

different ways. Ultimately, project implementation happens at the community level where rainwater catchment and storage systems are installed, or riparian buffers are planted along rivers.

It is well understood that all these levels of governance exist and function within the overall system of climate adaptation (Hooghe and Marks 2001). This chapter explores the extent to which interactions across governance levels and scales advance effective climate change adaptation. Understanding these systems is critical, especially in the context of developing countries, because the involvement of so many actors can potentially cause more harm than good if not facilitated effectively (Chaudhai and Mishra 2016). To examine these systems, the chapter explores evidence from an Adaptation Fund project and a World Bank Pilot Program for Climate Resilience (PPCR) in Samoa.

The chapter first outlines a brief history of multi-level governance and describes its value as a framework to understand implementation of climate adaptation projects. Next, it suggests eight characteristics of multi-level governance that emerge from the literature. Through an analysis of the Adaptation Fund and PPCR projects in Samoa, the chapter then tests the extent to which these characteristics are apparent in a governance system which inherently involved many different levels and scales of governance. Finally, the chapter highlights the trade-offs embedded in this systems approach to adaptation governance.

Background: The multi-level governance framework

Rationale

Histories of international development and sustainable development show that when projects are conducted exclusively by a top-down actor they usually fail (Adams 2009). As a result, funders now seek projects that emphasize collaborative, community-based, and stakeholder-driven approaches. But, writing this plan in a proposal is vastly different from

carrying it out effectively. Further, community-based approaches face another set of challenges if the responsibility for these projects move to the community level, but the resources for implementation and long-term management do not (Elyachar 2005). Given that internationally-funded climate adaptation projects seem to be following in the footsteps of international and sustainable development initiatives (i.e., funded by many of the same sources, following similar monitoring and evaluation processes, and aligning proposals with the Sustainable Development Goals), avoiding these same pitfalls will be essential. This paper explores how multi-level governance (MLG) is a useful framework to understand the extent to which projects truly engage across the levels and scales of governance versus evoking the above buzzwords—community-based and locally-driven—in a more superficial form.

In order to see how MLG can be used to understand internationally funded climate adaptation projects, it is critical to understand the multiplicity of ways that MLG has been conceived since the term emerged in the 1990s. At its root, MLG describes the diffusion of power from a central government to other levels of governance. In this way, governance roles would be shared from the local to the international levels—an effort to correct for the failures of national, top-down approaches to development. Yet, today it is largely recognized that there is a need for balance across levels of governance after critiques of state interventions swung the pendulum away from state responsibility, as with the Washington Consensus and neo-liberalization, which moved power and responsibility away from the central government to the markets. As described by Steger and Roy, neo-liberalism is "a mode of governance that embraces the idea of the self-regulating free market, with its associated values of competition and self-interest, as a model for effective and efficient government" (2010, 12). These structures, embraced by the US and imposed on many developing countries, move responsibility to other

levels of government, but do not provide any resources or support for those levels of government to manage the services previously administered by the central government (Elyachar 2005). This is chiefly because under neoliberalism, the state's goals are the "deregulation of the economy, the liberalization of trade and industry, and the privatization of state-owned enterprises," so a central government would assume that decentralized services would be supported via market mechanisms (Steger and Roy 2010, 14).

Today, scholars employ MLG as an instrument which recognizes the faults of both overly-centralized or overly market-based governance. Instead, contemporary MLG provides a frame to describe "political decentralization within states" which refers to distributing power to the supranational level, to the sub-national level, and out to private entities (Hooghe and Marks 2001, 3). This form of governance, originally conceived as a way to understand the governance of the European Union, was expected to be more efficient and inclusive of all stakeholders. There are many derivatives of MLG discussed in the literature as "multi-tiered governance; polycentric governance; multi-perspectival governance; functional, overlapping, competing jurisdictions (FOCJ); fragmegration (or SOAs); and consortio and condominio" (Hooghe and Marks 2001, 3). This idea of MLG as a frame to understand governance structures has been employed by scholars to study international environmental change (Janicke 2017). Drawing on Janicke (2017), this chapter uses MLG to study internationally funded climate change adaptation projects.

We aim to test what aspects of MLG are present in the Samoan adaptation projects as well as aspects of the framework that are less applicable to this specific context. Samoa is home to two country-wide adaptation projects, of which one is complete and the other is in its final phase. The Government of Samoa considers climate change a national priority. Thus, the Samoa

case provided an ideal location for preliminary research to test this form of adaptation project analysis. Further, emerging trends from the Samoa case, while not generalizable to all Adaptation Fund or World Bank projects, may provide valuable takeaways to consider in future projects development and implementation.

We explore MLG within the context of the Cash et al. (2006) model of MLG interactions. Cash et al. define scales "as the spatial, temporal, quantitative or analytical dimensions used to measure and study any phenomenon" (Gibson et al. 2000 in Cash et al. 2006, 2). Levels are seen as the "unit of analysis that are located at different positions on a scale (Gibson et al. 2000 in Cash et al. 2006, 4). For example, the jurisdictional scale includes the local, regional, national, and international levels. Cash et al. (2006) provide a differentiation between cross- and multi-scale and level interactions. Cross-scale indicates that there is actual interaction between the scale, level, or both, while multi-scale simply implies that the different levels or scales exist. Throughout this chapter, the term MLG is intended to encompass the above definition. Using this understanding of existence and potential for interaction between scales and levels, we explore the characteristics of MLG as defined in the literature below.

Characteristics of MLG

Eight central characteristics of MLG are evident in the literature: 1) Devolution of power to the supra- and sub-national levels; 2) inclusion of state and non-state actors; 3) involvement of all scales; 4) nested levels of governance; 5) intentionality; 6) equal power across levels; 7) fluidity; and 8) new policy solutions.

Devolution of power to the supra- and sub-national levels. MLG includes actors at both the supra- and sub-national levels. However, it is not simply that these entities are named in a proposal, but rather that power (i.e., resources, decision-making ability, etc.) is devolved to them

(Keskitalo 2010). This implies that the entities have access to participation in the governance process (Stephenson 2013).

Inclusion of state and non-state actors. While governments may have a central role in facilitating MLG processes, non-state actors are also integrated in this framework. Keskitalo (2010) adds that both private and public entities need to be engaged across all the levels meaning that inclusion of multilateral development organizations is not sufficient to consider non-state actors adequately integrated into the governance process. Gumeta-Gómez et al. (2016) cite government agencies, communities, non-governmental organizations, and the private sector as specific examples of stakeholders in a MLG process. This makes the system necessarily complex with the involvement of "a multitude of actors" (Brockhaus 2012, 201).

Involvement of all scales. Cash et al. (2006) identifies seven scales that are necessary to consider when studying human-environment interactions (see Figure 3). The scales are spatial (with levels being areas from global to a single landscape), temporal (dealing with rates, durations, and frequencies), jurisdictional (governance levels from international to national to provincial to localities), institutional (dealing with rules that exist from international law to local norms), management (from strategies to plans to tasks), networks (dealing with links between people from 'trans-society' to family), and knowledge (defining truth from universal to contextual) (Cash et al. 2006, 3). To understand how MLG functions, it is important to explore the interaction across all these scales and their levels which creates a complex matrix of actors, institutions, and structures (Buckeley and Betsill 2005, Hooghe and Marks 2001, Keskitalo 2010).

Nested levels of governance. Drawing from Ostrom's (2012) polycentric governance, the idea of nested governance is that the levels of governance need simultaneous independence and interdependence (Cole 2011, Keskitalo 2010). While dependence creates linkages between entities, any level can also produce independent policy and decisions which are based on the outcome of interactions across the levels. Stephenson describes this as "a mutual dependency through the intertwining of policy-making activities" (2013, 817). This concept of the nature of interactions between levels and across scales is central to the functioning of a MLG system.

Intentionality. Cole (2011) emphasizes that these MLG systems and the interactions, nested or otherwise, that characterize the system do not happen by accident. Rather, they are an intentional strategy to "determine the appropriate division of responsibility and authority between governance institutions and organizations at global, national, state, and local levels" (Cole 2011, 2). Interesting, in the case of internationally funded adaptation projects, multiple levels of governance are always involved in an adaptation project. This makes intentionality paramount because otherwise the involvement of so many actors can be more of a burden than a support system (Chaudhai and Mishra 2016). So, the extent to which MLG is strategically embraced in order to facilitate adaptation may dictate certain elements of *success* in the project.

Equal power across levels. Stephenson (2013) suggests that a part of this intentional effort to foster effective MLG is creating an environment where the levels of governance interact on equal footing. He states, "MLG implies engagement and influence—no level of activity being superior to the other" (Stephenson 2013, 817). Similarly, Cash et al. (2006) highlights that knowledge should be co-produced in MLG systems. This may be one of the most challenging characteristics of MLG in the context of internationally funded climate adaptation because it envisions that a community has the same power as the national government or the funding entity. Understanding

how power structures are reinforced, renegotiated, or redesigned as a result of a MLG process is central to this study.

Fluidity. All the characteristics listed above are evolving—not static. This fluidity in the MLG system is central to how Buckeley and Betsill (2005) and Hooghe and Marks (2001) describe MLG. It is supposed to be a system that is adaptive and formed by the sum of its parts.

New policy solutions. In terms of outcomes of a MLG system, Cash et al. (2006) argue that MLG should facilitate the generation of new policy solutions that were not accessible prior to the effective usage of MLG. These solutions incorporate, and build on, co-production of knowledge and continuous negotiation across levels and scales.

Applying MLG to internationally funded climate adaptation projects in developing countries

From the broadest perspective, MLG translates well to the study of climate change governance because while climate change is a global phenomenon, the international scale is not always the most appropriate place to address the challenge (Adger 2001). Evaluating the characteristics of MLG can be particularly instructive when thinking about internationally funded climate adaptation projects taking place in developing countries because not only the concept of climate change, but the projects themselves are constantly maneuvering across and between governance levels and scales.

MLG in the developing country context can be complicated by a number of factors. First, effective institutions are needed for MLG to function, yet countries taking on climate adaption measures do not necessarily have those institutions in place. Second, scholars argue that MLG of climate change adaptation will only work if it is consistent with broader development objectives. Chaudhai and Mishra suggest that in the case of linking watershed development and climate change adaptation in India, “for multi-level governance, to be efficient for bringing in the climate

adaptation, coordinating and integrating climate and non-climate strategies across jurisdictions and sectors would be essential. Without these, the multiplicity of actors, scales and levels might be more of a hindrance rather than of any assistance" (2016, 326). Adger et al. (2003) echo Chaudhai and Mishra (2016) by suggesting that climate change adaptation in the developing country context will not work at any level if it is not done in tandem with general sustainable development objectives. The third complicating factor, as Adger et al. (2003) describe, is that developing countries are often working with limited options often because of financial resource constraints. Finally, MLG of adaptation in developing countries often involves funding from international sources (e.g., UNFCCC, World Bank, and other development agencies) which changes the players involved with governance and who dictates the adaptation needs (Adger et al. 2003). Adaptation implementation faces a different set of challenges in the developing country context, and it critical to understand how MLG functions in this space given the magnitude and scope of funding mobilized at the international level to support adaptation in developing countries.

Research methodology

This project uses a case study methodology to study climate change adaptation projects in Samoa (Creswell 2013, Yin 2014). The case study included a literature review, a review of project documents, and fieldwork in Samoa. We conducted the fieldwork in Samoa in July 2018.

During our 2.5 weeks of fieldwork, we conducted semi-structured interviews with seven key informants which ranged from 45 minute to three hours in length. The interviews are referred to in the chapter as interviews 1-6 and include the date conducted (one interview included two interviewees, referred to as A and B). We also spent two days observing the terminal evaluation of the Adaptation Fund project. This included traveling around the entire

island of Savai'i visiting adaptation projects funded by the Adaptation Fund with three Ministry of Natural Resources and Environment (MNRE) officials, one United Nations Development Programme (UNDP) staff member, and the international independent consultant conducting the evaluation. During this process, we observed interviews between the consultant and community stakeholders, informal conversations between the consultant and the other staff on the trip, and we learned all of their observations of the Adaptation Fund projects we visited. Separate from the terminal evaluation, we also visited Adaptation Fund and PPCR funded activities on Upolu.

We analyzed the transcribed interviews, field notes, and project documents using discourse analysis (Gee 2011). Applied broadly, discourse analysis explores the use of language in a set of texts with the understanding that all language is both from a specific context and situated in a larger framework of socially constructed conventions (Abrams 1999). Gee suggests that critical discourse analysis views language as a way of communicating social practices which "always have implications for inherently political things like status, solidarity…and power" (Gee in Rogers 2004, 33). In this context, we were reading for descriptions of when, how, and to what extent the national government distributed power to other levels; the difference, if any, in perspective on the projects from stakeholder approaching the projects from different levels and scales; and the processes and outcomes that interviewees suggested were both effective and ineffective.

The discourse analysis was conducted using the qualitative data analysis software NVivo by QSR International. Through a process of inductive and then deductive coding, we categorized how elements of the projects interacted across scales and levels as well as their alignment with the characteristics of MLG to identify where MLG occurred, to some extent, as well as where it did not happen effectively.

The study's main limitation is the fieldwork duration. The chapter presents first-hand observations of a snapshot in time rather than observations starting at the beginning of the project process and following through to post-implementation project management. Thus, the chapter relies on interviewee's accounts of the entire process. Time constrains also meant that we did not have sufficient opportunity to build relationship with village leaders and community members to accurately capture their perceptions of the project process. Thus, this article draws on a small set of observed interviewees between community members and the international consultant. An additional limitation is that, while general lessons may be drawn to inform adaptation across the Pacific region, the case study focuses specifically on the Samoan context. Generalizations out to the regional level should be done with careful consideration of countries' specific history, culture, economy, and geography.

The case study

Case study introduction: Climate change adaptation projects in Samoa

The Independent State of Samoa is a Small Island Developing State (SID) located in the Pacific Islands region (Figure 2). Samoa is composed of ten islands, of which four are inhabited. The two main islands are Upolu, where the country's capital Apia is located, and Savai'i. As of 2017, the population of Samoa was just over 196,000 people. About the same number of Samoans that live in country, live abroad, and the economy is dominated by remittances (Meleisea et al. 2012). Given Samoa's long history and rich culture, the country is often referred to as the 'Cradle of Polynesia.'

From the 1830s to 1962, Germany, and then New Zealand held administrative authority in Samoa. During the last decade of this period, New Zealand initiated work with the United Nations and Samoan leaders to craft a path to independence which was achieved in 1962. Thus,

Samoa became the first politically independent island state in the Pacific Island region (Meleisea et al. 2012). Since gaining independence, the Government of Samoa has faced significant challenges, including balancing traditional norms and rules with that of Western institutional structures that had been put in place prior to independence; broad pressures of globalization; and most recently the impacts of climate change (Macpherson and Macpherson 2010).

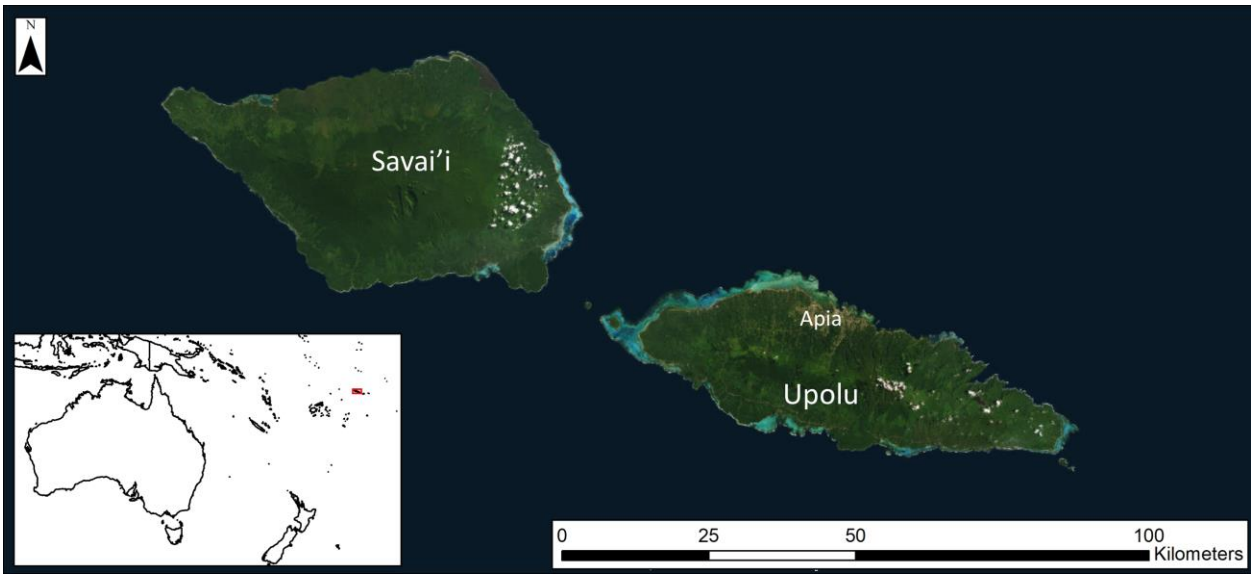

Figure 2: Map of the Independent State of Samoa

In the world of international climate change policy and planning, Samoa, and other Pacific island countries, are on the front lines—both in terms of facing climate change impacts, and in conveying the gravity of this challenge to the international community. The region is also at the forefront of climate change adaptation and are some of the main drivers behind obtaining climate change adaptation financing from the international community. Samoa has made climate change central to their overall development agenda and a broad national priority. This is seen through their focus on climate throughout the 2016-2020 Strategy for the Development of Samoa (SDS), their position as a founding member of the United Nations Group of Friends on Climate and Security, and their ambitious greenhouse gas mitigation goals laid out in their Nationally Determined Contribution (NDC) under the Paris Agreement. Because Samoa sees addressing

climate change as central to their country's development and security, it seems fair to expect that the country would have the most motivation to effectively address the issue. Thus, a country like Samoa, that is ahead of the curve on thinking about climate change, represents a useful case to explore the extent to which stakeholders leverage MLG to facilitate adaptation. Further, the synergies and barriers that emerge from Samoa's experience implementing internationally funded adaptation projects could serve as a tool for monitoring adaptation project effectiveness more broadly.

This case study explores two of the most recent internationally-funded adaptation projects implemented in Samoa. The initiatives are considered sister projects designed to complement each other—carrying out the same set of activities in different parts of the country and sharing data throughout the duration of the projects. The first project falls under the Adaptation Fund which is a funding mechanism designed and overseen by parties to the UNFCCC. The Adaptation Fund project, *Enhancing Resilience of Samoa's Coastal Communities to Climate Change*, was proposed by the Samoan national government to the Adaptation Fund, and approved by the Adaptation Fund Board in December 2011 as a US$8.7 million project. It started in January 2013, and officially concluded mid-2018. The Samoa Ministry of Natural Resources and Environment (MNRE) served as the executing entity for the project, and the implementing entity was UNDP. The sister project is part of the World Bank's Pilot Program for Climate Resilience (PPCR) initiative which provided US$14.6 million for the project, *Enhancing the Climate Resilience of Coastal Resources and Communities*. The project was approved in 2013 and is set to close in June 2020. The Ministry of Finance (MOF) is responsible for the project.

Both projects have three main components: Adaptation planning, community grants, and major infrastructure projects. First, each project was responsible for working with a set of villages to update their Coastal Infrastructure Management (CIM) plans which were originally drafted between 2002 and 2005. During this process of planning and consulting with village leaders, the implementers updated the plan name to the Community Integrated Management (CIM) plans to reflect their new 'ridge-to-reef' approach to adaptation planning. The idea is that activities on the island have impact on the coastal ecosystem, and vice versa, so the focus of the management plans needs to broadly consider island-wide implications for the coast. The PPCR project additionally funded LiDAR mapping of Upolu and Savai'i for use in both projects CIM planning processes.

The second part of the projects were community grants. These grants, administered through the national government's Civil Society Support Program (CSSP), aimed to provide up to 50,000 Tala (~US$18,900) per grant to villages to implement adaptation projects in line with their CIM plans. Of the 45 Adaptation Fund supported CSSP projects, some of the major areas of work included 23 projects to install rainwater harvesting and storage systems; nine projects carried out some form of construction including retrofitting schools to serve as evacuation shelters and building revetment walls; and, three focused on mangrove rehabilitation and planting.

The final element of the projects was larger infrastructure activities including building bridges to replace river fords, and tar sealing (i.e., paving) inland access roads for storm evacuation and to encourage inland relocation of coastal villages.

Case study results

Building on the description by Cash et al. (2006) of the scales that are necessary to consider when studying human-environment interactions, we examine these adaptation projects in Samoa to identify examples where a series of scales and levels work effectively together and exhibit some of the eight characteristics of MLG (i.e., functioning MLG), and contrast that with where the levels and scales do not seem to interact despite evidence pointing to the value these interactions add. Figure 3 shows the Samoa case overlaid on the scales and levels identified by Cash et al. (2006) to display the multitude of factors, actors, institutions, and structures involved in this governance and implementation process.

The sections below describe the following Adaptation Fund and PPCR project elements: (1) programmatic and pragmatic approach; (2) management of safeguards; (3) resources available to project implementers; (4) project timelines; and, (5) stakeholder participation in decision-making and project implementation. While the sections outlined above may seem to provide disparate examples, they are selected to display the diversity of ways that MLG could be integrated into international donor-funded adaptation projects.

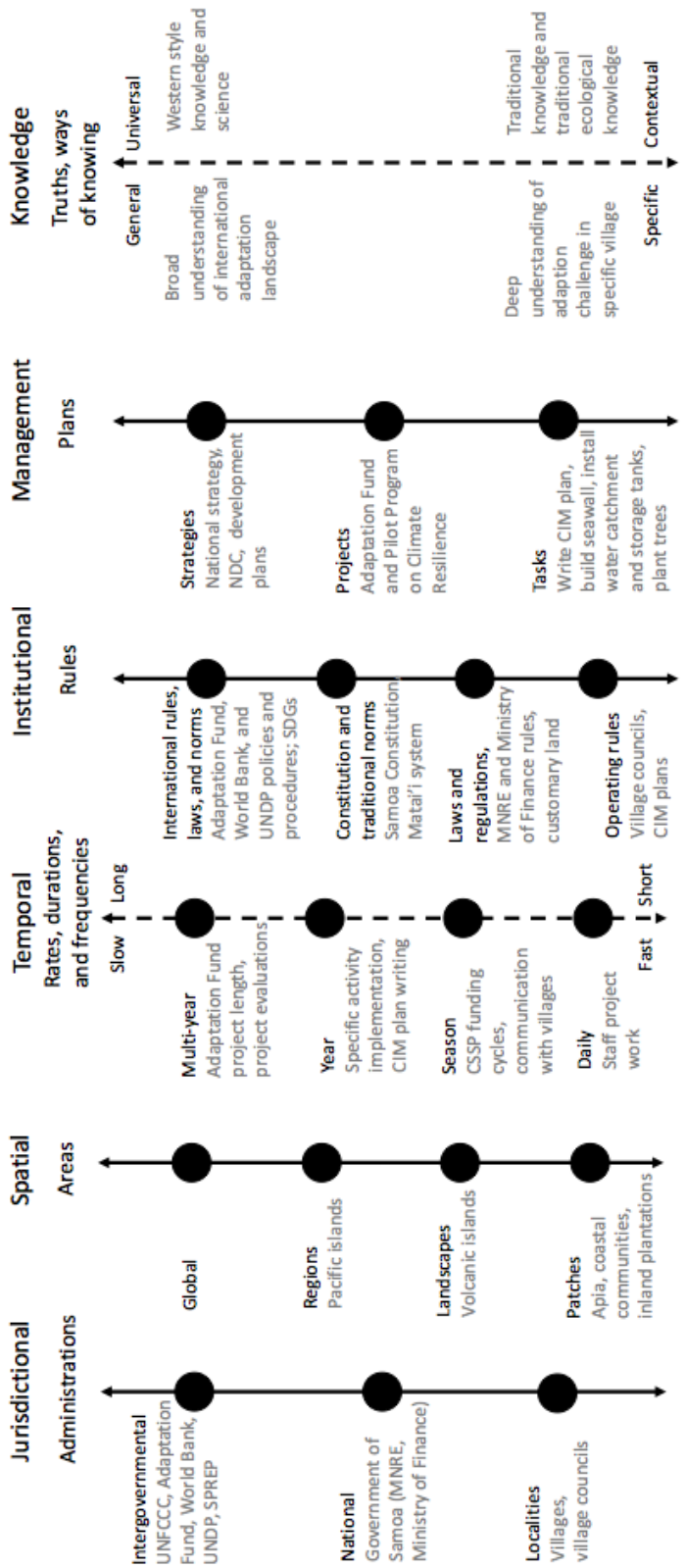

Figure 3: Scales and levels involved in environment-human systems. Details list the factors, actors, institutions, and structures in some way connected to the internationally-funded adaptation projects in Samoa. Adapted from Cash et al. (2006).

Programmatic and pragmatic approach. Technical and relevant government ministries in Samoa have substantial experience in seeking and accessing development funding assistance. Evidence of international development aid is visible on the two main islands, from schools' signs labeled 'built by the Chinese government' and park benches sponsored by 'The People of Japan,' to trash stands with signage from the Global Environment Facility.

Interviewees remarked that the need to transition from a project-based approach—the dominant paradigm used by most of the above entities—to a programmatic and pragmatic approach to managing international funding became apparent during the development of the Community Integrated Management (CIM) plan process (Interview 6A and 6B, 9 July 2018). Adaptation Fund and PPCR implementing agencies saw the revised CIM plan process as an opportunity to increase the cohesiveness of the country's adaptation efforts by more effectively designing connections across scales and levels, demonstrating the intentionality characteristic of MLG. Interviewees also highlighted that a well-developed programmatic and pragmatic approach to adaptation could serve as a model for other Pacific island countries dealing with similar influxes of funds for climate adaptation and mitigation with convergent implementation objectives (Interview 4, 12 July 2018).

The PPCR project is housed within the Samoa Ministry of Finance (MOF). This placement has been key to developing the programmatic and pragmatic approach because MOF houses financial records for all government ministries and agencies within the Government of Samoa. Thus, they can identify areas of work within ministries and agencies that are unfunded and related to adaptation and can then direct PPCR funding to fill those gaps. Rather than develop new projects that may or may not align with agencies' long-term strategies, the funding supports on-going work that may not be implemented because of a lack of resources. For

example, “SWA, [Samoa Water Authority], is already getting funding from the EU, but there are gaps in the funding that they need to source from other finance, so PPCR can fill those gaps. In that way, you have partner projects working together” (Interview 2 18 July 2018, also reflected in Interview 4, 12 July 2018). The same interviewee explained,

> “A lot of what we are doing now with the large projects, it is aligned to government work plans, so what we did was collect the information on government priorities with districts, we cross checked with what districts identified in the community, so we come across, oh they need this road and it is identified here [in the government work plan], so it was already planned, but there was no funding, so this is one way to fund it” (Interview 2 18 July 2018, also reflected in Interview 4, 12 July 2018).

Going forward, another interviewee stated, “any money coming in, any proposal that goes out, we see it from this national planning level” (Interview 6B, 9 July 2018).

The implementing agencies of these adaptation projects see the programmatic and pragmatic approach as valuable because it may increase the likelihood that the activities carried out in these discrete projects will be sustained once the project funding ends. Interviewees noted heightened cross-ministry buy-in over the course of project implementation. For example, in the past, representatives from the Land Transportation Authority (LTA) and the Ministry of Works, Transportation, and Infrastructure (WTI) departments would not attend climate related meetings, but this has changed because they now feel ownership of projects that incorporate climate considerations (Interview 6B, 9 July 2018).

The approach is also beneficial in that it facilitates injection of additional funding resources into existing funding gaps to bolster implementation of activities that have already been approved, rather than creating new projects. One example of existing projects waiting for

funding is improving inland roads. While these roads are in existing plans largely to facilitate improved economic conditions for inland plantations, they can also serve as evacuation routes. Thus, the project falls under the prevue of the adaptation funding. The expectation is that the ministries and agencies will maintain the activities over the long term because they had already been incorporated into their workplans before the Adaptation Fund and PPCR projects were developed. Here, we see that through the process of working across scales and levels, the implementing agencies generated new policy solutions that were not operationalized in this context before the initiation of this MLG process.

Interviewees indicated that this programmatic and pragmatic approach is already influencing change in that it has increased collaboration between government ministries on project implementation—one of the measures of effective MLG. There are interactions between the jurisdictional scale and institutional scale with efforts by the different government ministries influencing operational rules and norms around mainstreaming adaptation in their work areas. Finally, this example displays interactions between the jurisdictional scale and the management scale where the local-to-national level stakeholders move from only thinking in terms of ad hoc projects, to thinking about projects as a part of a higher-level strategy. A weaker aspect of the introduction of the programmatic and pragmatic approach is that, while local and international stakeholders did have some involvement in shaping this new approach, the national government played a central role. Thus, we see the involvement across the jurisdictional scale, but not at equal weight.

Embedded in this example of efforts to leverage MLG to support adaptation are trade-offs. Given that projects have finite resources and time, only certain areas of MLG are utilized, often at the expense of others. In this case, the national government heavily engaged its line

ministries across the national level which created a sort of horizontal nested structure, but not a vertical one. This is particularly important in countries like Samoa where the local village and chiefly/social system structures play an important role in how initiatives are taken up and sustained.

Safeguards. Safeguards are a tool to identify and manage externalities of adaptation projects that could end up causing more harm than good to the people, ecosystem, or culture impacted by the project. Both the World Bank and the Adaptation Fund have safeguard policies which are supposed to guide project planning and implementation. Safeguards are an interesting challenge of MLG because the funding organizations provide broad expectations for the project, and the country implementers must interpret and apply the expectations to the projects. This challenge requires work across the jurisdictional scale, as well as interactions between the jurisdictional and institutional scales. It is also mediated by types of knowledge.

Inconsistencies between the World Bank and the Adaptation Fund project safeguards caused disagreement over how certain parts of projects were conducted. This suggests that, in practice, refinement of safeguards is necessary for them to function effectively across jurisdictional levels. This tension is captured by one interviewee working closely on the PPCR project,

> "Safeguards and gender were put in [the project plan] and the environment and social criteria, those were developed under the PPCR, but were used by both projects. The PPCR also required the villages to go through the development consent process. That is like the government safeguards, so that is very important, but before not a lot of projects were going through this process. So, I think all the key players now understand the importance, because also, the Adaptation Fund

> through UNDP, they do not really emphasize the importance of safeguards unlike the World Bank, and that is a key difference because in Samoa, in a lot of projects, safeguards are the issues. And the reason why some partners insist on their procedures is because they see a gap in the national [procedure]" (Interview 3, 18 July 2018).

Interviewees put forward that Samoa is working to integrate the World Bank's safeguards into government procedures regardless of the funding source. This example of nested governance levels shows that the national level has observed and experienced a process developed at the supra-national level and sees a path to borrow that process to improve their governance procedures. Further, from the World Bank level, they are implementing a new approach to align safeguards with country priorities. An interviewee said that in a recent workshop, the World Bank presented a new framework which will prioritize "find[ing] a common approach with the government before, and agree on that approach, before [the project] gets implemented" (Interview 1, 20 July 2018). Again, a demonstration of how the levels have nested to improve overall governance.

However, this example again raises the question of power across the levels. While the national level appears to be reclaiming power over this process by adopting the World Bank safeguards on their own terms, the involvement of the sub-national level is variable. In some instances, the safeguard process did work to support the local level, from the perspective of the interviewees. For example, for all roads tar sealed by the government, the World Bank required the government to compensate people living on, or farming, land immediately adjacent to the roadwork, regardless of who actually owned the land. This certainly provided more protection for people than they would have received if the World Bank was not involved. However, the

funds to pay these costs cannot come out of the project budget, they must come out of the government budget which causes the safeguards to be a strain on government resources. While interviewees reported that the government followed through on these payments, it is worth noting that there is less incentive to do so when the funds must be additional to the international funding allocated in the project. This is an instance where the different levels of rules and norms along the institutional scale can create barriers to following the safeguards.

In another case, a project under the Adaptation Fund built a revetment wall along a river which caused more flooding instead of preventing it. The wall was developed in its present location because of requests from the village leaders against the recommendation of engineers. This represents a lack of communication across the knowledge scale—perhaps with more discussion the village leaders' experienced and contextual knowledge could have been integrated with the analysis of the geography to come up with an output that would have worked. This points to a need to increase the involvement of all scales in this aspect of the projects. Additionally, the level to which these issues are reported back up to the international jurisdictional level is not clear. If safeguard issues are underreported, it gives a different perception on the effectiveness of safeguards as you move across the jurisdictional levels, which does not foster nested levels of governance.

Resources. Three types of interconnected resources were highlighted by interviewees: operational costs, staff, and institutional memory. We observe a juxtaposition between the influx of funding from the international level, and the expectation by the international level of additional resources at the national and local jurisdictional levels that may or may not exist. In the case of the PPCR project, one interviewee explained that the World Bank provides the funds

for the project, but not the operational costs. The expectation is that the country shows its commitment to the project through supporting these operational costs which range from work computers to the payments for using land to improve roads as discussed in the safeguards section.

This raised a particular challenge in Samoa because the CIM plans required that ministry officials and consultants travel to every village in the country. But, to pay visits to villages means that they must practice "the cultural protocol which is very expensive. And those are not funded by the projects" (Interview 3, 18 July 2018). The interviewee suggested that the number of village consultations correlated with the funding that the government ministries could put forward to pay for the gifts and activities integral to the cultural protocol. This represents a blockage between the jurisdictional levels and the institutional levels where universal rules generated at the international level do not allow countries to use funding for what can be a critical part of the project process. This primary blockage also creates secondary issues like unequal power across levels because the national and the local had limited interactions given logical barriers.

One of the most popular lines among the consultants and ministry officials interviewed was that, in their one job, they wear about twelve different 'hats.' There are simply a limited number of qualified and/or experienced staff in the relevant agencies, and resources are also limited. Thus, staff working directly on climate adaptation are required to serve in a multitude of other capacities. This impacts the effectiveness of MLG because it is hard to be intentional about integrating new approaches and coordination when staff are already overworked. One interviewee explained,

> "I can't think about replication. So, it is nothing to do with the capacity of our people to be able to do it. It has to do with the fact that it is overwhelming. You have a hat on and say you have twelve [hats] already, then you are asked to do this pragmatic approach because we are looking at replicating" (Interview 6B, 9 July 2018).

This same interviewee underscored the imperative of the pragmatic approach, but simply cautioned that implementation is challenging with limited personnel.

An interlinked challenge is that of institutional memory. Not only are the staff hard to find, but in the case of the Adaptation Fund project, they were transient. At the time of the project's terminal evaluation, only one ministry official who started with the project when the original Adaptation Fund proposal was drafted, was still on the team. An observer of the project noted that it is hard to effectively facilitate work across the jurisdictional levels—not to mention build higher-level strategy (management scale), work across types of knowledge, and align timescales—when staff are constantly changing (Interview 5, 18 July 2018). The observer continued by noting that this is a frequent challenge in internationally-funded climate projects across the board. Not only is institutional memory missing within projects, but it is often almost non-existent across large projects especially when they involve different sectoral partners. Thus, these resource barriers to effective MLG might be more broadly applicable across climate projects.

Aligning timelines. The implementing agencies did not effectively use MGL to manage the different project timetables for the Adaptation Fund and the PPCR, respectively. This challenge traverses the management, temporal, jurisdictional and institutional scales. According to several interviewees, the ministries decided to link up the Adaptation Fund project and the PPCR project

once they were both approved. The initial challenge this created was that the PPCR project was approved later and thus had more administrative matters to address before beginning implementation. Those implementing PPCR also noted that the World Bank requires more administrative reporting throughout the duration of the project. Conversely, the Adaptation Fund provided those implementing the Adaptation Fund project with the flexibility to change decisions during implementation without prior approval from the Fund. Given these different processes, the Adaptation Fund implementation was put on hold while the PPCR carried out its preparatory phase. This highlights that there was, from the start, intentionality to connect the projects linking up many different stakeholders and structures across scales. However, this connectivity became a problem when the Adaptation Fund Secretariat, according to interviewees, contacted the implementers to say that if they did not start implementation, they would lose the funding. So, while the in-country teams were working to align the workplan across the many different scales, this was prevented by international institutions' temporal expectations.

This announcement caused the Adaptation Fund project team to uncouple the sister projects, which removed the explicit alignment of the temporal and management scales. Hence, the project timelines were disconnected, and so, to some degree, were the project strategies. One observer of the Adaptation Fund project noted that this is, in their opinion, one of the most remarkable aspects of the project—that such rapid directional change was possible (Interview 5, 18 July 2018). While the separation process may have been impressive, it also resulted in some substantial challenges. Most importantly, since the Adaptation Fund still wanted to conduct the CIM planning in line with the PPCR, they started the implementation step with the infrastructure projects based off the 2002-2005 CIM plans, and then updated the plans after the projects were at least partially carried out. In the case of the CSSP projects for the Adaptation Fund, all the

villages in Savai'i also ended up applying for projects without an updated CIM plan on which to base their project proposals. The Adaptation Fund implementers said that, while it was not ideal, they had no choice if they wanted the CIM planning to be effective countrywide and finish by the Adaptation Fund's deadline, even with a granted extension. Observations suggest that the implementation was also rushed which may connect closely with the safeguard challenges discussed above. Thus, the clash of the temporal scale with the institutional and jurisdictional scales significantly impacted the efficacy of the project process.

Stakeholder participation in the decision-making process. It is well documented in the literature that top-down development projects continuously fail to give critical stakeholders a seat at the table (Adams 2009). The Adaptation Fund was charged with shifting this paradigm by being a Fund that would be responsive to the voices of the 'vulnerable' people it was set up to serve. In terms of MLG, this means that the Adaptation Fund is structured for movement of power to the supra-national and sub-national levels. In Samoa's project proposal to the Adaptation Fund, the national government laid out their plan to engage local non-governmental organizations (NGOs) in the planning and implementation process. Namely, NGOs would be brought on board to work with communities to develop, apply for, and implement their CSSP projects. However, due to the shortened timeline and lack of resources for the NGO trainings, the NGOs were not involved in the project in favor of ministry staff putting on another hat to advice the villages. This exemplifies how limited time and resources snowball into a stakeholder's exclusion from the project which leads to forgoing a key characteristic of effective MLG which is the inclusion of both state and non-state actors. It should be noted that NGOs were engaged with the PPCR project in a limited capacity.

Observations suggest that the Adaptation Fund and PPCR planning and implementation was dominated by the national level ministries. The projects seem to have done an exemplary job engaging ministries across the government to support different elements of the project including housing and implementing many elements of both the Adaptation Fund project and the PPCR project. As one interviewee explained, "So apart from the community consultations, we also did site assessments with the technical experts that were on the team. So, we had an ecosystem specialist, a civil engineer, a spatial risk planner, a geomorphologist, and plus the representatives from implementing entities like LTA, SWA, MWTI, MNRE, and the Ministry of Women" (Interview 2, 18 July 2018). Village leaders had direct opportunities to run projects through the CSSP portion of the programs which proved to be a useful way to create ongoing conversation between the government ministries and the villages beyond the CIM plan consultations. However, the villages did not receive full autonomy over the project namely because they were not given the grant in money and the discretion on how to spend it; rather, they were provided the physical materials only. According to Stephenson (2013), in an effective MLG arrangement "no level of activity [is] superior to the other." The case in Samoa reflects a clear imbalance.

Discussion

Characteristics of MLG

This chapter sets out to test the extent to which eight characteristics of effective MLG, as described in the literature, are evident as stakeholders maneuver across levels and scales to implement internationally-funded climate change adaptation projects in Samoa. This is of particular interest because, in cases of international funding flowing to national governments who implement projects at the local level, multiple levels of governance are inherent in the project governance process. However, the extent to which stakeholders recognize and actively

work to facilitate MLG is not predetermined and may play an important role in how effectively these forms of adaptation are managed.

The eight characteristics of MLG are evident in this case study to varied degrees. In a broad sense, there was an *intentional effort* by the Adaptation Fund and PPCR implementers to work within the MLG framework baked into the projects. Similarly, the implementers embraced the *fluid nature* of MLG especially in managing the different project timelines.

Despite the inherent multi-jurisdictional level interactions built into an internationally-funded adaptation project, the national government holds much of the control over both the Adaptation Fund and PPCR projects. The national government did work closely with *supra-national entities* such as the World Bank, the Adaptation Fund, and the UNDP. Especially in the case of the World Bank, the national government gave power to these organizations to vet each step of the project process including small logistical changes. Power was shared with the *local level* to a lesser extent. Villages were consulted as a part of the CIM planning process and had the opportunity to apply for and implement CSSP projects. However, both these aspects of the projects were closely overseen by the national government at every step. The interviewees summarize that the ministries saw the villages as dependent on them for support, but the ministries did not feel a mutual sense of dependency on the villages. This mutual dependency, which leads to more flattened power structures, is a tenant of Stephenson's (2013) understanding of MLG. This example highlights that the characteristic of *equal power across levels* did not manifest in these projects.

Returning to Keskitalo's (2010) understanding of MLG, both *private and public entities* are supposed to be involved at every level. At the international to national levels, we do see a mix of interactions between the World Bank, the UNDP, the Adaptation Fund, and the

government ministries. However, as highlighted by the discussion of stakeholders engaged in the projects, there is less collaboration between state and non-state actors in-country. Further integrating Samoan civil society, in the form of NGOs and village leadership groups, into the project process could enhance their engagement with this characteristic of MLG.

In terms of engaging *across all scales*, the introduction of the programmatic and pragmatic approach is an example where the project does work across multiple scales (i.e., jurisdictional, temporal, institutional, and management). Yet, the approach does not necessarily integrate levels across the knowledge scale. Given village members and leaders' deep, contextual knowledge of the islands, this is a critical scale to include in the Samoan context. Thus, while we do observe continuous efforts to work across scales, it is apparent that resource and time constraints moderate the ability to do so.

Cash et al. (2006) suggests that, when effective, MLG should create opportunities for *new policy solutions* that were not possible before the levels and scales started working both interdependently and independently (Cole 2011). In Samoa, the introduction of the pragmatic and programmatic approach represents the most significant structural change inspired by these projects. Moving away from the approach that deals with all internationally-funded projects in a vacuum towards one that integrates the use of international funds with existing ministry projects and priorities will likely have a long-term impact on Samoa's approach to international development finance. Further, two of the implementers also explained that they were encouraging communities to use the new CIM plans to hold their elected officials accountable. Villages should request that their elected officials use the plan to form their policy positions in the Legislative Assembly. They explained that this could be one of the most effective paths to ensure long term usage of the CIM plans. If the CIM plans become a tool for villages to increase

climate resilience through legislative actions this would represent another policy solution born out of the MLG process. Thus, while there were barriers to leveraging MLG for effective adaptation, we still see substantial policy impact coming out of these two sister projects.

Conclusion

MLG, polycentric governance, and nested governance have been discussed in the literature for over 25 years (Stephenson 2013). Yet, this case shows that despite the attention, implementation of MLG is challenging and there is no clear playbook for how to do it well. In Samoa, we see that the obstacles to carry out effective MLG are generated at various levels and scales with no particular actor or area serving as the central source of the issues. Interviewees suggested that, over the course of the projects, they were increasingly aware of the value of working across the levels and scales.

However, the analysis also suggests that even when project implementers embrace MLG, not all characteristics of MLG are apparent in each element of the project nor does each element of the project include cross-level and scale interactions. This illuminates the spectrum and quantities of trade-offs embedded in this systems approach to project management and governance. In fact, it brings into questions when, if ever, MLG aligned with all of the characteristics is possible. In the case of Samoa, decisions to work across all jurisdictional levels were constantly modified by access to resources and time. Thus, project implementers had to decide when to engage with the sub-national level entities rather than having a more nested governance approach. Since there are so many variables embedded in this systems approach, they cannot all be maximized at the same time. This chapter finds that effective MLG also requires an awareness of these diverse trade-offs throughout the governance process.

As Pacific island countries continue to apply for and receive international funding for climate adaptation, embracing MLG and understanding the trade-offs woven into the system can be informative in both the planning and project implementation phases. At the same time, it is critical that project funders place value in the characteristics of effective MLG and aim to support them through institutional policies and procedures. In particular, ministries responsible for writing project proposals ought to work with key stakeholders to build interactions between levels and scales into project proposals to set the project on a trajectory to be inclusive, strategic, and in-line with broader sustainable development goals. For example, providing funding for cultural protocols in the grants could enable more sustainable relationships between a national government and communities. At the implementation phase, project implementers need sufficient time to build relationships across scales and levels in order to see the programmatic and pragmatic approach to fruition. These are critical points for project funders to embrace.

Tracking future adaptation projects in Samoa to see how they build on or diverge from the project efforts described in this chapter as well as revisiting the Adaptation Fund and PPCR project elements in future years would be instructive to understand the extent to which MLG actually influenced the long-term sustainability of the projects. Further, an analysis of climate adaptation projects in other Pacific island countries, similar to the work throughout this book, will increase our understanding of the tools that are essential for effective climate adaptation in the Pacific context—essential knowledge for a region on the front lines of climate change impacts.

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CHAPTER 4

ADAPTING TO FLOODING AND DROUGHT IN NICARAGUA'S DRY CORRIDOR: A STUDY OF NICARAGUA'S ADAPTATION FUND PROJECT

Introduction

The Adaptation Fund Board approved Nicaragua's proposal, *Reduction of Risk and Vulnerability Based on Flooding and Drought in the Estero Real Watershed* in December 2010. The initiative joined just eight other projects as the first set of activities under the newly operationalized Adaptation Fund. The projects were geographically dispersed and topically diverse including one other Central American project focused on urban water resources in Honduras, a project in Tanzania on coastal adaptation, a project in Pakistan focused on reducing the risks of glacial lake outburst floods, and a project in the Solomon Islands centered on agriculture and food security.

Since the inception of this first batch of projects, the Adaptation Fund has experienced intense interest from developing countries. The most recent Adaptation Fund Board meeting, in March 2019, received a record of 40 proposals totaling US$ 268.2 million which reflects the demand on the Fund (AFB Press Release 2019). Prior to March 2019, the highest monetary requests to the Fund were US$264 million in October 2018 and US$208.5 million in 2016 (AFB Press Release 2019). These requests for funding far exceed the US$10-60 million that the Fund has allocated at each quarterly meeting from June 2014 and July 2018 (Grimm et al. 2018).

Given the Fund's popularity and influence, it is critical to understand both the process and outcome of past project implementation, so newer waves of projects can learn from and build upon past Fund experiences. In order to contribute to this endeavor, this article explores aspects of the Nicaragua project with a particular focus on understanding stakeholders'

perceptions of the project's impact and learning to what extent the project catalyzed further adaptation efforts in the region as planned in the project proposal. Since the majority of Adaptation Fund projects are still in process, the completed Nicaragua project provides a first sense of post-project sustainability.

Nicaragua Adaptation Fund project background

Nicaragua's Adaptation Fund project took place in the northwestern part of the country's dry corridor. The project ran from 2010-2015, and project elements spanned three municipalities: El Sauce and Achuapa in the department of León and Villanueva in the department of Chinandega (Figure 4). Each of these municipalities, which are made up of small towns surrounded by farming communities and forest, are situated in the Estero Real watershed—a critical source of water for the region that is also vulnerable to flooding. According to Nicaragua's project proposal, "During the rainy season, landslides in the middle watershed and heavy flooding in the middle and lower watershed are common, aggravated by extreme events such as hurricanes or storms, causing heavy losses in harvests, human lives, domestic animals, damage to infrastructure and a progressive deterioration of local economies" (Adaptation Fund/MARENA nd).

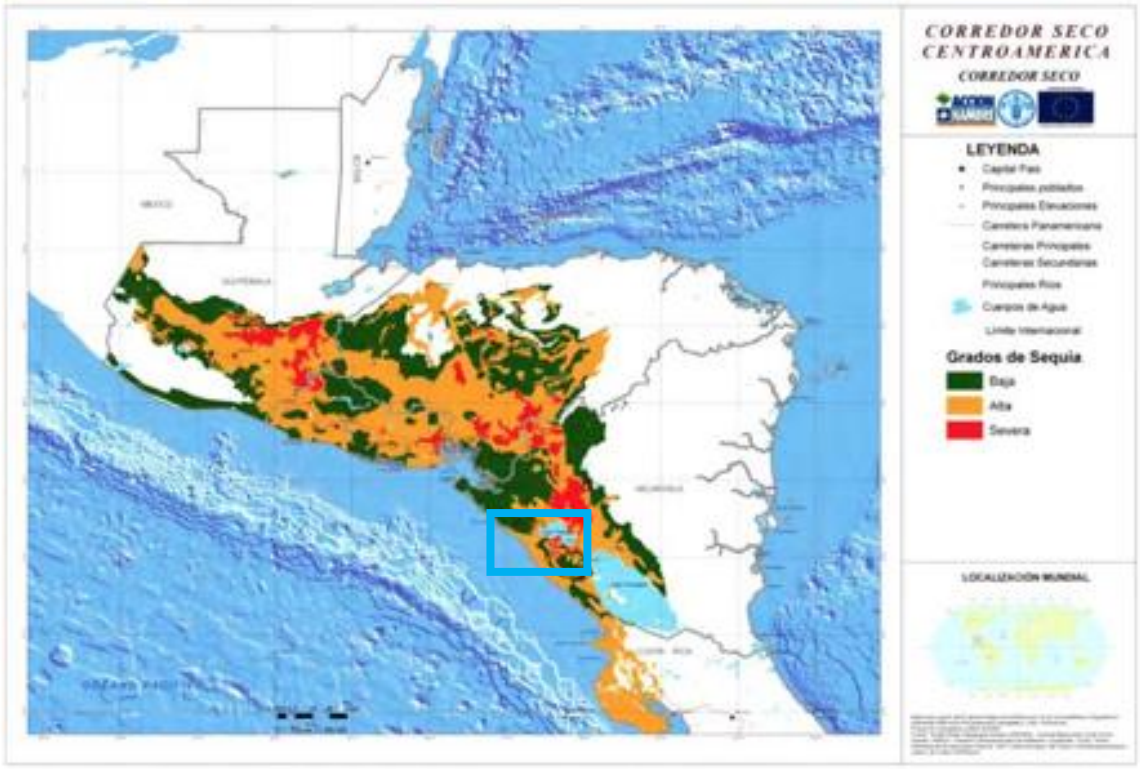

Figure 4: Central American Dry Corridor: Legend reads "**Levels of dryness** green- low, yellow- high, red-severe." The region discussed in this paper is within the light blue box (FAO 2012 from Briones 2017).

Project activities differed in each of the municipalities based on their geographic situation within the watershed. The major project in El Sauce was the installation of two communal irrigation systems which serve about 100 subsistence farms (Adaptation Fund 2014). The municipal leaders in charge of implementing the project also worked with farmers to develop *Farm Agro-ecological Transformation Plans* (FATP) which include adaptation actions that farmers agreed to integrate into their farming practices. In Villanueva, to address concerns about flooding, the project focused on building water retention ponds and reforestation. They also worked with farmers to develop FATPs.

Achuapa is located at a higher elevation than El Sauce and Villanueva, so the focus in that municipality is on reforestation and forest management to enhance the land's ability to absorb and retain rainfall. They also installed or retrofitted several rainwater catchment and storage tanks to increase longer-term access to water during droughts. Across municipalities, the

project aimed to enhance regional climate data collection, so at least one weather station was installed in each municipality.

Research methods

This case study is based on in-country fieldwork, a review of project documents, and research at United Nations Framework Convention on Climate Change (UNFCCC) Conferences of the Parties (COPs). The first phase of the research was observing adaptation negotiations at COP21 (Paris 2015) and COP22 (Marrakech 2016). These observations informed generation of research questions about Adaptation Fund projects taking place on-the-ground. I conducted fieldwork in Nicaragua in July-August 2017. Initially, I intended to spend the full three week trip with stakeholders involved in the Adaptation Fund project, but after four months of emails and phone calls with Nicaraguan NGOs, the UNDP, universities, and other entities in the country, I was not able to find anyone familiar with the Adaptation Fund project.

As a result, our 3-person team shifted our research plans, and spent each day with NGOs that incorporate climate adaptation into their portfolios to learn about their projects taking place in the same regions as the Adaptation Fund project. We interviewed university professors (n=2) based in Managua who study adaptation; NGO leaders (n=14) based in Nagarote, El Tololar, León, Estelí, and Totogalpa whose organizations are focused on climate adaptation; and community members (n=14) involved with the NGOs' adaptation projects. These interviews informed our understanding of (1) how the NGOs' projects are implemented, (2) the ways groups measure how projects increase resilience to flooding and drought, and (3) the extent to which NGOs are connected to one another and to other entities working on adaptation across the country. We also visited adaptation project sites to learn about the intricacies of project implementation, maintenance, obstacles, and long-term sustainability. Through connections we

made once in Nicaragua, we were also able to interview municipal leaders in Achuapa (n=2) who led implementation of the Adaptation Fund project in that area, and we visited various sites where the project was carried out.

The resulting research outputs do not aim to provide a comprehensive evaluation of the Adaptation Fund project, but rather, a contribution to the overall understanding of climate adaptation in Nicaragua's dry corridor and the Adaptation Fund's role in funding these efforts.

Multi-level governance approach

Internationally-funded climate adaptation projects inherently include multiple levels of governance because funding comes from the international level, the project is usually managed at the national level, and the implementation takes place at the local level with reporting requirements at the international level. However, the existence of these levels in the project process, does not predetermine that they will work in conjunction with each other. Rather, project implementers must actively work to build a multi-level governance approach to maximize on these pre-existing conditions. This article uses the lens of multi-level governance to explore the implementation of climate adaptation projects in Nicaragua.

Takeaways from Nicaragua's Adaptation Fund project

Studying the Adaptation Fund across governance levels from country statements made at the UNFCCC negotiations to the perspectives of municipal leaders in Achuapa, Nicaragua, we find that the processes and projects are multi-faceted, making the possibility of declaring a project a success or failure tenuous and more likely irrelevant. The following analysis highlights aspects of the nuanced experiences of project implementation in Nicaragua as described by stakeholders and observed by our research team. We find that inconsistent support across governance levels (Adaptation Fund—national government and UNDP—municipal government)

and lack of connectivity with existing in-country resources (namely NGOs) may have limited the effectiveness of the project. Local officials in Achuapa did report an ongoing focus on climate adaptation as a result of involvement in the Adaptation Fund project. This indicates that, at least in Achuapa, the community leaders have an elevated sense of awareness about climate impacts and have some tools to draw on when evaluating potential adaptation actions.

Unpacking local level implementation

The Ministry of Environment (MARENA) and the UNDP proposed and received funding for the Nicaragua Adaptation Fund project. The UNDP served as the multilateral implementing entity and MARENA acted as the executing entity. However, it is important to note that towards the end of project implementation, all UNDP offices and personnel were asked to leave Nicaragua by the national government citing "political interference" (Chamorro 2016). So, while UNDP has early involvement in the project, by the end they had to drop involvement and leave the country. This points to an overarching lack of coordination across governance levels extending far beyond this Adaptation Fund project.

While I did not have the opportunity to meet with national government officials or the UNDP, their role in implementation seemed limited notwithstanding the conflict described above. By contrast, the municipal leaders held the bulk of responsibility for project implementation. The Adaptation Fund's Portfolio Monitoring Mission to Nicaragua confirms this understanding, stating repeatedly that, "In the case of Nicaragua, the decentralization of the implementation of the programme was very noticeable" (AFB/EFC 2014, 26). This decentralization of the project, also referenced as "the devolution of responsibilities to the local level" (AFB/EFC 2014, 2), illuminates some of the primary reasons behind both the project's limited successes as well as the overarching challenges.

Development scholars largely agree that while the "devolution of responsibility" does represent a trend toward shared governance and co-management, it often fails to adequately shift power and resources to the local level (Elyachar 2005). Thus, local leaders and community members are expected, in this case, to bear the responsibility for adaptation outcomes without all the tools to do so. In the case of Achuapa, municipal leaders did not know that the Adaptation Fund project existed until after the Adaptation Fund approved the project proposal. While the municipal leaders reported that they were pleasantly surprised by the influx of resources when informed that MARENA selected their municipality as a sight of implementation, it was a significant addition to their municipal work load. Additionally, they never received the actual funds to carry out the project, rather they were sent experts and materials. The control of the money and the decision on the types of adaptation activities to be implemented stayed at the national level.

When municipalities do not have the capacity or resources to manage adaptation projects alone, we see the devolution of responsibility down to the individual level. For example, Maria, a rancher in Achuapa, shared that, as a part of the Adaptation Fund project, municipal leaders asked that she be the sole person responsible for protecting the massive swath of forest adjacent to her home. Cutting had been prohibited on that area of land, and Maria had been charged with enforcing this rule. Maria said that while she "has always wanted to keep that area forested," it is a major challenge to make sure people from town do not come and cut down trees (Interview, 2017). In this case, the long-term sustainability of the Adaptation Fund's forest management and reforestation effort in this particular forest rests on the shoulders of one rancher.

On community participation

This is not to say that community engagement with adaptation projects is not essential. In fact, quite the opposite. Communities are central to the whole process. While Maria, the rancher described above, was given significant responsibilities as part of the Adaptation Fund project, she and other community members were not actively engaged in the project planning. As one of the Achuapa municipal leaders described, "Because a lot of the construction activities were planned in Managua, and the culture and characteristics of the people weren't taken into account…They contributed something, but people didn't want it. It didn't serve their needs…but people assimilated well" (Interview 2017). Not only were the community members unaware of the project, but the municipal leaders did not know about it either. The municipal leaders described to us, "[the national government] didn't consult anyone in formulating the project. Because once it was planned and approved, they came here to promote it, but they already bought the technology, the activities were already established" (Interview 2017). So, while the local leaders and community were given significant responsibility during implementation, they did not have a say in the project priorities, the ways to address the priorities, or the desired outcomes.

Our observations suggest that the municipal leaders in Achuapa embraced the project, despite their exclusion during the planning phase, and took ownership of making the efforts successful. They ran community meetings, created committees, and paid visits to people's homes to discuss elements of the project and check in after implementation (Interview 2017). Maria, the rancher, said that she had full trust in the municipal leaders (Interview 2017). However, evidence suggests that the project could have been more successful if not just responsibility, but also

resources and decision-making authority had been placed with the local community (Elyachar 2005).

At the local level, there was a significant attempt to embrace a community approach to adaptation during implementation and ongoing monitoring, such as forest management, despite MARENA and UNDP's original approach. The important question to ask is, do we understand this community involvement as success in the eyes of the Adaptation Fund? While the national government is the executing entity on paper, if the responsibility for executing the entire project will ultimately be devolved to other stakeholders, those stakeholders' involvement in all stages of the Adaptation Fund project seems critical.

On NGOs

In 1990, the ruling party, the FSLN, held presidential elections. In the lead up to the 1990 election, the opposition put together a coalition to run against Daniel Ortega, the FSLN leader and president. Violeta Chamorro won the election unseating the FSLN and their socialist goals. The Chamorro administration championed neoliberal reform carrying Nicaragua into new era of politics and economics. These neoliberal ideas were carried on by her successors Arnoldo Alemán (1997-2002) and Enrique Bolaños (2002-2007)[5]. Starting in 1990, Nicaragua saw the proliferation of NGOs across the country—from 300 groups in 1990 to 2,000 in 2005 (Chahim and Prakash 2014). Scholars refer to this phenomenon as the "NGOization of civil society" (Chahim and Prakash 2014, 493). This is not coincidental, but rather a symptom of reduced government services.

Over the next decade, more and more foreign funding started to flow through these NGOs rather than as assistance to the national government meaning that NGOs increasingly

[5] For more information on Nicaragua's political and economic history from 1890-present, see Appendix 2.

provided services for the Nicaraguan people. As such, many NGOs in Nicaragua are now paying close attention to climate change as a prominent funding stream and an area of significant concern, especially in the dry corridor.

Despite their abundance, there were no NGOs involved with the Nicaragua Adaptation Fund project, and, of the five NGOs we met with and an additional seven that I spoke with over the phone and via email, none of the organizations were aware of the Adaptation Fund project. This is not to suggest that project responsibility should have been further devolved from municipalities to local NGOs, but rather that NGOs in the region have significant experience implementing similar projects; and therefore, could have played a supporting role and perhaps helped to further develop municipal capacity to carry out climate adaptation work.

For example, in the mid-term evaluation of the Adaptation Fund project, one of the concerns about the project was its use of irrigation by aspersion, also known as spray irrigation. The report suggests that not only do farmers "begin their irrigation in the morning and leave the water spraying through the hot part of the morning" which is inefficient because most of the water evaporates, but the system also increases "inequitable distribution of water in that the new access points appear to only benefit those who are nearest to the water distribution systems" (Ryan 2014, 46). This maladaptive practice introduced by the Adaptation Fund project may well have been avoided if NGOs had been involved. This is likely because all five NGOs we visited worked exclusively with drip irrigation, in light of the more intense droughts, because of its efficient use of water. One NGO had an experimental farm where they tested different methods of water-efficient irrigation to figure out what works best for different plants and under different precipitation and temperature conditions. The results of this nearby project could have informed irrigation decisions made for the Adaptation Fund project if these connections were cultivated.

Similarly, another concern from the Achuapa municipal leaders was that the Adaptation Fund project component on collecting weather data—especially rainfall amounts—did not ensure accurate, or even useful, data. They suggested this was because of the lack of systematic monitoring of manual precipitation gauges. Again, many of the NGOs in the region are also collecting climate data and are working with a national effort run by the science hub, Centro Humboldt, to collect these data and then disseminate analysis back out to farmers via Whatsapp. While the municipal governments have their own access to government data, additionally tapping into this existing network could have made the Adaptation Fund projects' data collection efforts more usable for the area's farmers and conserved resources by connecting with pre-existing networks.

Two leaders of one of the NGOs accompanied us on our visit to Achuapa because they were just as interested as we were to learn about their neighboring municipality's climate adaptation initiatives. Their reaction upon leaving Achuapa was, "me quedaron con dudas" which translates to, *it leaves me with doubts* (Interview 2017). When asked to elaborate, one of the NGO leaders described that they have done similar work with agriculture and reforestation with sustained funding for the past 10 years, and the work is still ongoing. It is a huge challenge to make a difference with only 5 years of funding (Interview 2017). This perspective is not surprising, and has been well studied, but it is a reminder that the long-term sustainability of the project needs to be planned from the beginning. One significant way that Achuapa attempted to do this was dedicating 5% of their annual municipal budget to environmental work. During our visit, about two years after the Adaptation Fund project funding ended, it was evident that they were still trying to sustain the project but were juggling many other priorities as well. It is critical that the municipal governments build their capacity to manage climate adaptation, and it would

be valuable to explore further how existing NGOs with an adaptation focus can support this institutional capacity building effort.

Adaptation Fund project as a catalyst for further adaptation in the region?

The Adaptation Fund intentionally funds small, concrete adaptation projects which are often seen as pilot initiatives that can be replicated, if effective. The Adaptation Fund's Portfolio Monitoring Mission to Nicaragua makes this clear in their report:

> The scale of the problem…is evidently too vast to be overcome fully through a project-based intervention of the scale funded through the Adaptation Fund. The interventions, accordingly, seek to demonstrate pilot solutions with immediate benefits for highly vulnerable communities. Attention must subsequently focus on how these are financially sustained and scaled out to other vulnerable communities with additional financial resources (AFB/EFC 2014, 2).

A central challenge in the "highly decentralized" Nicaragua case is how to replicate the project when most of the knowledge on implementation rests with the municipal leaders. This is especially problematic because, as one of the Achuapa leaders stated, "whenever a project like this is finished, it is the municipality's responsibility to monitor the results. Not to replicate it" (Interview 2017). Thus, MARENA could replicate the type of project in another area, but they likely lack critical information about experienced successes and pitfalls known only by the local implementers.

Further, implementers stated that there is no existing network or mechanism for them to disseminate information about the project to municipalities working on adaptation in other regions. Their lack of connections with NGOs means that the experience of the project will not feed into any NGO's future project planning either. In this way, more attention to multi-level

governance—support moving back and forth between the local and the national governments—and less dependence on "devolution of responsibility" could have increased the likelihood that lessons learned will influence other adaptation efforts taking place in Nicaragua.

Conclusion

Local, but isolated, impact

This Adaptation Fund project set climate adaptation planning at the center of Achuapa's municipal conversation and decision making for five years. As a result of the project, they have now dedicated 5% of their annual budget to environmental work, and they have built relationships throughout the community around efforts to decrease negative impacts of flooding and drought. The project ballooned conversations and planning about forest management that is compatible with agricultural livelihoods (Interview 2017). In these ways, the Adaptation Fund funding did promote climate adaptation at the local level—its intended goal.

Yet, the sections above outline the ways in which the project structure and governance reduced the project's overall effectiveness and scalability. In this project, as with many Adaptation Fund projects, the national government serves as the linchpin between the funding agency and the actual project stakeholders. Given that the national government is inherently essential to the project, the idea of multi-level governance which is that each level of governance is constantly interacting and supporting the work at the other levels (Cole 2011) ought to be encouraged over project decentralization which seems to have largely removed the national government from responsibility of ensuring that the project supported communities in adapting to the impacts of climate change.

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APPENDICES

Appendix 1: Additional analysis of multi-level governance in Samoa

Chapter 3 included analysis of five elements of the Adaptation Fund and PPCR projects to unpack the ways in which MLG was facilitating adaptation and where it was not leveraged to support the projects. Below, I provide four additional examples to supplement this discussion if the reader is interested in further analysis of the Samoan adaptation projects.

Regional organizations

Much of the analysis of MLG is situated around the jurisdictional scale because it houses the governing entities. Thus, it is important to state upfront that the supra-national organizations that connect many of the SIDS in the Pacific region are largely absent from both these adaptation projects. The Pacific region has a substantial network of regional organizations including the Secretariat of the Pacific Regional Environment Programme (SPREP) which is the intergovernmental environmental organization. While SPREP and other regional organizations are charged with providing support to countries working on sustainable development, they were noticeably missing from conversations on adaptation in Samoa. Individuals involved with the adaptation projects expressed that the national level is often working to build the capacity of the regional organizations instead of the inverse. One interviewee describes that the only role that SPREP played was in receiving support from Samoa, "so this thing about regional going in to help, it was us from PPCR Samoa who built capacity of the regional. I thought this was very interesting because the whole PPCR experience on the national side was actually being taking into the regional" (Interview 6B, 9 July 2018). MLG is supposed to work multi-directionally creating a nested structure where levels simultaneously working with independence and

interdependence (Cole 2011) Here, the obstacle is that the national level is supporting the regional without reciprocation.

There is significant potential in SPREP to be a National Implementing Entities (NIE) to the Adaptation Fund and other funds like the Green Climate Fund for Samoa and other pacific countries. However, one interviewee explained, "countries go for the fund that has the proven track record rather than going for something new…Yes, SPREP is more in tune with countries, as opposed to other regional organizations, but as an executing agency, they are having teething problems. We don't need that. Countries don't need an executing agency or an implementing agency coming in with problems" (Interview 6B, 9 July 2018). It seems that SPREP would need to increase involvement in these projects to continue to draw institutional capacity from the national level because, at present, they are the missing link in the MLG structure for climate adaptation. Where SPREP could add substantial value is in transferring project knowledge and lessons learned across its member states creating more connectivity across the spatial scale.

Nature-based solutions

Nature-based solutions are adaptations that employ nature to improve the resilience of both the natural and human systems. While the Adaptation Fund and PPCR adaptation projects were largely focused on engineered solutions from rainwater harvesting and storage systems to roads and bridges, a few projects started to engage with the concept of nature-based solutions (Interview 2, 18 July 2018). These efforts included planting trees along critical inland water catchment areas, rehabilitating mangrove reserves, and a marine protected area. An interviewee outlined one of the most promising nature-based solution adaptation projects implemented under the PPCR,

> "We have a project in Savai'i…on Mount Sili, the highest peak, so if we do this project we would stop any more sealing of the road that goes up so that people will continue to hike, and also we are looking at invasive species as an indicator of climate change impacts, because…from previous projects, I know that climate change also changes vegetation and given that it is Samoa's largest peak and it's got the cloud forest and all that, we have a proposal to protect the area and we intend to have a permanent monitoring vegetation plot so MNRE can monitor and see changes. But that is a long-term thing, but we think it is good to set it up now and then link it up with the National University so students can use it as a research space" (Interview 2, 18 July 2018).

In this description, the interviewee highlights that these projects necessitate longer timescales. Unlike paving a road which happens in a matter of weeks and then the project is deemed complete, this project to establish and maintain a protected zone on Mount Sili will be ongoing for years.

In this way, nature-based solutions have the potential to build greater connections across levels and scales because the interdependence occurs over a longer period of time. In addition, this example integrates academia, a non-state actor, into the long-term project management which expands the network of stakeholders invested in the initiative's success. It seems that this project may also be providing a window for this "new solution" that was not available prior to the introduction of these projects. In these ways, we see a number of the key characteristics of MLG. Yet, at the same time, these types of projects test the endurance of a MLG system to hold up even after the project funding periods end.

Nature-based solutions may also provide an avenue for future adaptation work in Samoa because these types of projects generally demand fewer financial resources. According to a

PPCR project implementer, “the environment projects are actually less costly, they cost less than a million…whereas the infrastructure one’s cost millions. But the long-term impact, the long-term sustainability, I see more in environment projects. But the problem with our people is that they still want seawalls…and big structures” (Interview 2, 18 July 2018). Here, we see a clash of the management scale and the temporal scale as the ministries grapple with the costs associated with short versus long term benefits and how these fit into the current internationally-funded projects as well as the country’s longer-term adaptation strategy.

Nature-based solutions to address climate impacts are an area to continue monitoring to observe to what extent these nature-based solutions provide a path to build up sustainable and longer lasting connections across levels and scales of governance.

Accountability

A cross-cutting challenge of MLG is which levels on what scales are held accountable for decisions, mistakes, and acting on lessons learned. In in the case of the revetment wall described in the safeguards section, implementer of the PPCR project expressed that there was a problem of accountability. The implementers wanted to “appease” the village leaders to move the project forward, so they did not engage in further consultations with the engineers and the village leaders. When it comes to taking responsibility for the more intense flooding in the village, does it fall on the implementers, the village leaders, the UNDP who is supposed to oversee the project, or even on the Adaptation Fund safeguard policy? The interviewee shared that for these projects to be sustainable over the long term, “at the end of the day, someone needs to be held accountable (Interview 2, 18 July 2018). This issue involves the jurisdictional scale because of the critical stakeholders at each level which are influenced by the Samoan and international norms on the institutional scale as well as by different forms of knowledge.

This example highlights that stakeholders operating in a MLG system are faced with numerous trade-offs. If the national government takes highlights, and takes responsibility for the breach of safeguards, they may be less likely to see additional international funding in the future. Would this be to the benefit or detriment of adaptation efforts in the country overall? Or if the village is asked to take responsibility, perhaps they will be less interested in working with the national government and with international funds in the future.

Tourism

The Adaptation Fund and PPCR projects did successfully involve many of the country's ministries in the implementation and planned long-term management of the project initiatives. An official from MNRE said that while ministries are each in a different place on their integration of climate considerations, the most challenging area of alignment is with the Samoan Tourism Authority (STA). Much of Samoa's current tourism industry is based on the coast, lagoon, and ocean. This is largely a clash of the temporal scale with the levels across the jurisdictional scale. While some ministries are working on long planning horizons, like MNRE, STA is looking to increase tourism opportunities in Samoa in the next five years. As a result, the local level receives conflicting development advice from the national levels.

In response to tourism demands, villages are encouraged by STA to develop accommodations and resources on the coast. This mentality is best described by one of the carpenters involved in a CSSP project on Savai'i. He explained that they used the funding to build stairs down the steep cliffs to the coast because the old stairs were dangerous, but people want to access the grasses to weave their mats. Now that the stairs are built, though, the village wants to develop the small area of land right on the beach to attract tourists. He suggested that they are interested in building beach fales (open-air buildings), bathrooms, and a restaurant.

Now, an adaptation project that was intended to help people continue their coastal livelihoods while giving them a safe way to return to the village on higher ground has enabled a better environment for coastal development. One interviewee shared that they are working with villages to reconcile these seemingly competing efforts,

> "We understand the nature of the industry, but…that is going to have an impact on what we are trying to promote…We say maybe you can still develop down there, but you ensure that there is proper access to your safe areas up there and ensure that you reside in those safer areas, and you have your tourism areas that you come down here and operate during the day. And we try to push to ensure that each of those villages have proper access, escape routes." (Interview 4, 12 July 2018).

The interviewee further describes the need to balance the interests of the villages, the ministries, and the adaptation projects. He explains, "we cannot just totally decline the villages, refuse the villages from building in those areas, otherwise the village will turn to the government and say give us the money to help us out…because we can't do that" (Interview 4, 12 July 2018). While paying communities for the economic losses they face as a result of climate impacts is an emerging topic especially under the UNFCCC (i.e., Loss and Damage), the Samoan government does not see this as an economically sustainable option at this time. Working within the national jurisdiction to reconcile temporally based development objectives might smooth MLG across the jurisdictional levels and help the different ministries come to new policy solutions.

Appendix 2: Brief economic and political history of Nicaragua

Chapter 4 provides a short case study of the Adaptation Fund project in Nicaragua. This section, Appendix 2, provides additional background on Nicaragua's economic and political history from 1890-present because it is critical to many of the trends observed in the Nicaragua case.

Nicaragua, located in the heart of Central America, is a country bursting with brightly colored towns layered in murals, it is a country dotted with nineteen volcanoes running down the Pacific coast, and it is a country known for its kindhearted people. But, Nicaragua is also a country that has faced decades of war, it is a country where the United States has worked to tips the scales in the US's favor for over 150 years, it is a country grappling with rural poverty and urban planning challenges, and it is a country this is now faced with the impacts of climate change. Nicaragua is the largest country by area in Central America and is the poorest country in the Western Hemisphere after Haiti (CIA World Factbook 2017).

Governance: From Zelaya to Ortega

Nicaragua has a complicated political history as a result of both domestic events and foreign intervention. Here, we begin with Jose Santos Zelaya and walk through the major events and leaders that continue to influence the way that Nicaragua governs and interacts with the international community. Zelaya came to power in 1893. It was not until one year later, in 1894, that Nicaragua gained full independence when the British moved out of Bluefields on the Atlantic Coast (Powell 1928). Zelaya has a goal of uniting all of Central America under one government but was met with significant challenges from both other Central American nations and by the US. At this time, the US already had significant footholds in Nicaragua especially via industry centered around Bluefields and the Mosquito Coast area. In 1909, because of Zelaya's

radical motivations to bring together all of Central America, the Mexican and US governments forced him to step down from the presidency.

Over the next 28 years, there were 16 presidents and acting presidents of which some served for only a week and others for years. Civil wars took place, and power struggles abounded. The most influential icon of the era, Augusto C. Sandino, developed his ideology and emerged as a leader during this time. Sandino, who gathered his revolutionary thinking from inspiration in Mexico and Cuba, had a goal of "emancipating Nicaraguan workers" (Hodges 1994, 27). For Sandino, the first step was expelling US control from Nicaragua, so he embarked on a guerilla war against the US Marine forces occupying the country. Despite Sandino's efforts, the US continued to push forward its agenda in Nicaragua which was to build a canal and establish economic controls. When the US successfully propped the Somoza family into power in 1937, one of their first acts was to have Sandino assassinated. While this act removed Sandino himself from the country's future, his ideology ultimately propelled the take down of the Somoza regime 43 years later. Sandino's legacy is still front and center in Nicaragua today.

It has been well established that the Somoza regime was a dictatorship upheld by the US government. The US largely ignored the human rights violated of the regime because Somoza allowed the US to exercise whatever power it desired in the country. During this time, through the influence of Somoza, the economy transitioned to a more capitalist framework. In the agricultural sector, the government provided subsidies to large export-oriented companies while reducing credit available to smallholder farmers. This caused the migration of smallholder farmers to the hillsides while industrial scale farmers took over the flatlands (Biderman 1983). Opposition to the Somoza regime started as early as 1939. In the early 1960s, Carlos Fonseca Amador started to break away from the main opposition group he was a part of because "he saw

the development of a new revolutionary group which would finish the tasked started by Sandino by mobilizing peasants and workers into a military force with a true *Nica* identity based on self-determination and nationalism" (Staten 2010). Fonseca continued on to establish the baseline ideology of the Sandinista National Liberation Front (FSLN) through his thinking and writing.

Although the economy was growing overall, almost every section of the Nicaraguan population was discontent with the Somoza regime by the 1970s. In this context, the Sandinistas (FSLN) developed and launched a successful overthrow of the Somoza regime which ended in 1979. This event sent shocks through the US government because their dictator had fallen. As the Sandinistas took over, the US intensely debated how they would interact with Nicaragua going forwards. For example, would they provide an aid package to the war-torn country or would they apply harsh sanctions to cripple the Nicaraguan economy even further? These concerns were not only fueled by politics within Nicaragua, but also how Nicaragua would establish their international relations in a Cold War world. There was a distinct fear in the US that Nicaragua could be a premiere target for another communist foothold, in addition to Cuba, in the Western Hemisphere. Under the Carter administration, the US held a slightly more amiable position toward the FSLN, but as soon as Reagan took over, aid was off the table (Jones 1981). The FSLN was able to obtain aid from other sources including the Soviet Union, but the US effectively blocked other major sources where they would have been able to take out loans for reconstruction. On top of this, it was not possible for the FSLN to focus on rebuilding because they were still fighting the Contra Wars which were anti-Sandinista Nicaraguans, funded by the US, fighting to take down the Sandinista government. The Contra Wars continued through the Reagan Administration.

During their time in power, the FSLN set up five-year presidential terms. In the lead up to the 1990 election, the opposition put together a coalition to run against Daniel Ortega, the FSLN leader and president. Violeta Chamorro won the election unseating the FSLN and their socialist goals. Shocked, but pleased, the US immediate went to work to encourage Chamorro to make certain economic and political decisions including downsizing the government in an effort to remove as many Sandinistas as possible and to drop Nicaragua's world court case against the US (Brown 2000). The Chamorro administration championed neoliberal reform carrying Nicaragua into new era of politics and economics. These neoliberal ideas were carried on by her successors Arnoldo Alemán (1997-2002) and Enrique Bolaños (2002-2007). Daniel Ortega continued to run in every election and after three unsuccessful bids, he won back the presidency in 2007.

Ortega has now served as Nicaragua's president for ten years, and he was reelected in November of 2016 to be president for another five years. Over this time, Ortega has worked to consolidate power and has reduced the exercise of many democratic principles. While he is still the leader of the FSLN party, the ideals of today's Ortega would be hardly recognizable to the FSLN that overthrew the Somoza regime in 1979. Some of the specific changes that Ortega has made, either directly or through the courts, to the functioning of the Nicaraguan government include ending presidential term limits in 2009, ending a Separation of Power law in 2010, and eliminating poll observers from the voting process in 2011 (Thaler 2017). Thaler (2017) also details a series of moves by Ortega to consolidate power of the police and military forces. In addition to these policy and law changes, Ortega has also developed strong relationships with the business class as well as the Catholic Church which were two major enemies of the Sandinistas in the 1970s and 1980s. While pulling these groups in, Ortega simultaneously joined the Bolivarian Alliance for the Peoples of our Americas (ALBA) and developed a particularly strong

relationship with Venezuela. The most prominent deal secured with Venezuela is the Petrocaribe Program which locks in Venezuela as Nicaragua oil provider, and, in return, Nicaragua agrees to pay off the shipment in particular, pre-set installments (Thaler 2017). Thaler (2017) argues that under Ortega Nicaragua has moved from competitive authoritarianism to more classic authoritarianism, and Nicaragua continues to inch away from democracy with each passing event of the Ortega Administration. It is in this historical and current context that this paper continues by exploring the evolution of the Nicaraguan economy.

Economy: Philosophies and realities of economics in Nicaragua

Ortega is termed by Walters (2017) as having a "contradictory economic agenda" (7). This can, in large part, be derived from the political alliances outlined above. In an effort to pursue capitalism while also pleasing what is left of his 1970s FSLN base, Ortega has taken a track which Walters (2017) dubs "market economy with a preferential option for the poor" (9). However, it seems as though the market economy mentality, more than the focus on the poor, drives the decision making of the administration. Nicaragua has established economically dominant free trade zones where foreign multinational corporations can set up shop and work under relaxed Nicaragua regulations with low paid Nicaraguan workers. The administration also supports industrial agriculture via subsidies and tax breaks. It should be acknowledged that they do also offer programs for small-scale agriculture, but the scope of these two endeavors do not compare. Ortega has also been encouraging large-scale extractive industries to dig into Nicaraguan gold reserves (Walters 2017). The government does have large aid programs to address poverty in Nicaragua; however, the majority of this funding is funneled into Nicaragua from the ALBA countries, and Venezuela in particular, so the long-term stability of this support is questionable given the volatility in Venezuela at present.

While not entirely illustrative of the reality on the ground, Nicaragua's economic statistics appear optimistic. According to UN Data (2014), Nicaragua's GDP had increased from US$ 8,741 million in 2010 to US$ 11,806 million in 2014. The GDP growth rate during that time, using 2005 as a baseline, is 4.7 percent. Nicaragua's two major economic sectors are agriculture and industry. Agriculture grew from 17.7 percent gross value added (GVA) in 2005 to 20 percent GVA in 2014. Industry has hovered between 23 percent GVA and 25.7 percent GVA over the past decade. Nicaragua is a net importer, and its largest trading partners as a percent of imports are the US, China, and Mexico; the largest trading partners as a percentage of exports are the US, Mexico, and Venezuela (UN Data 2014). Nicaragua's top exports are "insulated wire, knit t-shirts, coffee, gold, and frozen bovine meat" and their top imports are "refined petroleum, packaged medicaments, crude petroleum, delivery trucks, and cars" (OEC 2015). These statistical descriptors give some sense of where the economy has been focused in recent years. It is critical to address, however, that Nicaragua's economy has developed extremely unevenly. While many urban dwellers are experiencing upward mobility and the new bourgeoisie class that has risen under Ortega is thriving, there is still chronic rural poverty across the majority of the country.

Nicaragua's economy has shifted significantly in style and trajectory over the country's modern history in large part because of its tumultuous political past. The roots of the modern-day economy begin in the 16th century when Nicaragua was one of the focal points of the slave trade. The number of people removed from Nicaragua to be slaves in other countries significantly reduced the people in country who would be able to work. For this reason, people made decisions to focus on livelihoods that required less labor, but perhaps more land, following the Stolper-Samuelson model. This initiated the tradition of cattle farming in Nicaragua (Biderman

1983). During this time, people also started to grow cash crops for export with a main focus on cacao and indigo. The land tenure structure set up during this era persisted through much of Nicaragua's history and plays an important role in who had access to the land to grow crops. The 19th century was marked by the coffee boom which benefited the land-owning class the most.

Once Nicaragua gained full independence, one of the most substantial challenges for the Zelaya regime was to connect the economies of the Pacific and Atlantic regions. While the Pacific region was the more *culturally connected* region to the central city of Managua, the Atlantic region was the exporting powerhouse due to the historic presence of British and US corporate enterprises. There was general resistance to bringing together the regions at the expense of a united economy (Healy 1981). Even in present day, there is still a cultural divide between the Pacific and Atlantic regions of Nicaragua.

Under the Somoza regime, the economy was propelled towards the capitalist direction. From the onset of this capitalist momentum, the development of the economy happened unevenly (Biderman 1983). Somoza supported large agriculture through subsidies and incentives while disregarding the needs of the smallholder farmers. The 1950s and 1960s in Nicaragua are categorized by the cotton boom which is the major event that strengthened the divide between the subsistence based campesinos and the owning class. First, agricultural mechanization swept through the country, replacing workers with machines and chemicals. Second, the focus of cultivation shifted from food to cotton, so food grown in country for domestic consumption dropped significantly. Third, the government reduced campesinos access to credit, so they often were forced into a position where they had to sell their land to the industrial agricultural companies in order to have enough capital to feed their family for the next year. This phenomenon meant that campesinos who traditionally lived on the fertile flat lands moved up the

hillsides and on the sides of volcanoes onto land they could afford (Biderman 1983). This distribution of people across the landscape is still evident today with the lowland dominated by monocultures and the hillsides dotted with small farms and pervasive rural poverty.

When the Sandinistas overthrew the Somoza regime in 1979, they had a socialist, redistributive economic agenda. But, crippling sanctions from the US hampered their ability to move the country out of war recovery and into a functioning economy of any type. According to Stahler-Sholk (1995),

> The Sandinista development model envisioned a kind of expansionary restructuring of the economy, centered around a state-led investment drive that was supposed to modernize agriculture and agroindustry, raise productivity as an alternative to intensifying the exploitation of labor, and reduce external dependence (85).

Under the FSLN, the number of unions ballooned, and the government brought just under half of the country's economy under state ownership (Stahler-Sholk 1995). The goal was a radically different economic style from the Somoza era dominated by US involvement.

However, in 1990 when the Sandinistas lost the election to Chamorro, the trajectory of the economy shifted once again back towards neoliberal, capitalist values. Baquedano et al. (2011) explain that during the 1990s, Nicaragua focused on liberalizing the entire economy and specifically it looked to adjust policies on agriculture to favor privatization and price liberalization. The owning class systematically consolidated economic power in the form of buying up smaller companies and small parcels of land. As described in the governance section, the US favored this series of neoliberal Nicaraguan leaders and encouraged the capitalization of the economy. This era carries us back to the present-day Ortega economy which represent some mixing of each of these varieties of economy which came before him. While policies have

shifted, the major thread running through an analysis of Nicaragua economy over time is that of unequal development between the politicians and owning class and the rural campesinos (Biderman 1983 and Thaler 2017). This divide remains one of Nicaragua's most profound challenges looking into the future.

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