

THE POLITICAL ECONOMY OF MARINE CONSERVATION

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Abstract

Beginning in the mid-2000s, governments increasingly began relying on marine protected areas (MPAs) larger than 200,000 km² to help combat declining ocean health. This research asks two questions about this new phenomenon: why have large MPAs emerged as a part of the solution to ocean decline despite uncertain and disputed conservation potential, and what explains variance in how governments locate and manage large MPAs? To answer these questions, I propose a novel framework of environmental norm diffusion that divides the process into two stages: an international norm adoption stage, followed by a domestic norm localization stage. My argument is twofold. First, large MPAs have emerged as a part of a new global norm of large MPAs, with a select few transnational environmental NGOs (ENGOs) strategically targeting prospective sites in the absence of a cohesive multilateral civil society coalition. And second, governments make decisions about where to locate and how to manage a large MPA based on the salience of extractive and non-extractive industry interests within it. These interests are a function of an industry's intensity of activity, factor specificity, asset specificity, and exogenous stressors. The configuration of industry interests based on these indicators determines the type of stakeholder coalition that forms in a large MPA negotiation process. States then make decisions about large MPA location and management based on which stakeholder group they have aligned their interests with. I explore these arguments through three case studies: the 2014 expansion of the Pacific Remote Islands Marine National Monument in the US, the 2012 Coral Sea Commonwealth Marine Reserve in Australia, and the 2015 Palau National Marine Sanctuary in Palau. These case studies reflect state coalitions with ENGOs, the commercial fishing sector, and the ecotourism sector, respectively. This research uses a process tracing methodology that draws from 74 semi-structured fieldwork interviews in Australia, Palau, and the US. Interviewees include ENGO representatives, business owners and managers, industry association representatives, government officials, and marine scientists.

Lay Summary

In the mid-2000s governments began creating large marine protected areas (MPAs) exceeding 200,000 km². The goal of this dissertation is to explain why this new global trend emerged, as well to explain how governments make decisions about how to regulate the ocean space within large MPAs. It makes two contributions that answer these questions in turn. The first is that the trend towards large MPAs is the result of a select few environmental groups that have strategically promoted large MPAs to government leaders, building momentum one domestic campaign at a time. The second is that governments make decisions about how to manage large MPAs according to the extent of various industries' attachment to the resources within a large MPA site. The commercial fishing and ecotourism sectors can be especially influential in government decisions about how to protect a given marine ecosystem.

Preface

This dissertation is original, unpublished, independent work by the author, Justin Alger.

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Chapter 1: The Political Economy of Large Marine Protected Areas

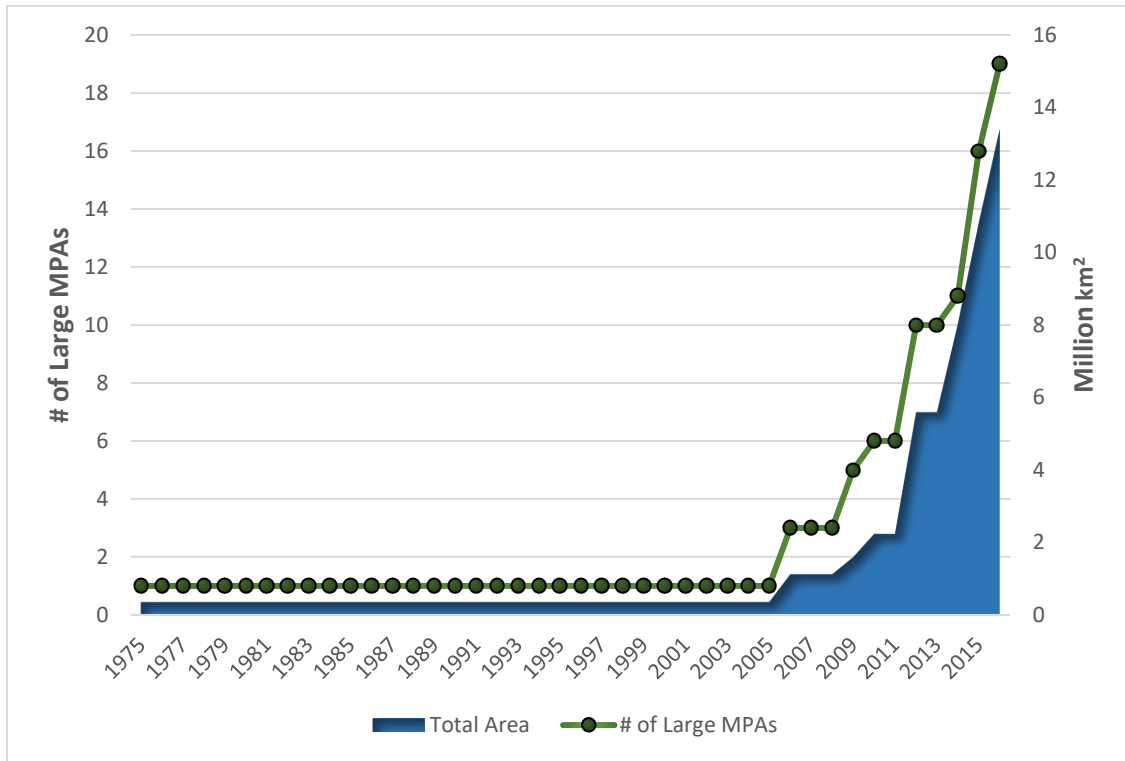
The pace and scale of global marine conservation efforts changed dramatically in 2006, with the US designation of the Papahānaumokuākea Marine National Monument – a 363,000 km² marine reserve that became the largest marine protected area (MPA) in the world. Within a decade, more than a dozen other marine reserves surpassed it in size, marking a new trend in how states protect marine biodiversity. This trend was towards large, pelagic, and, when feasible, no-take marine protected areas, which I define as exceeding 200,000 km² in size. This new practice of designating large MPAs has led to an unprecedented rate of marine protection, with governments protecting over 15 million km² in the decade since Papahānaumokuākea, a total exceeding the entire land masses of Canada or the US. Many of these areas are fully protected marine reserves that prohibit all extractive activity from oil and gas drilling to commercial fishing. Others are mixed use, typically permitting various types of commercial fishing that is often restricted to specified zones. This new practice is, for better or worse, reshaping the way that states protect marine biodiversity.

The trend towards large MPAs is a response to the growing scientific awareness that the oceans are declining at an alarming rate (Wilhelm et al. 2014). Global market forces have been having a devastating impact on the world's oceans (Jacques 2006; Lobo and Jacques 2017). Scientific research into ocean health ramped up in the early 2000s, showing that conditions were more dire than previously thought (Roessig et al. 2004; Pauly, Watson, and Alder 2005). The main culprits are climate change, terrestrial run-off, and overfishing. Climate change-induced coral bleaching is devastating reef ecosystems, leading many to functional collapse (Donner et al. 2005; Hoegh-Guldberg et al. 2007). Terrestrial run-off from agriculture and mining is eroding water quality in coastal reef ecosystems, including Australia's Great Barrier Reef (Furnas 2003; Fabricius 2005). Over three-quarters of coral reef ecosystems are currently threatened, meaning they are actively in decline (Burke et al. 2011). For decades, improvements in commercial fishing technology and practice have been masking the ongoing global collapse of fish stocks (Pauly et al. 2002; Barkin and DeSombre 2013). Many fishers are also finding increasingly creative ways of avoiding regulation, such as flying flags of convenience, further undermining fisheries management efforts (DeSombre 2005). By 2005 one-quarter of the world's fisheries had already collapsed due to overfishing (Mullon, Fréon, and Cury 2005).

With over 13,600 MPAs in the world, they are one of the primary policy tools that states use to protect marine ecosystems, but they have had mixed success at best in protecting marine life. The median MPA is only about 5 km², much smaller than what most scientists agree is necessary to be effective (Edgar et al. 2014). MPAs also tend to be poorly managed, and are often little more than ‘paper parks’ that contribute little to conservation (West and Brockington 2006; Kareiva 2006). The most ecologically vulnerable reef ecosystems are located in the global South, where capacity and implementation challenges are pervasive (Kareiva 2006; Burke et al. 2011). MPAs tend to suffer from poorly adapted terrestrial strategies, conservation programs that do not fit local realities, and other challenges of top-down management (Gaymer et al. 2014; de Morais, Schlüter, and Verweij 2015). Perhaps the greatest challenge is that states are often quick to establish MPAs, but fail to commit to effective enforcement, community involvement, and no-take zoning (Rife et al. 2013). Wealthier states tend to establish more MPAs, but do not invest more resources into managing them, underscoring the generally poor commitments of governments in protecting marine ecosystems (Fox et al. 2012). In short, global marine conservation efforts have fallen far short of being able to adequately combat ocean decline.

Large MPAs are distinct from typical MPAs in their size, of course, but also in that they protect pelagic ecosystems, which are the least protected ecosystem on the planet (Game et al. 2009). They emerged in the mid-2000s as one method for scaling up global marine conservation efforts, and government reliance on them to protect marine ecosystems has grown rapidly since, depicted in Figure 1.1. But despite their promise, they are by no means a panacea for marine conservation. They are in fact quite divisive, with many scholars and environmental groups opposed to or skeptical of them. One criticism is that governments tend to establish large MPAs in areas that are too remote from commercial activity, and therefore fail to address the sources of ocean decline (Toonen et al. 2013; Jones and De Santo 2016). Another is that large MPAs are incompatible with sustainable development, and prioritize closures over fisheries management practices, or tackling climate change. These critics argue that there is a normative preference for conservation over resource management among large MPA advocates that actually prevents progress towards sustainable global fisheries (Agardy, Di Sciara, and Christie 2011; Caveen et al. 2013; Leenhardt et al. 2013). Some caution that large MPAs are a form of ‘fortress conservation,’ in which governments establish protected areas that erode the rights of local and indigenous communities (De Santo, Jones, and Miller 2011). These criticisms all have merit, but they have not deterred states from creating new large MPAs.

Figure 1.1 – Emergence of Large MPAs



These criticisms also tend to homogenize large MPAs, sometimes neglecting that their location and management practices can and do vary quite considerably. Many large MPAs are remotely located, particularly those around UK and US territories in the Pacific Ocean. But others are not, in some cases comprising nearly the entirety of a nation’s exclusive economic zone (EEZ), and many are located in areas that do have a moderate amount of commercial activity. The management practices of large MPAs also vary, with many fully no-take, and others mixed-use and permitting a range of commercial activity in various zones. And while certain large MPAs have undoubtedly eroded the rights of local and indigenous communities, in others these communities play a more prominent role in their design, and sometimes endorse them. Governments need to make a variety of decisions about how to locate and manage a large MPA, and these decisions inevitably lead to many large MPAs taking on distinct characteristics from one another.

This dissertation is devoted to answering two questions about the emergence of large MPAs as a solution to rapid and ongoing ocean decline. First, why have large MPAs emerged as a solution despite their uncertain and disputed conservation potential? And second, what explains variance in how governments manage large MPAs? These questions are ultimately about how governments make decisions that balance conservation with the interests of various stakeholder groups, including

environmental groups, extractive and non-extractive industries, and local communities. These stakeholder groups influence the decisions that governments make about MPAs, and this dissertation will explore precisely how the interests of these stakeholders amalgamate to impact conservation outcomes. It does so through an analysis of the recent trend towards larger and in some ways more ambitious MPAs, but the insights from this analysis and the framework that I develop have potential application to smaller MPAs, and possibly to their terrestrial counterparts as well.

This chapter will unfold first by introducing the main argument in answer to the two questions that I pose above. It will then turn to a brief overview of the explanatory framework that I develop and apply in later chapters, including its theoretical foundations in international political economy. Next, I will position this work within broader international relations scholarship by contrasting it with potential alternative explanations for the emergence and variance of large MPAs. It will then outline the methodological approach that I take to answering these questions, including an explanation of how I selected my three cases: the expansion of the Pacific Remote Islands Marine National Monument (2014) in the US, the Coral Sea Commonwealth Marine Reserve in Australia (2012), and the Palau National Marine Sanctuary (2015). Finally, I will conclude this chapter by providing a brief overview of the chapters to follow.

Argument

This dissertation makes two overarching claims. The first is that the trend towards large MPAs is the result of a new global norm, propagated by a select few transnational ENGOs, and strategically promoted one national jurisdiction at a time in the absence of a cohesive multilateral coalition. This norm is for MPAs that are larger than 200,000 km², contiguous, pelagic, and, whenever possible, no-take. Many ENGOs do not actively promote large MPAs for the reasons cited above, so just a few have borne the brunt of the campaigning for this new global norm. Dedicated large MPA campaigns at The Pew Charitable Trusts and National Geographic Society (NGS) have been the primary driver of large MPAs around the world. These two groups effectively establish local coalitions with domestic ENGOs, lobby governments, produce scientific and socioeconomic reporting on an MPA site, and conduct promotional campaigns to rally public support. By strategically identifying and targeting politically feasible large MPA sites, these ENGOs have built momentum towards this global norm, which is becoming increasingly state-driven as governments recognize the value and feasibility of large MPAs as high-profile marine conservation initiatives.

The second claim is that variance in the location and management of large MPAs is the result of a coalition-based decision-making process in which the state aligns with environmental groups, extractive or non-extractive industry, or local communities. The type of informal coalition that forms in any given large MPA deliberation explains why governments set certain MPA boundaries, and the types of commercial activities allowed within them. Coalitions are determined by the configuration of various extractive and non-extractive industry interests, with the commercial fishing and ecotourism industries being especially prominent in the politics of large MPAs. How influential a given industry is in an MPA deliberation, and whether the government forms a coalition with that industry, depends on the salience of its interests. Intensity of activity, factor specificity, asset specificity, and exogenous stressors all combine to determine the salience of a given industry's interests in a given ecological and economic space.

One of the major contributions of this argument is to operationalize industry interests in a way that helps to explain environmental policy outcomes. There is a growing body of literature in international relations about the power and influence of corporations (Cutler, Haufler, and Porter 1999; Clapp 2006; Newell 2006; Fuchs 2007; Clapp and Fuchs 2009; Dauvergne and Lister 2013). This argument deconstructs industry interest salience into its component parts, allowing for a more nuanced understanding of when and under what conditions industry actors are able to influence domestic environmental policy-making. High levels of factor and asset specificity, for example, explain why industry actors can be influential even when their activity in a given region is quite low. Similarly, deconstructing industry interest salience helps to explain why industry actors often fail to convince governments not to enact new restrictions, despite protests that a region is important to their interests. Businesses are privileged political actors because of their economic importance, but there are limits to their influence. This argument and the framework introduced below are an effort to better understand the extent of industry influence in environmental policy-making.

This argument aligns with prominent global environmental politics literature on the political economy of the environment. This industry-focused explanation of environmental decision-making is consistent with Bernstein's (2001) insight that the current paradigm for environmentalism means that new environmental policies cannot hinder economic growth and development. Lobo and Jacques (2017) explain ocean decline as partly the result of a world ocean regime that prioritizes fisheries productivity over conservation. The argument that I develop lends support to this claim, demonstrating exactly how industry interests shape states' domestic MPA decisions. My claims that

NGOs target politically feasible large MPA sites and that industry interests are preeminent in government decisions supports Dauvergne's (2016) argument that environmentalism is increasingly industry-friendly, with gains predominantly marginal. Despite the scale of large MPAs and their very real potential to yield increasingly ambitious multilateral progress in protecting marine environments, the diffusion of the large MPA norm is broadly consistent with many of the insights from the political economy of the environment literature. My contribution to this literature is to operationalize industry interests and provide microfoundations that help to explain why and how the political economy of environmental issues is dictating how governments make conservation decisions.

This argument is also complementary to DeSombre's (2000) work on the internationalization of domestic environmental policy. DeSombre similarly theorizes the relationship between domestic stakeholder interests and international regulation (rather than norms), noting the significant role of industry in the creation of international environmental policy. My framework pursues a broadly similar theoretical agenda, but with an emphasis on the diffusion (from the international to the domestic) of environmental norms, rather than the internationalization of domestic regulations (from the domestic to the international). Both approaches note the prominent role of industry in influencing environmental outcomes, and specifically the importance of industry interest alignment with environmental goals.

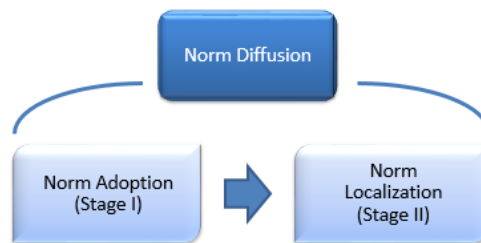
The two overarching claims above are the two pillars of my argument throughout this dissertation. They are effectively claims about the diffusion of a new norm in the international system. Diffusion is a two-stage process. The first stage involves the spread of a norm to new jurisdictions, and the process through which new states (in this case) adopt the norm. The second stage involves the localization of the norm, in which it takes on distinct characteristics that reflect local practice and customs. The next section introduces a two-stage norm diffusion framework that explains the diffusion of new norms through these two stages, and in accordance with the interests and influence of various stakeholder groups.

Framework

The strategic actor framework that I develop throughout this dissertation reflects the two stages of international norm diffusion, depicted in Figure 1.2. It draws on existing international relations theories of global norms to explain the spread of a new norm (stage I). To explain the localization of a new norm, however, it breaks from conventional international relations

explanations that tend to emphasize preexisting domestic cultural norms (Acharya 2004). Instead, I adapt Gourevitch and Shinn's (2005) coalition-based political economy model on corporate governance structures and apply it here to explain the localization of environmental norms. The outcome is a strategic actor framework for understanding the diffusion of environmental norms, which I develop in detail throughout this dissertation.

Figure 1.2 – Norm Diffusion



This strategic actor framework broadly reflects a two-level game in which states are engaging both internationally (during the norm adoption stage) and domestically (during the norm localization stage) (Putnam 1988). Unlike a standard two-level game, however, the state is engaging in two distinct processes rather than bargaining in both arenas on the same outcome. That is, in stage I states engage with other states and environmental groups on whether or not to adopt a new norm. This is not typically a bargaining process, but rather works through persuasion and socialization (Finnemore and Sikkink 1998; Price 1998). Once a state adopts this new norm, it goes through a norm localization process. In this framework, this process does reflect a traditional bargaining process, with the state negotiating (formally or informally) with domestic stakeholder groups about how to implement a new norm. During this process, coalitions form that lead to various environmental outcomes, as I claim in my above argument with respect to large MPAs.

These coalitions predict the decisions that governments make about environmental protection. The process through which these coalitions form is therefore an integral part of this norm diffusion framework. Gourevitch and Shinn's (2005) seminal work on corporate governance structures provides an effective model for understanding how informal coalitions form and influence governance outcomes. In their model, the interests of various stakeholder groups determine the type of coalition that forms. But the ability of these coalitions to achieve their objectives is filtered through intervening institutions, which can either facilitate or constrain a coalition. A combination

of stakeholder interests, subsequent coalitions, and institutions therefore determine policy outcomes. In the chapters to follow I develop this framework and its inherent concepts more precisely as I apply it to the diffusion of the large MPA norm.

Alternative Explanations

The argument and framework that I introduce above make a number of claims that challenge some of the existing theoretical explanations of norm diffusion. This section will introduce three alternative explanations that address different components of the argument that I outline above. The first is specific to norm adoption, and the process by which NGOs promote new international norms. The latter two alternative explanations are specific to norm localization, and explain localization as being contingent on civil society advocacy effectiveness, and local culture and norms, respectively.

Multilateral Persuasion

Most explanations of the initial emergence of a new norm focus on the ability of coalitions of transnational NGOs to successfully advocate for its adoption. They tend to emphasize transnational networks, and especially the capacity of NGOs to affect change through multilateral venues (Finnemore and Sikkink 1998; Price 1998; Keck and Sikkink 1998; Khagram, Riker, and Sikkink 2002). These scholars measure the influence of NGOs in international organizations (IOs), and tend to suggest that NGOs have greater influence when IOs afford them greater access, usually in exchange for providing information that fills gaps in state knowledge (Betsill and Corell 2001; Böhmelt and Betzold 2013; Tallberg et al. 2015). This process accurately characterizes the initial emergence of a wide array of global norms, on issues ranging from restrictions on certain types of weapons to better human rights standards (Price 1998; Risse, Ropp, and Sikkink 1999; Seidman 2007; Acharya 2013). It has become the predominant explanation of how civil society persuades states to adopt new norms.

But this explanation does not explain the emergence of the large MPA norm. Many ENGOs share the concerns and criticisms of large MPAs that I outline above; namely, that they are too remote, and often contrary to sustainable development goals. Major transnational ENGOs such as the World Wide Fund for Nature (WWF), Greenpeace, and The Nature Conservancy are therefore often lukewarm at best about large MPAs as a solution to ocean decline (at least in their current form). There is therefore no cohesive transnational ENGO coalition advocating for large MPAs. Additionally, the Convention on Biological Diversity (CBD) already includes MPA coverage targets, so ENGOs such as Pew and NGS had no need to advocate within the UN for a new legal mechanism to

encourage large MPA uptake. The prominent theories of international norm emergence do not reflect how the large MPA norm emerged, nor the more targeted process through which ENGOS persuaded certain states to adopt it domestically.

Civil Society Effectiveness

The explanation that I outline above gives primacy to the salience of industry interests, and the influence the configuration of those interests have on how governments make decisions about large MPAs. This explanation is asymmetrical, with industry interests doing the majority of the explanatory work, to the neglect of civil society-oriented explanations. Put simply, civil society campaigns vary in their effectiveness, which could determine the location and management characteristics of a large MPA. One of the most significant competing explanations to this framework and the theory of large MPAs that I develop later is therefore that effective civil society mobilization is integral to large MPA outcomes.

There is a wide body of international relations literature on transnational activism that can help to explain why some movements are able to mobilize effectively while others falter (Khagram, Riker, and Sikkink 2002; Bennett 2004; della Porta, Donatella and Tarrow 2005; Tarrow 2005; Batliwala and Brown 2006; Seidman 2007; Weible 2007; Sabatier and Weible 2007). Much of this literature focuses on how issues emerge within these networks, and how these networks then go on to influence global norms (Keck and Sikkink 1999; Bob 2001; Carpenter 2005; Bob 2007). Another current of thought positions NGOs as interest groups, considering how organizational factors and interests combine to determine their ability to affect domestic and international policy (Cooley and Ron 2002; Carpenter 2007; Bloodgood 2011; Stroup and Murdie 2012; Bloodgood, Tremblay-Boire, and Prakash 2013). Transnational advocacy groups often bring substantial normative and material resources to bear on contested issues, including MPAs. The extent of these resources affects their ability to compete with influential and often wealthy industry groups. ENGOS' ability to achieve their goals also depends on how effectively they lobby states, pressure economic actors, and reframe issues to garner public support (Wapner 1995; Wapner 2002; Evenden 2004; Khagram 2004). The ability of these groups to apply these strategies and constantly adjust them over the course of their campaigns can often predict success. The literature cited above covers just a few of the prominent explanations for how different features of transnational advocacy can influence the success of these movements.

Large MPA advocacy campaigns have, however, so far been fairly similar to one another, in large part because one of Pew or NGS tend to spearhead them and use the same campaign strategy. These campaigns have all been high-profile environmental campaigns. The size of the targeted areas and the wealth of biodiversity that they typically contain attracts a lot of public, industry, and international attention. These select few transnational ENGOs have needed to effectively collaborate with local ENGOs to develop a campaign strategy that works for a given constituency. In some cases there have been costly missteps that have undermined public opinion about large MPAs, and exacerbated industry opposition. But these missteps, as I will demonstrate throughout my case studies, had a minimal impact on government location and management decisions. Civil society explanations provide insight into why transnational advocacy campaigns succeed on some issues and falter on others, but the similarity of large MPA campaigns to date and the relatively minor impact of campaign missteps warrant an industry-oriented explanation of large MPA outcomes.

Local Culture and Norms

When international relations scholars refer to norm localization, they generally mean the interaction of global norms with local norms and customs. The process of localization is therefore one in which local actors reshape a global norm so that it is consistent with local 'cognitive priors and identities' (Acharya 2004). The diffusion of a new norm is therefore not homogenous across jurisdictions. It is instead dynamic, with a global norm often taking on distinct characteristics as local actors adapt it. This process of norm localization has been used to explain discrepancies in the diffusion of human rights norms in particular, most notably questions about the extent to which the responsibility to protect doctrine has spread throughout Asia, and to explain local resistance to small arms limitations (Capie 2008; Prantl and Nakano 2011; Acharya 2013).

The characteristics of large MPAs could therefore vary due to pre-existing cognitive priors and identities in various local jurisdictions. For example, it is not unreasonable to expect that a Pacific island nation with a longstanding cultural attachment to oceans and subsistence fishing would localize the large MPA norm differently than a wealthy industrialized nation with active commercial fishing fleets. Pre-existing local norms and customs undoubtedly influence the discourse of large MPA campaigns, but it is less clear how well they explain government decisions. As with the civil society explanation, the case studies to follow will demonstrate precisely how local culture and norms influence large MPA campaigns. But they will also demonstrate why stakeholder interests and coalition formation better explain government decisions. The policy decisions that governments

make about the location and boundaries of MPAs, and the commercial activities allowed within them, are highly responsive to the political economy of the area in question. Local norms and customs shape discourse, but they do not have the same measurable impact on government decisions.

That said, the framework that I introduce above accepts that norm diffusion is dynamic, and that new norms are localized according to domestic conditions. Where it differs is in the source of those conditions. Rather than the literature's focus on ideational factors, this framework uses material factors to explain its localization component. Instead of explaining localization through cognitive priors and identities, this framework explains it through the configuration of stakeholder interests tied to a specific economic and ecological space. This stakeholder analysis can explain large MPA norm dynamics, including whether a state's large MPAs are conservation- or management-oriented, whether they are mixed-use or no-take, and whether the intention is to strictly enforce them or run them as 'paper parks.'

Methodology

As of early 2017, there are only nineteen large MPAs in the world. Because ENGOs have strategically targeted politically feasible large MPA sites, there are also no clear cases of large MPA campaigns that did not yield a new large MPA, or that are not still in progress. That said, there are undoubtedly instances in which ENGOs assessed the possibility of a large MPA and declined to follow through with a dedicated campaign. These null cases could yield useful insight into how and why governments decline (or would be likely to decline) a large MPA, but information about these cases is too sparse to include them in this research. The population of cases for this research therefore consists of just the nineteen large MPAs that states have established by early 2017, as well as two large MPA expansions (both by President Obama, in 2011 and 2016), for a total of twenty-one possible cases.

Twenty-one cases are too few for quantitative analysis. The theoretical framework that I outline above includes a multi-stage process with a different set of stakeholders and causal variables at work in each stage. Those variables include the extractive and non-extractive use of resources, the salience of industry interests (itself an amalgamation of four indicators), various coalitions, the authority and permanence of institutions, and environmental change. The dependent variables—where states locate MPAs and how they manage them—have several dimensions, outlined in depth later. The small number of cases combined with the large number of causal variables poses a

degrees of freedom problem for quantitative analysis, meaning there are too few cases to produce statistically significant results (George and Bennett 2005). This research therefore requires a qualitative methodology.

Specifically, case-based process tracing can provide the inferential leverage required to determine the explanatory power of the theoretical claims that I make in subsequent chapters. To provide empirical support for my theoretical claims I need to demonstrate that I am accurately describing how events unfolded, and that those events are unfolding the way they are because of the causal process that I describe. Process tracing involves finding diagnostic evidence that can provide the basis for both descriptive and causal inference (Collier 2011). Causal inference depends on an accurate characterization of events or situations at various points in time, so to understand a process it is first necessary to describe it accurately (Brady and Collier 2010; Collier 2011). This research methodology focused on in depth case studies will provide a basis for descriptive inference of large MPA processes.

These case studies will allow me to assess the explanatory power of the series of theoretical claims that I derive from my strategic actor framework of norm diffusion. That is, they do not merely describe events, but apply a set of theoretical claims to each case to determine if they accurately explain large MPA political processes and outcomes. The goal is to determine why political actors make the decisions that they do—what stimuli they respond to, what processes they establish or participate in, how they position themselves relative to other actors and groups, and numerous others. Diagnostic evidence produced through process tracing is potentially limitless, and will therefore allow me to weigh the explanatory power of my theoretical claims against the alternative explanations that I outline above, even with so few cases to draw from.

Case Selection

Purposive rather than random sampling is necessary when the number of cases is small. This selection methodology will adhere to a diverse case selection technique that seeks to exemplify diverse values on both my independent and dependent variables (Seawright and Gerring 2008). Most importantly, these case studies need to vary in the salience of extractive and non-extractive industry interests. In this strategic actor framework, interest salience determines coalition formation, and by extension government decisions about large MPA location and management. Selecting case studies to reflect variance on industry interest salience provides more inferential leverage for assessing the explanatory power of the theoretical claims that I make in chapter three.

Cases need to also vary on the dependent variables to draw conclusions about variation in large MPA outcomes. Selecting on the dependent variable is problematic in qualitative research that relies on a correlational logic of inference, which relies on making causal inferences based on the values of independent and dependent variables (Geddes 1990). A causal process-based logic of inference, however, avoids this problem because of the inferential leverage provided by the potentially limitless number of causal process observations available in any given case (Collier, Brady, and Seawright 2010).

Table 1.1 outlines three case studies that adhere to this case selection criteria: the expansion of the Pacific Remote Islands Marine National Monument (PRIMNM) in the US, the Coral Sea Commonwealth Marine Reserve (CMR) in Australia, and the Palau National Marine Sanctuary (PNMS) in Palau. These three cases reflect a range of extractive and non-extractive industry interest salience in a large MPA site prior to a government establishing it. None of these cases has a high salience of extractive industry interests since ENGOs have so far avoided targeting sites with high extractive commercial activity. These three large MPAs nonetheless reflect a range of industry interest configurations and a range of MPA outcomes.

Table 1.1 – Case Selection

Case	Year	Independent Variables		Dependent Variables	
		Salience of Extractive Industry Interests	Salience of Non-Extractive Industry Interests	Remoteness from Economic Activity	Management Type
PRIMNM (US)	2014	Low	None	High	No-Take
Coral Sea CMR (Australia)	2012	Moderate	Moderate	Moderate	Mixed Use
PNMS (Palau)	2015	Low	High	Moderate	No-Take

Data Collection

There is very little academic literature available about any of these three cases given how recent they are, and given that marine politics is an understudied area of global environmental politics. Data collection therefore required an intensive interview process with MPA stakeholders. The case studies to follow draw from interviews with 74 key large MPA stakeholders and experts. Interviewees include politicians, government officials, industry representatives, ENGO employees

and managers, and marine scientists. This involved in-person interviews in: Washington, DC in the US; Cairns, Canberra, and Sydney in Australia; and Koror and Malakal in Palau. In instances in which in-person interviews were not feasible, phone interviews took place in their stead with individuals throughout Australia, the UK, and the US. All interviews were semi-structured interviews, and varied in length. Interview questions centered on asking for detailed descriptive accounts of large MPA campaigns and government processes, as well as the goals and roles of stakeholders involved in them. All of these interviews were conducted confidentially to protect the professional and personal interests of interviewees. Where interviewees are cited by name, I sought permission for attribution. Appendix I includes a comprehensive list of all interviewee positions, affiliations, and locations, except where doing so would reveal their identity.

In addition to these interviews, this research relies on a variety of secondary sources. Government and ENGO reporting on prospective large MPA sites is often extensive, so I draw from a number of these scientific and socioeconomic reports. These three large MPAs were also high profile conservation initiatives, so media reporting on stakeholder positions and expert views was often extensive, providing another useful source of data. Because these are high profile initiatives, there have also been numerous parliamentary and congressional proceedings on them across cases. Transcripts of these proceedings tend to be readily available, and provide further insight into the political process leading to the creation of new large MPAs. I was able to attend one such congressional hearing in person in Washington, DC, in September 2015. I use these supplementary sources to verify and support data collected from the interview process. Together, these sources provide a basis for assessing the power and influence of various stakeholder groups in determining governments decisions about large MPA location and management (Arts and Verschuren 1999).

Chapter Organization

The next two chapters of this dissertation comprise its theoretical component. They are divided according to the two stages outlined above. Chapter two draws from conventional international relations literature to explain the emergence of the large MPA norm. It more precisely defines the characteristics of this new norm, and specifies its origins within the US ENGO community. It then turns to explaining how and why this new norm has spread since the mid-2000s, and the reasons for why it is likely to continue to spread. It also briefly discusses the scientific challenge to large MPAs, and why this challenge is unlikely to impede the continued spread of the large MPA norm. This chapter explains the norm adoption stage (Stage I) of norm diffusion.

Chapter three introduces my strategic actor framework of environmental norm diffusion. This framework and my application of it to the large MPA norm comprise the main theoretical contribution of this work. This chapter will first introduce the framework in more depth than provided above. Then drawing from environmental politics and political ecology literature, it turns to providing an overview of the preferences of the four major stakeholder groups involved in large MPA bargaining processes; namely, the state, industry, ENGOs, and local communities. It then introduces the five-step coalition process portion of this broader norm diffusion framework, introducing the theoretical claims that I make about coalition formation, intervening institutions, and large MPA outcomes. These theoretical claims provide the basis for the analytical lens through which I examine my three case studies.

Chapter four through six are the empirical component of this dissertation, applying the norm diffusion framework and theoretical claims that I develop in the preceding chapters to large MPA cases. Chapter four analyzes Barack Obama's 2014 expansion of the Pacific Remote Islands Marine National Monument. Previously established by George W. Bush in 2011 as a 225,000 km² non-contiguous marine reserve, the Obama expansion increased it to 1,270,000 km². The minimal commercial interests in the region made this expansion a prime candidate for a coalition between the state and environmental groups, eventually yielding a large, fully no-take marine reserve.

Chapter five provides a much different story through an analysis of Australia's 2012 Coral Sea Commonwealth Marine Reserve. This large MPA has involved what is likely the most contested stakeholder bargaining process of any large MPA up to 2017. There is a moderate amount of commercial fishing and ecotourism activity in the Coral Sea, and the MPA is directly adjacent to the Great Barrier Reef Marine Park, itself a hub of commercial activity. This industry activity led to a protracted battle over how the area was to be regulated, a problem exacerbated by political instability as Australia had four prime ministers in just five years at the height of the bargaining process. This political instability complicated the negotiations and created a great deal of uncertainty, but ultimately did not prevent a stable coalition between the state and commercial fishing industry to emerge. This coalition will produce a mixed-use MPA that largely facilitates business-as-usual activity in the Coral Sea.

Chapter six turns to an analysis of the Palau National Marine Sanctuary, a reserve that comprises 80% of Palau's exclusive economic zone. Palau's economy is critically dependent on its ecotourism industry, which contributed 54% of its GDP in 2015 (Asian Development Bank 2016a). Its

commercial tuna stocks, however, are exported primarily by foreign-owned fleets with little local benefit. This reserve is an attempt to protect Palau's ecotourism sector while shifting towards building a domestic commercial fishing capacity to take place in the remaining 20% of Palau's EEZ. The idea for the sanctuary originally emerged out of the ecotourism sector (which tends to overlap quite closely with civil society in Palau). This coalition between the state looking to protect its economy and the critical ecotourism sector have been driving the sanctuary, with Palauan President Tommy Remengesau Jr. its primary advocate.

Finally, chapter seven will conclude with a comparative analysis of these three case studies. It will summarize a number of insights that result from applying this framework and the subsequent theoretical claims that it yields to my three case studies. It discusses insights from the norm adoption and norm localization phases of norm diffusion in turn. It concludes with a brief discussion of the potential for future research derived from this work.

Chapter 2: The Emergence of the Large MPA Norm

The emergence of a new norm of large MPAs has led to a fundamental shift in the way that states protect marine ecosystems. Although states continue to establish smaller, often networked MPAs, at no time in history has nearly as much ocean space been protected in so short a time as the past decade. Prior to 2006 the only MPA exceeding 200,000 km² was Australia’s Great Barrier Reef Marine Park, established in 1975. Since then nine different states have established 17 new MPAs that surpass this metric. After over 30 years of the Great Barrier Reef Marine Park being the largest MPA on the planet there are now 15 that exceed it in size. The large MPA norm has already taken hold in global marine conservation as state leaders continue to protect large swaths of ocean at an unprecedented rate (Alger and Dauvergne 2017).

The large MPA norm has its roots in a longer intellectual tradition of protecting ecosystems from human activity. The idea that these principles could be applied to remote, pelagic marine ecosystems began to take hold in the mid-2000s as environmentalists searched for novel ways to combat rapid ocean decline. State adoption of the norm was the product of a concentrated civil society campaign to convince governments that large-scale marine conservation was necessary to protect rapidly degrading oceans. The declining cost of satellite and drone monitoring technology has bolstered these efforts. It is now more feasible for governments to cost effectively monitor large and remote ocean spaces. ENGO large MPA campaigning has its roots in the US, with American ENGOs The Pew Charitable Trusts, National Geographic Society (NGS), and Conservation International (CI) being its early proponents. In 2006 Pew and NGS lobbied for the creation of a large reserve around the Northwestern Hawaiian Islands, in what would later become known as the Papahānaumokuākea Marine National Monument. At the same time CI was engaged in a campaign in Kiribati that led to the creation of the Phoenix Islands Protected Area (PIPA). These two large MPAs were the first byproducts of this new norm in global marine conservation.

This norm has three defining characteristics. When ENGOs lobby a state for a new large MPA they tend to actively promote the three characteristics in table 2.1.

Table 2.1 – Characteristics of the Large MPA Norm

Characteristic	Description
Large and Contiguous	The area is a, or contains at least one, contiguous area exceeding 200,000 km ² .
Pelagic	The area protects pelagic ecosystems in addition to coastal ecosystems.

Characteristic	Description
No-Take	Extractive use for commercial purposes is banned in the area, or in certain zones in the area.

That MPAs are large and contiguous, and pelagic are the two deterministic features of this norm. Large MPAs are often fully no-take, but the norm can be influential and active in particular cases absent this management requirement. For example, ENGOs like CI tend to be more open to mixed-use MPAs that have both environmental protection and sustainable development goals, and will therefore not necessarily advocate for a fully no-take area. Stakeholder consultation processes can also sometimes lead to an ENGO-proposed MPA being reduced in size, being mixed-use, or ultimately having few or no new restrictions on use. These three characteristics nonetheless all tend to feature prominently in the emergence of the large MPA norm.

This chapter will explain why and how this large MPA norm emerged in four sections. The first section will provide an account of the origin of the norm, including its intellectual roots in early US environmentalism. It will explain the ENGO strategy to frame ocean decline as a problem requiring large MPAs as the appropriate solution. Australia established the first large MPA in 1975, but it was not until two parallel ENGO campaigns in the US and Kiribati in 2006 that large MPA adoption began to represent a global norm. These campaigns were broadly consistent with how other norms in international relations have emerged through civil society activism, albeit with some key differences. These two campaigns provided a template for large MPA advocacy that ENGOs quickly began applying elsewhere. The second section will provide an overview of how quickly the large MPA norm has spread. It will argue that it has been successful to date in part because it is consistent with the broader global environmental regime. The third section will explain the scientific challenge to the efficacy of large MPAs and how advocates have responded to this challenge, concluding that the norm seems well positioned to overcome it. A final, concluding section will briefly make the case that the norm is well positioned to continue spreading. As a whole this chapter will argue that a new large MPA norm has emerged, that it has emerged through civil society, and that it is well positioned to continue to grow.

Origin

The origin of the idea of protecting large ocean spaces has a long intellectual history dating back to the environmental movement's earlier calls to protect ecosystems from the perils of human activity. These calls began in earnest in the 1960s primarily for terrestrial ecosystems, where

ecosystem degradation was clearly visible (Chape et al. 2005). The first international commitment to protecting ecologically representative areas was at the 1972 United Nations Conference on the Human Environment. States reiterated this commitment at several other environmental conferences, and it was later enshrined in the 1992 Convention on Biological Diversity (CBD). These commitments applied equally to terrestrial and marine ecosystems, but states tended to neglect marine ecosystem protections (Wood et al. 2008). The oceans seemed too massive and bountiful for anthropogenic decline. In the 1990s, prominent marine biologists and explorers such as Sylvia Earle and Jean-Michel Cousteau increasingly devoted their efforts to raising awareness about the finite limits of the ocean. The work of these early ocean conservation pioneers foreshadowed growing interest among scientists to document the extent and severity of ocean decline.

As our understanding of the human threat to marine ecosystems gradually improved in the 1990s and 2000s, environmentalists increasingly voiced their support for protecting our oceans in the same way that we protect land (Alpine and Hobday 2007). MPAs rapidly proliferated from the 1990s onward, but they were failing to curb ocean decline (Burke et al. 2011). Even with this rapid proliferation ocean coverage was poor (only 3% in early 2017), and just as damning, the vast majority of these MPAs were poorly managed ‘paper parks’ with few conservation benefits (Kareiva 2006; Burke et al. 2011). And even worse, the cumulative effects of climate change mean that each passing year puts more and more pressure on ocean ecosystems. Environmentalists needed an answer to this growing threat that had thus far been coupled with a poor governance response.

Large MPAs provide one part of that answer. There was already a precedent for them prior to the mid-2000s when the idea began to take hold in prominent ENGOs. The Australian government created the Great Barrier Reef Marine Park in 1975, and its management of it has had mixed results (De’ath et al. 2012). The Great Barrier Reef is one of the seven wonders of the natural world, so it was always the exception due to its uniqueness. Ecuador established the 133,000 km² Galapagos Marine Reserve over twenty years later in 1998. Like the Great Barrier Reef, the Galapagos is a globally iconic biodiversity hotspot, in no small part because it is often cited as the inspiration for Charles Darwin’s *Origin of Species*. What began to emerge in the mid-2000s was the idea that large-scale marine protections did not necessarily need to be reserved just for these iconic areas, nor did they need to be reserved strictly for coastal ecosystems.

Fewer protected areas exist in the pelagic ocean than in any other ecosystem on the planet (Game et al. 2009). This is partly because coastal waters tend to harbor the largest concentration of

biodiversity and are considered higher priority areas (Gray 1997). The enormity of the pelagic ocean ecosystem has also led critics to claim that area protections for it are ecologically, logistically, and economically infeasible (Alpine and Hobday 2007; Game et al. 2009). This view was the dominant view throughout the 20th century with states establishing smaller MPAs in coastal waters en masse, but neglecting pelagic waters. The oceanic pelagic ecosystem is by far the largest on the planet, which has made it both difficult to protect but also essential for healthy oceans (Angel 1993). The declining cost of satellite and drone technology around the same time frame has made monitoring larger areas possible, although enforcement remains a major challenge. The private sector was increasingly using these technologies for commercial purposes, so MPA proponents were quick to note their potential application to MPA monitoring as well.

Finally, large MPAs are possible because they are consistent with an international system that provides nations with sovereign control over their surrounding waters. Article 57 of the UN Convention on the Law of the Sea (UNCLOS) established a 200 nm limit for states exclusive economic zones, within which they have the sovereign right to control all resources, and govern as they see fit. This international convention afforded former colonial powers massive EEZs due to their overseas territories, most notably France, the UK, and the US. A small military outpost on a remote Pacific island was sufficient to give these former colonial powers sovereign control over large, remote swaths of ocean. These international rules coupled with colonial legacies have afforded certain states opportunities for large scale marine conservation that would not otherwise be possible.

To summarize, throughout the 2000s a growing movement for the need for pelagic MPAs was emerging. This movement emerged for a few reasons. First, it was becoming increasingly clear how much human activity was devastating pelagic ecosystems that previously seemed an inexhaustible source of resources. Second, although states and conservationists tended to neglect pelagic systems in favor of more biodiversity-rich coastal and terrestrial ecosystems, neither ever claimed that they were not important. Third, monitoring large, remote protected areas became feasible through more affordable satellite and drone monitoring technology. And fourth, international law and colonial histories give some states control over vast ocean spaces far beyond their continental shelves. In short, even many environmentalists who once considered these areas boundless and unfeasible to manage increasingly saw them as threatened and practical conservation targets. This recognition among many marine biologists and conservationists was the intellectual origin of the large MPA

norm. That norm began to manifest itself in state policy through the advocacy efforts of a handful of primarily American ENGOs beginning in the mid-2000s.

The origin of the idea that large MPAs could be a partial solution to ongoing ocean degradation has some parallels to how epistemic communities have influenced policy in other areas (Adler 1992; Haas 1992; Haas 2016). Given government uncertainty about how to address ongoing ocean degradation, networks of marine scientists have been increasingly advocating for a more ambitious, ecosystem approach to marine conservation policy (Sherman et al. 2005; Mahon et al. 2009), noting the dearth of protection for pelagic waters (Game et al. 2009), and noting the conservation benefits of untouched ecosystems (DeMartini et al. 2008; Sandin et al. 2008; Friedlander et al. 2014). This professional network has increasingly worked to inform governments of the value of larger scale conservation policies. Marine scientists' research into the extent of ocean degradation in the 1990s and early 2000s was similarly crucial as a precursor to the large MPA norm.

But the influence of a marine conservation epistemic community does not explain the emergence of the large MPA norm well for a few reasons. First, most of the scientific research specific to large MPAs came after the first manifestation of the norm in 2006. Second, the idea to lobby for large MPAs originates with a few individuals at a select few ENGOs motivated primarily by a desire to better protect marine environments that was not necessarily grounded in any scientific consensus or understanding, discussed in depth below. Third, it is debatable that there is a shared set of causal and normative beliefs specific to large MPAs—both definitive features of epistemic communities. There are actually notable divisions within the scientific community and even among ENGOs about the value of large MPAs, also discussed further below. An epistemic community tends to be more influential when there is consensus within it (Cross 2013). And finally, there is considerable overlap between prominent large MPA advocates and the marine scientists publishing studies that endorse them. ENGOs themselves are increasingly sources of original scientific research, which partly explains the growing number of studies supporting large MPAs in the decade following the initial emergence of the norm (Gough and Shackley 2001). Individuals such as Lance Morgan and Enric Sala are among the more prolific scientists publishing studies that support large MPAs. These two individuals are also the President of the Marine Conservation Institute (MCI) and a National Geographic Explorer-in-Residence respectively, two of the most prominent ENGOs campaigning for large MPAs. For these reasons, the large MPA norm is predominantly a product of ENGO advocacy rather than of an epistemic community.

As Finnemore and Sikkink (1998) outline in their seminal article, norms become engrained in international politics through a three-stage process called the 'norm life cycle.' This pattern of norm emergence is evident across a wide range of cases in international relations (Meyer 1979; Finnemore 1993; Price 1998; Sunstein 1999; Kelley 2008). In the norm emergence stage, norm entrepreneurs motivated by an ideational commitment work to persuade decision makers about an appropriate course of action. Once these norm entrepreneurs have convinced a critical mass of states to adopt a given norm it reaches a tipping point. After this tipping point is reached a norm moves on to the norm cascade stage, at which point it becomes widely adopted in the international system. In the norm cascade stage, states that have not already adopted the norm become socialized into it as they seek legitimacy, often responding to social pressure from influential states. Some norms become so deeply engrained in international politics that they reach the final internalization stage. A norm is internalized when it has become institutionalized across most, if not all, states, and conformance with the norm is essentially automatic. Some scholars have criticized this life cycle model as being too static or linear to accurately capture the dynamism of various international norms (Krook and True 2012), but it nonetheless remains the dominant model in international relations norms scholarship.

Finnemore and Sikkink's (1998) theoretical explanation for how norms emerge in the first stage of the norm life cycle accurately characterizes the emergence of the large MPA norm. In response to the growing consensus about the need for pelagic ecosystem protections, US ENGOs Pew, NGS and CI began expanding their marine conservation advocacy efforts to include large MPAs. These organizations were the primary norm entrepreneurs, motivated to do more to protect marine ecosystems in the face of growing scientific knowledge about the rapidity and severity of ocean decline. ENGOs can be highly influential in convincing states to adopt their ideas (Wapner 1995; Gulbrandsen and Andresen 2004; Betsill and Corell 2008). The dominant mechanism for the growth of a norm in the emergence stage is persuasion, as norm entrepreneurs work to convince decision makers about an appropriate course of action. In this case these ENGOs used their pre-existing lobbying power and expertise to persuade state leaders that large MPAs were the appropriate policy response to the poor state of marine protection.

Framing the Large MPA Norm

For a new norm to emerge norm entrepreneurs need to construct a 'cognitive frame' for the issue (Snow et al. 1986; Finnemore and Sikkink 1998). The goal of framing is to present a new norm

in a way that will convince a target audience to support it (Payne 2001). Norm entrepreneurs' strategies for promoting a new norm involves either persuasion or strategic manipulation (Payne 2001). Persuasion is an attempt to alter the preferences of the target audience, or put differently, to convince the audience that a certain course of action is desirable. Norm entrepreneurs create new cognitive frames in order to change the perception of decision makers and the public about a problem and the appropriate course of action to address it. Strategic manipulation refers to norm entrepreneurs' use of material levers to distort frames and convince a target audience to adopt a norm that might not be in its interests. Strategic manipulation is not prominent in the emergence of the large MPA norm because ENGOs tend to lack material levers over states.

Both the persuasion and strategic manipulation methods of norm framing imply that the target audience has firmly established existing preferences. In most cases emerging norms need to alter these existing preferences, as was the case with the anti-landmine campaign in the 1990s or the spread of human rights norms throughout the latter half of the 20th century (Price 1998; Risse, Ropp, and Sikkink 1999). Protecting often remote, large swaths of ocean was not on states' agendas before ENGOs began advocating for large MPAs in the mid-2000s, so state preferences had not yet formed. ENGOs were not advocating for large MPAs to replace the existing practice of networks of smaller MPAs, but rather to complement them. The ENGO efforts to promote large MPAs in the mid-2000s was an exercise in state preference formation rather than alteration. The goal was not to overthrow the existing paradigm of marine conservation, but to expand on it.

When actors form new preferences they are influenced by both ideational and instrumental factors (Fearon and Wendt 2002). They form their preferences according to what IR scholars refer to as either a 'logic of appropriateness' or a 'logic of consequences,' respectively (March and Olsen 1998). The spread of norms involves a complex combination of normative and instrumental causes and constraints (Kelley 2008), and ENGOs used elements of both ideational and instrumental persuasion to convince states to establish large MPAs. They persuaded state leaders that large MPAs were the appropriate policy response to ocean decline, but also that they would benefit politically from establishing large MPAs.

Ideational Persuasion

ENGOs frame ocean decline as an increasingly urgent issue, highlighting the severe pressure that overfishing, climate change, and other stressors put on marine ecosystems. They characterize ocean decline as a problem caused by both local and diffuse stressors, and argue that large MPAs

are the appropriate policy response for states to address both types of stressor. Prior to the mid-2000s conservationists and governments neglected pelagic ocean ecosystems in favor of more biodiversity rich and more feasible coastal areas. Pelagic conservation did not focus on protected areas, but rather on combatting overfishing through fisheries management mechanisms or on mitigating climate change. ENGOs needed to convince governments that pelagic MPAs were a mechanism worth pursuing.

ENGO advocates of the norm argue that large MPAs are the appropriate response in two ways. First, they provide scientific evidence that even a small amount of human activity can drastically alter the composition of a marine ecosystem. Studies of both the Line Islands and the Pitcairn Islands have shown that there is significantly less top predator biomass in areas where even a small amount of commercial fishing occurs (DeMartini et al. 2008; Sandin et al. 2008; Friedlander et al. 2014). Marine ecosystems, unlike their terrestrial counterparts, are healthy when there is an abundance of top predator biomass. ENGOs tend to use this evidence to advocate for MPAs that are big enough to protect entire marine ecosystems, and also fully no-take. Second, ENGOs point to the evidence that area protections are an important part of strategies to make ecosystems more resilient to the impacts of climate change (Hughes et al. 2003; Bellwood et al. 2004; McLeod et al. 2008). ENGOs make the case to states that large MPAs address both causes of ocean decline: the local threat of extractive industry, and the diffuse threat of global carbon emissions.

MPAs were already well established as a marine conservation tool by the mid-2000s, so ENGOs emphasize the urgency of the ocean decline problem as a way to convince states to increase the scale and pace of area protections. There are currently over 13,600 MPAs in the world, but their median size is only about 5 km². MPAs were not formally included in the International Union for the Conservation of Nature's protected areas network until 1982, but they grew rapidly in number in the latter half of the 20th century. States have historically used them mainly for the small-scale conservation of local reefs and marine habitats rather than more comprehensive ecosystem protection. ENGOs were looking to change that by advocating for MPAs large enough to protect larger ecosystems, as well as contribute to protecting part of the habitat of highly migratory pelagic species.

The already established practice of using MPAs to protect marine environments eased ENGOs' advocacy efforts for large MPAs. One way that civil society actors persuade decision makers to adopt a given norm is to graft it onto an existing norm (Price 1998). Grafting a new norm involves

rooting it in existing practices and ideological frameworks. The goal is to frame a new norm in a way that will resonate with broader public and policy maker understanding (Payne 2001). ENGOs could root the large MPA norm not only the pre-existing state use of MPAs for small-scale marine conservation, but the more prominent use of protected areas for conservation on land. As of early 2017 15% of the earth's terrestrial area is under some kind of protection compared to only 3.0% of the global ocean (or 7.3% of state EEZs) well below the 10% target embedded in the Convention on Biological Diversity (CBD)(Marine Conservation Institute 2017). Spatial management as a conservation tool was already internalized in state practice by the mid-2000s. Promoting the large MPA norm entailed ENGOs taking the already established norm of using protected areas for conservation and convincing states that they would be valuable for larger, often remote marine areas as well.

ENGOs also worked to persuade states that taking a precautionary approach to protecting marine biodiversity was the appropriate course of action. They did this for two reasons. First, it allows them to undermine arguments that large pelagic MPAs are ineffective. Marine conservation science is complex, and the appropriate conservation tool for a given area can vary based on what needs to be protected and what threatens it. For example, the scientific basis for using MPAs to protect localized coral reef ecosystems is well established (albeit not against climate), whereas the notion that MPAs can also be useful in protecting pelagic ecosystems with migratory species such as tuna is newer, and still contested. I will elaborate on the contested science of large MPAs later in this chapter, but the point here is that by advocating a precautionary approach to environmentalism ENGOs put the onus on those opposed to large MPAs to clearly demonstrate that they do not in fact protect migratory species. In the face of contested science, ENGOs argue, the government should err on the side of greater protections.

The second reason ENGOs advocate for a precautionary approach is to bolster their arguments that large MPAs in remote areas are necessary. The proposed sites for large MPAs are often removed from the commercial activity that causes ocean degradation, so industry groups and even some ENGOs claim that they do not address the real root of the problem anyway. Large MPA advocates argue that remote MPAs act as an insurance policy, guaranteeing that they are forever protected from commercial activity. Increasing technological sophistication and overcapitalization of the fishing industry has increased the geographical reach of fishing fleets over the past few decades, putting intense pressure on fish stocks (DeSombre and Barkin 2011; Barkin and DeSombre 2013).

Locating MPAs in remote areas insulates them from this ongoing trend. And as noted above, even a minimal amount of human activity can have wide ranging ecosystem impacts (DeMartini et al. 2008), so ENGOs argue that remote areas with little commercial activity need protection.

Another component of the ENGO strategy to persuade states that large MPAs are the appropriate response to ocean decline is to make an emotional appeal directly to a state leader.¹ Affect, empathy, and moral belief are often an important part of promoting a new norm (Fearon 1999; Clark 2010). A new norm advocates a new course of action as being an appropriate one, not necessarily as being more truthful (Finnemore and Sikkink 1998). Strategies for promoting a new norm therefore often involve some kind of emotional appeal rather than a solely rational one. ENGOs usually make the final appeal for a large MPA to a head of state, or high-ranking minister or secretary. Advocacy efforts often begin with lower-ranking officials or intermediaries, but the scope of a large MPA as an environmental initiative generally means it receives high-level attention early in the process. ENGOs tend to not want to rely solely on communicating complex, contested science to state leaders to convince them of the merits of a new large MPA, so they work to romanticize the marine life that a new MPA would protect. Many large MPAs are located in previously unexplored areas, so the first step for an ENGO is to conduct an expedition to gather scientific information about the richness of biodiversity in a given space.² They then communicate this information to a state leader or high-level officials through a combination of reports, documentaries and, when possible, bringing them on one of these expeditions.

Instrumental Persuasion

ENGOs also work to persuade state leaders that large MPAs have political benefits as well. They highlight their low cost, the relative ease of establishing them, and the minimal industry stake in the regions that they have targeted so far. The largest cost of maintaining a large MPA is monitoring the area for any illegal activity. As noted above, satellite monitoring technology is becoming increasingly affordable, and has made it easier for ENGOs to argue that the remote monitoring of large MPAs can be cost effective.³ Historically patrol boats have been the main monitoring mechanism for MPAs, but the sheer size of a large MPA means that patrol boats are impractical. ENGOs frequently

¹ Interview with Program Director, National Geographic Society, Washington, DC, 17 September 2015.

² Interview with Program Director, National Geographic Society, 17 September 2015.

³ Interview with Consultant, Sea-Scope, phone, England, 7 August 2015; interview with Director, Sea Around Us, University of British Columbia, Vancouver, BC, 17 August 2015; Interview with Senior Scientist, Sea Around Us, University of British Columbia, Vancouver, BC, 17 August 2015.

propose satellite monitoring as the solution. For example, Pew was so confident of the effectiveness and affordability of satellite monitoring in the UK's Pitcairn Islands Marine Reserve that it committed to paying for it for the first five years.⁴ Large MPAs also require little to no initial investment to establish. The first step for a government to create a large MPA can sometimes be as simple as setting its boundaries by drawing lines on a map, followed by the often more challenging process of deciding on the restrictions for the area, and then monitoring and enforcing them. The government resources required for a large MPA are nonetheless fairly modest given the amount of area protected, making them an attractive high-profile environmental policy initiative to state leaders.

NGOs are also deliberately targeting areas that are remote from commercial activity to limit the amount of industry resistance they need to contend with. They do this in part to further romanticize untouched ecosystems that warrant protection, but it also serves a strategic purpose. State leaders are more likely to establish an MPA in a remote area because they can do so without overly upsetting industry groups. This allows state leaders to pursue high-profile conservation initiatives that will not receive a lot of corporate backlash. They appear to be an 'easy win' for state leaders looking to bolster their environmental credentials, and in many instances, they are. For example, the public and conservation groups alike praised British PM David Cameron for creating the Pitcairn reserve in the middle of the Pacific, but the announcement also partly masked the government's failure to deliver on its marine conservation promises for the UK continental shelf. Despite many of these areas being removed from commercial interests, the case studies to follow will show that industry interests play a prominent role in even some of the most remote regions of a state's EEZ. Influential industry groups are in fact central to the rationale behind why NGOs target remote areas in the first place.

NGOs also target remote areas for the longer term strategic objective of setting a precedent for large MPAs. The US established all three of its large MPAs in the past decade in remote areas far from the continental US. In 2015 President Obama started pursuing another large MPA (albeit less than 200,000 km²) at Cashes Ledge in the Atlantic off the coast of New England, an area with a higher level of industry activity. Although Obama eventually decided against the Cashes Ledge large MPA, by targeting remote areas NGOs are establishing the basis upon which the large MPA norm can potentially spread to less remote areas. The NGO strategy of targeting remote areas therefore

⁴ Interview with Senior Policy Analyst, UK Foreign and Commonwealth Office, phone, London, 30 October 2015.

serves two purposes: in the short-term it increases their chances of a successful campaign, and in the long-term it sets a precedent that can serve as a basis for ENGOs and state leaders to begin targeting less remote areas.

Finally, large MPAs are politically attractive because they tend to be rewarding for state leaders. In the US, President Bush received praise from otherwise hostile environmental groups for establishing Papahānaumokuākea. After he established PIPA, President Anote Tong of Kiribati became a high-profile spokesperson for Pacific Island states on climate change, became a board member for CI, and won several environmental awards, in addition to the formation of an international committee devoted to awarding him a Nobel Peace Prize. ENGOs use the idea of a 'blue legacy' as a type of emotional appeal to encourage state leaders to establish large MPAs.⁵ Unlike much of what a leader will accomplish during her or his time in office, large MPAs are a lasting, physical manifestation of that time. ENGOs cite the positive reception to large MPAs and the legacy they leave as a part of their strategy to convince a state leader of their benefits to that leader personally.

Framing Summary

ENGOs work to persuade state leaders on both ideational and instrumental grounds to establish large MPAs. They frame ocean decline as an increasingly urgent problem and call for an ambitious response. They advocate for large MPAs as the appropriate response because they are firmly established in existing practice and because scaling them up can protect entire, often pristine, ecosystems. By also appealing to state leaders' instrumental interests these ENGOs provide a compelling rationale for establishing large MPAs. Given this compelling rationale and the lack of pre-existing preferences, ENGO large MPA campaigns to date have been highly successful. Those successes started in 2006 with Papahānaumokuākea and PIPA, were quickly replicated in several other coastal nations in the following decade, and have so far shown no signs of faltering. International norms often begin as domestic norms and later spread internationally (DuBois 1994). The large MPA norm is such a norm, with primarily American ENGOs beginning the process of framing it through their respective campaigns to designate Papahānaumokuākea and PIPA in the US and Kiribati respectively.

⁵ Interview with Program Director, National Geographic Society, 17 September 2015.

Papahānaumokuākea

In 2005 Pew executives Josh Reichert and Steve Gainey—motivated by growing evidence of ocean decline and the poor state of marine protections in the US—decided that they wanted to identify a major marine conservation initiative in the Pacific.⁶ They quickly identified the Northwestern Hawaiian Islands as a prospective site, and put eventual Global Ocean Legacy—a Pew program devoted to large MPAs—founder Jay Nelson in charge of the campaign. The area was already partly protected and had been bogged down in the National Oceanic and Atmospheric Administration’s (NOAA) marine sanctuary designation process since 2001. Pew saw the opportunity to increase both the pace and the scale of protections for the area through an executive order, so started immediately lobbying the Bush administration to take action. This lobbying represents the first efforts to frame the large MPA norm.

Pew, along with like-minded NGS, Environmental Defense Fund (EDF), and Marine Conservation Institute (MCI), needed to convince the Bush administration of the value of protecting the remote Northwestern Hawaiian Islands. The ENGO strategy was to use a combination of scientific information and emotional appeals directly to President Bush to convince him of the area’s importance, in what would later become the standard ENGO strategy to advocate for new large MPAs. The Bush White House never released the ENGO scientific report on Papahānaumokuākea to the public, but the report detailed the richness of biodiversity in the area. The Northwestern Hawaiian Islands contain more than 11,500 km² of coral reefs, are home to over 14 million seabirds, and contains one of the highest ever recorded top predator biomasses in a coral reef ecosystem (Morgan 2013). The area had also received various environmental protections in 1903, 1940, 1967, and again in 2000, so previous US presidents had already acknowledged the area’s importance by the time ENGOs were lobbying the Bush administration in 2006. All that was left was for ENGOs to convince Bush that the area warranted more ambitious protections than those already in place.

ENGOs made their initial appeal to the Council on Environmental Quality (CEQ), the environmental arm of the Executive Branch, holding several meetings with them.⁷ The CEQ agreed that the government should close the area, but wanted an indication of the potential political response to creating a reserve. It wanted the support of the governor of Hawaii, and it wanted

⁶ Interview with Former Executive, Pew Charitable Trusts, phone, Juneau, AK, 7 October 2015.

⁷ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

reassurance that the Hawaiian Congressional delegation would not oppose it.⁸ Representatives from Pew, EDF and MCI were all involved in lobbying Hawaiian politicians for their support, including meeting directly with the governor. The lobbying efforts proved largely successful and the CEQ received the assurances it required. The industry presence in the region was also virtually nil with only nine fishers having permits (one of which was in jail at the time), so there was next to no industry resistance.⁹ The likelihood of a strong political or industry backlash looked to be minimal.

The next step was for ENGOs to appeal directly to President Bush, which they were able to do at a White House event in 2006 with CEQ support. ENGO executives along with other prominent marine conservation luminaries, such as Jean-Michel Cousteau and Sylvia Earle, made an emotional appeal directly to President Bush during a documentary screening and dinner at the White House in 2006. The documentary was Cousteau's *Voyage to Kure* (Cousteau 2005). It depicts his team's trip to the Kure Atoll in the Northwestern Hawaiian Islands, and catalogues the vast array of marine species over the course of several dives. Like many documentaries of its kind, *Voyage to Kure* romanticizes the marine biodiversity of the region while simultaneously calling for action to protect it. National Geographic's 2005 book of photographs taken in the Northwestern Hawaiian Islands, *Archipelago*, complemented this screening to provide a fairly comprehensive visual overview of the flora and fauna on and around the islands (Liittschwager and Middleton 2005). The dinner following the White House screening provided a more intimate setting for the conservationists present to further educate the President on the importance of the area. Both President Bush and First Lady Laura Bush were moved by the documentary, and reportedly committed to establishing the 362,000 km² region the night of the screening.¹⁰

The political response to Papahānaumokuākea was in fact resoundingly positive. The praise that President Bush received for the reserve had such a strong effect on him that it encouraged him to establish two more large MPAs during his remaining time in office.¹¹ The short-term impact on US marine conservation was directly evident in Bush's expressed desire to leave a blue legacy. The positive reaction from the public and environmental groups provided the first clear evidence that large MPAs could be politically rewarding for the leaders that establish them. In 2016 President

⁸ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

⁹ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

¹⁰ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

¹¹ Interview with Executive, Environmental Defense Fund, phone, Raleigh, NC, 23 September 2015.

Obama expanded Papahānaumokuākea to the full 200 nm limits of the US EEZ, protecting 1,508,870 km² of ocean.

The ENGO campaign for the reserve became an effective model that they could replicate elsewhere. Papahānaumokuākea reflects all three characteristics of the large MPA norm: it is large and contiguous, protects pelagic waters, and is no-take. It also created the template for future large MPA advocacy efforts. The rapidity and severity of ocean decline was the preamble to this ENGO campaign, but ENGOs otherwise focused on presenting a positive message. Their message was that a large MPA was scientifically important to the region's biodiversity. Moreover, they instilled a sense of stewardship over this pristine area in President Bush. ENGOs had so effectively presented the case for Papahānaumokuākea that they convinced a conservative US president with an otherwise poor environmental record to create what was, at the time, the world's largest MPA.

Phoenix Islands Protected Area

Meanwhile, ENGOs were engaged in a similar process in Kiribati under the leadership of marine biologist Gregory Stone. A New England Aquarium expedition in 2000 led by Stone was among the first attempts to document the marine life of the Phoenix Islands.¹² In what would become a fairly common story for large MPA campaigns, these first dives revealed a richness of biodiversity that the local government was previously unaware of. Stone reported the findings of this and subsequent expeditions to Kiribati government officials and President Tong himself, who were quickly convinced that protecting the area was important. It was in fact the government that expressed a desire to create a more ambitious reserve that included pelagic waters in response to evidence of white caps spotted along the borders of Kiribati's EEZ.¹³ These white caps imply a shallow reef ecosystem further ashore, which means greater biodiversity. Stone's tacit strategy in Kiribati mirrored the concurrent ENGO campaign for Papahānaumokuākea: he provided evidence of a thriving, lush ecosystem directly to state leaders, instilling the sense of stewardship that has become essential to large MPA designations. President Tong announced PIPA in 2006, and formally established it in 2008 after a government process. PIPA, like Papahānaumokuākea, is large and contiguous, no-take as of 2015, and was the result of an entrepreneurial state leader taking advice from ENGOs.

The one major obstacle to protection that was not present around Papahānaumokuākea was that the waters surrounding the Phoenix Islands were important to the Kiribati economy. A large

¹² Interview with Executive, Conservation International, Arlington, VA, 17 September 2015.

¹³ Interview with Executive, Conservation International, 17 September 2015.

MPA was not at first politically attractive to President Tong because of the potential lost commercial fishing revenue in the area. Kiribati is especially known for its profitable skipjack tuna, the most common species of tuna for canning. Kiribati is one of the least developed Pacific Island states, with the government relying on fishing licenses for nearly half of its revenue (Central Intelligence Agency 2016b). The potential revenue loss from banning fishing in such a large portion of its EEZ made it difficult for Tong to protect the area. Stone proposed having an ENGO set up a trust to offset this revenue loss. These types of arrangements are common on land, but this had not been done in the ocean, with one exception around Iceland.¹⁴ American ENGO Conservation International proved willing to try to raise the funds. CI has what it calls a more humanist philosophy towards conservation, favoring an approach that combines sustainable development and conservation goals. The trust idea was therefore one that resonated well with CI's core philosophy.

The CI trust was not immediately available in 2008 so Kiribati did not ban commercial fishing in PIPA until January 2015. Kiribati used the time to substantially increase its revenue from fishing licenses. Fairly modest revenue of \$23 million in 2011 skyrocketed to \$100 million in 2014 by increasing the number and allowances of its licenses (Korauaba 2015). The delay in the PIPA fishing ban and the increased revenues outside of PIPA demonstrate the importance of extractive industry interests to how large MPAs are established. ENGOs need to account for the economic impact of a particular reserve on the country establishing it if they want their large MPA campaigns to be successful. CI demonstrated that a trust was one possible way to convince states to establish a large MPA. Kiribati, for its part, demonstrated that closing off one area to fishing did not necessarily mean an overall revenue loss. Many conservationists in fact criticize PIPA for not effectively reducing the total biomass taken from Kiribati waters, as the reduction in the protected zone was more than offset by increases elsewhere.¹⁵ The delay and overall increased fishing led to some scathing critiques of PIPA as an undelivered promise (Pala 2013).

PIPA, delays and criticism aside, set the precedent for developing countries to establish large MPAs. In 2008 PIPA was the largest MPA in the world at 408,250 km², until it was surpassed two years later by the UK's Chagos Marine Protected Area. The environmental politics literature tends to treat environmental problems and solutions as distinct for developed and developing countries (Miller 1995; Najam 2005; Williams 2005; Newell 2005; Pattberg 2006). International norms tend to

¹⁴ Interview with Executive, Conservation International, 17 September 2015.

¹⁵ Interview with Executive, Environmental Defense Fund, 23 September 2015.

have a North to South trajectory, with a few exceptions that demonstrate the reverse (Clapp and Swanston 2009). The large MPA norm owes its intellectual origins primarily to US conservationists, but its diffusion is happening concurrently in the global North and South. Kiribati announced PIPA two months before the US announced Papahānaumokuākea, showing a developing country taking a similar leadership role to the US through its early adoption of the large MPA norm. The PIPA decision further challenges the notion that developing countries are too limited in their capacity to exhibit environmental leadership (Steinberg 2001). Chile, the Cook Islands, New Caledonia, and Palau would all later follow Kiribati's example and establish large MPAs of their own.

The announcement of Papahānaumokuākea and PIPA in 2006 marked a turning point in how states protect marine biodiversity. Lance Morgan, President of the Marine Conservation Institute, claims that these two MPAs “began setting a new standard” for marine conservation.¹⁶ They were an example to the rest of the world that large MPAs could be an important tool for protecting marine ecosystems, and one that would also benefit state leaders politically. ENGOs had so effectively framed the large MPA norm in their lobbying efforts for these two large MPAs that they quickly began looking for other opportunities to replicate their success.

Spread

The large MPA norm made rapid strides after these two cases in part because of the efforts of a few individuals at prominent ENGOs to capitalize on these successes. Jay Nelson of Pew and Enric Sala of NGS—who had both advocated for Papahānaumokuākea—worked to turn this initial success into what would become long-term campaigns to advocate for large MPAs. Bolstered by the broader support of a strong intellectual and scientific push for large MPAs, they were among the foremost ‘transnational moral entrepreneurs’ and ‘meaning architects.’ Both of their organizations worked to convince others of the moral imperative of the norm and to frame it in terms that would make it accessible to decision makers and the public (Nadelmann 1990; Lessig 1995; Clark 2010). Those organizations relied on the insights and work of a broad range of actors both within and outside of them (Park and Vetterlein 2010), but ultimately were where efforts coalesced into a coherent mandate to expand the large MPA norm. Norm entrepreneurs tend to be motivated by empathy, altruism, and ideational commitments (Keohane 1990; Mansbridge 1990; Keohane 2005). Marine

¹⁶ Interview with Executive, Marine Conservation Institute, phone, Glen Ellen, CA, 24 September 2015.

conservation advocates were no exception, motivated foremost by the goal of better protecting marine ecosystems.

These norm entrepreneurs are also quick to give due credit to political leaders as the individuals whom ultimately make the decision to establish a large MPA.¹⁷ Despite his poor overall environmental record, George W. Bush was a particularly important political entrepreneur in large-scale marine conservation. A political entrepreneur is a politician that takes up the cause of a new norm and works to promote it domestically (Tiberghien 2007). Bush had nothing to do with the inception of the idea to protect the Northwestern Hawaiian Islands, nor for the idea to protect large ocean spaces more generally. But his willingness to listen to environmental groups and ultimately establish the reserve set the tone for future large MPAs. As noted, Bush went on to create two more large MPAs toward the end of his second term again at the urging of environmental groups. Bush's support for large MPAs cemented the large MPA norm in US politics, and established the US as a global leader in marine conservation. President Anote Tong similarly demonstrated in Kiribati that developing countries could also take leadership on large MPAs.

It was nonetheless the ENGO programs that Nelson and Sala would go on to launch that drove the spread of the large MPA norm. Nelson and Sala independently worked to create more coherent organizational platforms for pursuing large MPAs elsewhere. An organizational platform refers to the organizational or institutional basis from which norm entrepreneurs promote a norm (Finnemore and Sikkink 1998), and they are often explicitly created to promote a given norm (Sikkink 1993; Klotz 1995; Keck and Sikkink 1998; Price 1998). In this case, however, both Pew and NGS were well-established institutions dedicated to advancing a broader normative agenda. These organizations took on a leadership role because advancing the large MPA norm was already consistent with their internal values and objectives (Dashwood 2012). Although both organizations took on leadership roles, their pre-existing agendas shaped how they promoted the large MPA norm (Adler 1992; Strang and Chang 1993; Finnemore 1996a). Pew focuses on using its substantial financial resources to lobby for large MPAs globally, remaining actively involved in the process from identifying a potential MPA all the way through to implementation. NGS, on the other hand, focuses on scientific expeditions and produces high quality media to gain the support of decision makers and broader audiences for large MPAs.

¹⁷ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015; Interview with Program Director, National Geographic Society, 17 September 2015.

In 2006 Papahānaumokuākea project leader Jay Nelson founded the Global Ocean Legacy program at Pew, with the support of a number of other foundations. It was the success of both the strategy for and the outcome of Papahānaumokuākea that inspired Nelson to explore the potential for new large MPAs abroad and create this program.¹⁸ Initial funding constraints meant that Pew needed to look at projects that could be completed within a five-year window, so feasibility was a high priority.¹⁹ To attain the kind of scale that Pew wanted for these MPAs they needed to target remote areas, which would be the most expedient. Pew also made the decision early on to focus on areas within EEZs so that it could target its lobbying efforts at a single decision maker. Pew identified four initial projects at Chagos (UK), Coral Sea (Australia), Kermadec (New Zealand), and Marianas Trench (US). All four of these projects have led to the creation of a new large MPA. All told Pew was involved in 12 of the 18 large MPAs that states have established since 2006, summarized in Table 2.2.

National Geographic’s Pristine Seas initiative has been similarly ambitious, although with a more specific focus. As the name suggests the Pristine Seas initiative targets only the most remote, untouched ecosystems on the planet for protection. It was launched in 2008 by Explorer-in-Residence Enric Sala, who has led the initiative since its inception. This project has a finite goal of protecting 20 pristine marine environments over its 10-year duration. So far NGS has been involved in six large MPAs (see Table 2.2), but its accomplishments include a number of MPAs smaller than the admittedly arbitrary 200,000 km² threshold. National Geographic has a uniquely high capacity to conduct scientific expeditions and produce high quality media to document their findings, most notably documentaries. NGS has often worked in collaboration with Pew to lobby for a large MPA. Their combined efforts have contributed to what were at the time the world’s largest contiguous MPA, and both of the world’s largest contiguous and non-contiguous no-take marine reserves.

Table 2.2 – Large MPAs and NGO Participation

Year*	Country	MPA Name	Size (km ²)	Pew**	NGS**	CI**
1975	Australia	Great Barrier Reef	345,000			
2006	United States	Papahānaumokouākea Marine National Monument (expanded in 2016)	1,508,870	Yes	Yes	
	Kiribati	Phoenix Islands Protected Area	408,000			Yes
2009	United States	Marianas Trench Marine National Monument	247,000	Yes		

¹⁸ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

¹⁹ Interview with Manager, Pew Charitable Trusts, phone, Washington, DC, 11 August 2015.

Year*	Country	MPA Name	Size (km ²)	Pew**	NGS**	CI**
	United States	Pacific Remote Islands Marine National Monument (expanded in 2014)	1,270,000	Yes	Yes	
2010	United Kingdom	Chagos Marine Protected Area	640,000	Yes		
2012	Australia	Coral Sea Commonwealth Marine Reserve	990,000	Yes		
	Australia	South-West Corner Commonwealth Marine Reserve	272,000			
	United Kingdom	South Georgia & South Sandwich Islands Marine Protected Area	1,000,700	Yes		
	Cook Islands	Marae Moana	1,100,000			Yes
2014	France (New Caledonia)	Natural Park of the Coral Sea	1,369,000	Yes	Yes	Yes
2015	Palau	Palau National Marine Sanctuary	500,000	Yes	Yes	
	United Kingdom	Pitcairn Islands Marine Reserve	834,300	Yes	Yes	
	Chile	Nazca-Desventuradas Marine Park	297,500		Yes	
	Chile	Easter Island Marine Park	570,000	Yes		
	New Zealand	Kermadec Ocean Sanctuary	620,000	Yes		
2016	United Kingdom	Ascension Island Marine Reserve	234,000	Yes		
	United Kingdom	St. Helena Marine Reserve	444,916			
	United Kingdom	Tristan da Cunha Marine Reserve	750,510			

*Represents the year that the MPA was formally announced, but not necessarily fully implemented

** Pew = The Pew Charitable Trusts; NGS = National Geographic Society; CI = Conservation International

These efforts are also notably closely tied to the geography of the states that have so far adopted the large MPA norm. Nearly all of these large MPAs are in the Pacific Ocean, and the vast majority are located remotely from any of the major continents. These countries all have relatively large EEZs either in absolute or relative terms. The US and the UK boast overseas territories as a result of their colonial legacies that vastly increase their EEZs, as does Chile. Small island nations such as Kiribati and Palau have relatively large EEZs given their small land masses. Which countries adopt the large MPA norm depends on geographical features, which ENGOs of course consider as they identify prospective large MPA sites.

Through the Global Ocean Legacy and Pristine Seas initiatives, Pew and NGS have been the two dominant ENGOs behind the spread of the large MPA norm. They have been directly involved in all but five of the large MPAs states have established since 2006, and two of the remaining five were CI projects, including PIPA. They by no means work alone, with a number of smaller ENGOs supporting their efforts on various campaigns. For example, the Marine Conservation Institute has been influential in the US, but lacks the capacity to pursue large MPAs globally. The Marine Reserve Coalition in the UK emerged during Pew and NGS's lobbying efforts for the Pitcairn Islands Marine Reserve, but has since taken on a domestic leadership role in advocating for more—an effort that has been successful with the UK announcing or establishing three new large MPAs in 2016 alone. It was the leading organization in the campaign to convince the British government to designate a reserve around Ascension Island.

These ENGOs have been the driving force behind the rapid spread of the large MPA norm in the decade following 2006. Their strategy so far has proven highly effective, and is evident in the Pacific Remote Islands, Coral Sea, and Palau case studies in the chapters to follow. Recent years have shown an even greater global push for large MPAs as early adopters of the norm continue to take action and as it spreads to new states. States only established three large MPAs (including the original Pacific Remote Islands reserve) in the five years following the US and Kiribati governments' creation of Papahānaumokuākea and PIPA. ENGO campaigns to lobby for a new large MPA often take years since they usually involve a scientific expedition, local outreach, political lobbying, and a government approval process. The global push for large MPAs only really began after Pew founded Global Ocean Legacy in 2006, and NGS founded Pristine Seas in 2007. Between 2012 and 2016 states established 13 large MPAs that total roughly 2.5% of the global ocean. This number and Table 2.2 above both exclude the 2016 Ross Sea MPA, a 1.55 million km² area located on the high seas in the Antarctic, established by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). An effective ENGO strategy for promoting large MPAs has been central to the rapid growth in the number of large MPAs, but these efforts have also benefitted from a friendly global environmental regime.

The Global Environmental Regime

An emergent norm generally needs to be institutionalized in a set of international rules and organizations if it to spread beyond its early proponents (Goldstein and Keohane 1993; Katzenstein 1996; Finnemore and Sikkink 1998). A new norm generally challenges existing standards of

appropriateness often leading to contested, and even combative, efforts to promote and institutionalize it (March and Olsen 1998). This was not the case with the large MPA norm, as it was already consistent with the existing international rules and practice for biodiversity conservation when ENGOs began advocating for it after 2006. It was, in a sense, a 'privileged' emerging norm because it did not challenge the existing order (Collier and Collier 2002), and was instead an incremental and complementary change to it (North 1990).

Specifically, the large MPA norm is consistent with the current global environmental regime. This regime organizes how states agree on environmental commitments in international fora, and has two core tenets. The first is that it is grounded in rational, scientific authority that manifests through arenas such as the 1992 Convention on Biological Diversity (CBD). The second is the normative imperative that environmental policies should not impede economic growth and development. This regime provides important context for understanding why states tend to focus on MPAs as their marine conservation tool of choice.

In the international system states are socialized into converging around particular sets of standards and practices for pursuing shared goals. To appreciate why states establish MPAs at all, it is important to recognize that states are remarkably similar in that they are of the same structure at a fundamental level (Meyer et al. 1997). They tend to conform to a common world culture because global networks of competition, exchange, and association condition certain behaviors and institutions (Bull 1977; Meyer 1980; Buzan 2004). These global processes of interaction lead to isomorphism among states not just in state structure, but in the way that states pursue their shared goals (Scott and Meyer 1994; Finnemore 1996b; Meyer et al. 1997). Their standards and practices tend to be similar because states are socialized through their interaction in a world society.

This convergence through socialization applies to the types of environmental policies that states tend to adopt as well (Dimitrov 2005). The rationalized scientific interpretation tenet of the global environmental regime is one in which states pursue environmental policies that are measurable and that they negotiate through some kind of international body (Meyer et al. 1997). As Finnemore and Sikkink note, an emergent norm needs to be institutionalized in a set of international rules and organizations to reach a tipping point and move toward the norm cascade stage (Goldstein and Keohane 1993; Katzenstein 1996; Finnemore and Sikkink 1998). By 2006 these institutions were already in place for the large MPA norm.

States have agreed to formal protected area targets on two separate occasions. Article 8 of the 1992 CBD obliges states to establish a system of protected areas to conserve biodiversity. This institutionalization of protected areas was an easily measurable biodiversity conservation metric that was consistent with the rational, scientific measures that had come to characterize international environmental targets. States further institutionalized protected area targets in Aichi in 2010 with the creation of the Aichi Biodiversity Targets. One of the Aichi Targets was for states to protect 10% of their marine area by 2020. The Aichi Targets also call for the effective management and ecological representation of protected area networks. Policy makers have adopted concepts like 'biomes' to further rationalize biodiversity conservation, allowing them to measure not just the extent of the area covered but also the diversity of ecosystems covered. State marine conservation strategies are shaped by this highly rationalized global conservation regime as they work to meet their international protected area targets.

The second tenet of the global environmental regime is that environmental policies need to be consistent with economic growth and development. Global processes of interaction also lead to convergence towards 'marketization' (Simmons, Dobbin, and Garrett 2008). Marketization refers to a reduction in government constraints on economic behavior. In the environmental arena, this convergence to marketization has led to what Bernstein (2001, 2002) called the compromise of liberal environmentalism. This compromise set the terms for state environmental policy by making it conditional on economic growth and development. The policies that states tend to agree on in the international arena are those that either promote some form of economic growth, or at least do not hinder it. By definition protected areas are meant to limit or prevent economic activity in a given space, so on the surface they appear to be contrary to this compromise. But states make decisions about where to locate them and how to manage them based on a thorough analysis of their economic impact. The framework that I outline in chapter 3 and the case studies to follow will analyze the political economy of large MPAs in depth. For now, it is enough to note that states can create MPAs in ways that are compatible with domestic economic interests, although often at the cost of effective conservation.

Compliance with this regime is mixed, in part because it is challenging for developing countries with limited resources. Once norms are codified into an international agreement, they do often have high levels of compliance (Chayes and Chayes 1993). This compliance is often a by-product of states agreeing to treaties with few substantive commitments that would require them to change their

behavior (Downs et al. 1996). Treaties that do have more ambitious commitments, like the Kyoto Protocol, tend to have poor compliance rates as a result (Cass 2012). But decision-making is costly for states, so it is more efficient for them to adhere to already agreed upon arrangements than to devise their own independently. Even the process of negotiating and agreeing to a treaty is a learning process through which states can and do internalize new conceptions of national interest (Checkel 2001), in this case protecting large swaths of ocean space. The CBD and the Aichi Targets pressure states to create protected areas by binding them to do so through international law. Whether or not states meet these targets is secondary to the fact that the commitments themselves condition state behavior, socializing them to take action that they otherwise might not. Well-structured environmental agreements can and do generate substantive social change (Schofer and Hironaka 2005). Even states that are not party to the convention will be more inclined to work towards these targets. The US is not a CBD state party, but well exceeds the 10% marine area protected target with 33% of its EEZ protected because of a few remote, large MPAs.

The large MPA norm is thriving because it is consistent with the existing global environmental regime. ENGO strategies have been effective because they are advocating for policies that states are already comfortable with. They are not trying to radically alter state behavior, but are instead helping states to identify opportunities to take policy action that most have already agreed to take through international agreements. Despite this compatibility and the effective framing and lobbying strategies of ENGOs, however, the large MPA norm has not gone entirely unchallenged.

Scientific Challenge: Conservation vs. Management

There has been a scientific challenge to the conservation potential of large MPAs since their emergence in the mid-2000s. This challenge largely reflects a normative division over whether governments should prioritize conservation, or marine resource management. The purpose of conservation is strictly biodiversity protection, whereas management approaches promote sustainable resource use as well. The challenge is partly to MPAs generally, but much of the most vocal criticism is specific to some of the claims that large MPA advocates make about the conservation potential of MPAs in pelagic waters, for migratory species. Despite this challenge, the scientific basis in favor of large MPAs has been growing.

Scientific research has repeatedly demonstrated that MPAs can be highly effective for conserving marine biodiversity (Jameson, Tupper, and Ridley 2002; Halpern 2003; Lubchenco et al. 2003; Chape et al. 2005; Pomeroy, Parks, and Watson 2004; Selig and Bruno 2010; Edgar et al. 2014;

Emslie et al. 2015; Lamb et al. 2015). Whether or not a given MPA is effective depends largely on how well managed it is. The vast majority of the world's protected areas are, unfortunately, poorly managed. According to one prominent study—commonly referred to as the NEOLI study²⁰—the five criteria for an effective MPA are that it needs to be no-take, properly enforced, old (> 10 years), large (> 100 km²), and isolated by deep water or sand (Edgar et al. 2014). For an MPA to be statistically different from a fished area in terms of richness of species and biomass it needs to meet at least three of these five criteria. This study used 87 MPAs as case studies, and 59% of them met less than three of these criteria. Numerous other studies have confirmed the poor state of MPA management globally (Kareiva 2006; Jentoft, van Son, and Bjørkan 2007; Burke et al. 2011; de Morais, Schlüter, and Verweij 2015). All of these studies nonetheless recognize that well managed MPAs are an effective marine conservation tool. Some even go further and recommend that community managed networks of small MPAs need to be supplemented with large no-take areas to effectively address conservation targets (Weeks et al. 2010).

Critics of large MPAs tend to acknowledge the conservation potential of MPAs generally, but claim that they are not a panacea for marine conservation. Whether or not an MPA is effective depends on its specific conservation goals and whether a static marine reserve is the best tool for achieving them. Scientists that are critical of MPAs call for a case-by-case analysis of the structure of an ecosystem and human impacts on it to determine if an MPA is the appropriate conservation tool (Hilborn et al. 2004). These critics argue that other fishery management tools like equipment regulations, catch limits, and vessel limits may be more appropriate. They argue that MPAs do not address most of the major threats to ocean ecosystems, namely warming temperatures, ocean acidification, pollution, illegal fishing, land-based run-off, and plastics (Hilborn 2015). They also contend that the one issue that MPAs do address—legal fishing—is already well regulated (Hilborn and Ovando 2014). Further, scientific research citing the benefits of MPAs tends to partly reflect a normative preference for conservation over management (Agardy, Di Sciara, and Christie 2011; Caveen et al. 2013; Leenhardt et al. 2013). Detractors use these criticisms to challenge the idea that MPAs can effectively protect migratory species.

Despite the size of large MPAs, they are not nearly large enough to encompass the entire habitats of highly migratory species like tuna. Whether or not a large MPA is effective depends on whether protecting a partial habitat has conservation benefits. As one prominent marine biologist

²⁰ NEOLI is an acronym for the five criteria listed in the study.

argues, there are two criteria that scientists should evaluate to determine the potential benefit of a large MPA (Costello et al. 2016).²¹ The first is whether or not it will reduce the total mortality of species. Even large no-take areas may not necessarily do this because of activity outside of them. When Kiribati closed PIPA to fishing it did not likely decrease the mortality of species due to increases in commercial fishing just outside of the zone. The second criterion is whether the large MPA protects a bottleneck habitat that is disproportionately important to a given species, like a nursery or spawning area. Opponents contest many of the 18 large MPAs states established in the last decade based on these criteria. In response, MPA advocates have been arguing that protecting partial habitats does in fact have conservation benefits.

The existing literature on the conservation benefits of large MPAs does not necessarily apply to pelagic reserves over 200,000 km². The studies that do purport to study large MPAs tend to use a much lower benchmark that reflects the typically small size of MPAs, such as the 100 km² figure used in the NEOLI study (Aswani and Hamilton 2004; Edgar et al. 2014). States established all but one of the 19 MPAs larger than 200,000 km² in the decade following 2006, and most of those were after 2011. There has not been enough time for scientists to directly study their impacts as of yet, so they instead rely on research into untouched ecosystems, and research about the more general benefits of MPAs for conservation writ large. For example, the DeMartini et al. (2008) study of the Line Islands was among the first to note the abundance of top predators in untouched ecosystems, which marine scientists now use as one of the main indicators of marine ecosystem health. The only large MPA more than 10 years old that can provide any kind of direct baseline is the Great Barrier Reef Marine Park (GBRMP). The GBRMP is a mixed-use MPA with a dynamic management system, and studies of the Reef have shown that marine life has fared better in the more heavily regulated areas (Emslie et al. 2015; Lamb et al. 2015). These studies of pristine areas and the GBRMP have provided the initial scientific basis for large MPAs absent the more specific studies of large MPAs that will emerge in the coming years.

Advocates also claim that large MPAs provide a safe haven for migratory species such as tuna so that they can reproduce and grow in certain zones unmolested by human activity. They support this safe haven claim with studies that demonstrate the dramatic global decline of large predatory fish stocks, with numbers for the decline ranging from 74-90% (Baum et al. 2003; Myers and Worm 2003; Lotze et al. 2006). The message is that current efforts are failing and that large MPAs are one

²¹ Interview with Executive, Environmental Defense Fund, phone, Raleigh, NC, 23 September 2015.

important option for trying to reverse the trend. As I discussed above, they advocate a precautionary approach to states. Faced with rapidly declining fish stocks, they argue that the burden is on detractors to prove that large MPAs would not be effective. Even absent direct evidence about the effect of large MPAs on migratory species, advocates are able to present a compelling case in favor of them. With a handful of large MPAs now at least 10 years old it is only a matter of time before marine scientists begin to release the results of longitudinal studies of large MPAs. The debates about the effectiveness of large MPAs nonetheless tend to distill to a normative divide over the relative importance of marine conservation versus the sustainable management of marine resources for human use.

This scientific challenge raises a number of valid concerns about the long-term conservation potential of large MPAs, as well as normative questions about whether we should prioritize conservation or human uses. But this challenge is not likely to have much of an impact on the spread of the large MPA norm because ENGOs that advocate for large MPAs have effectively framed this debate in a few key ways. First, they note that there is a wide body of evidence documenting the benefits of well-managed MPAs. Second, they point to studies of pristine seas that reveal the impact that even a small amount of human activity can have on marine ecosystems. Advocates argue that large MPAs will yield similar results in the long run. Third, they highlight that global fisheries have declined rapidly and are in crisis, with large MPAs positioned as an appropriate way to combat the issue. And fourth, they argue that this crisis provides a compelling case for a precautionary approach to marine conservation. The challenge to the ability of large MPAs to protect migratory species and promote sustainable resource use has so far tended to be drowned out by these reasons supporting their potential.

Future

The large MPA norm is well positioned to continue to spread for three reasons. First, it is a clear and specific norm with a straightforward policy prescription. Norms that are clear and specific tend to spread more effectively because they provide entrepreneurs with an easily understandable and often relatable message to present to their target audience (Chayes and Chayes 1993; Legro 1997). ENGOs have done well to frame the norm in a highly accessible and attractive way. Second, it has had the support of influential states, most notably the UK and the US. Norms that have the support of states that others view as successful and desirable models are more likely to succeed (Florini

1996; Finnemore and Sikkink 1998). And third, as discussed above, it is compatible with the current global environmental regime, and specifically with the existing institutions for marine conservation.

It is difficult to identify exactly when an emergent norm reaches its tipping point and the large MPA norm is no exception. Finnemore and Sikkink (1998) suggest two criteria for identifying when an emergent norm has reached it. The first is that it has the support of about one-third of the states in the international system. The large MPA norm's threshold to reach a tipping point is lower than it is for most global norms. Only 77 of 196 countries have EEZs that exceed 200,000 km². It is unlikely that it would be economically viable for many of those 77 countries to establish an MPA in nearly their entire EEZ, so the actual population of potential large MPA countries is even lower. Only nine states to date have adopted the norm by establishing a large MPA, but others are poised to do so in the near future. The second criterion is that a norm has the support of critical or influential states. The large MPA norm has been well supported by important states. The US, Australia, and the UK have the first, third, and fifth largest EEZs in the world respectively, and have been the three most proactive countries in establishing large MPAs so far. The US also still has substantial normative influence in setting the global agenda, so its embrace of and advocacy for large MPAs makes it more likely that the norm will continue to spread. US leadership on large MPAs is likely to end following the Bush and Obama administrations, but it is leadership that has in many ways already served its purpose by creating the initial momentum for the norm.

It is likely premature to claim that the large MPA norm has already reached a tipping point, but the evidence so far suggests that it is well on its way. As it approaches this tipping point, we can expect to see its spread driven more and more by a process of international socialization rather than ENGO persuasion (Katzenstein 1996; Fearon 1999; Risse, Ropp, and Sikkink 1999). States' need for legitimacy, conformity, and esteem will become more prominent drivers of the large MPA norm as they look to emulate influential states (Axelrod 1986; Barnett 1997; Barnett and Finnemore 1999; Hyde 2011). As the norm reaches this point ENGOs will continue their advocacy, but will likely increasingly benefit from international socialization. There is already evidence of this process. The US hosted the inaugural *Our Ocean* conference in 2014 for states to coordinate their marine conservation initiatives. At the conference the US announced a large MPA, only for Chile and New Zealand to follow suit at the 2015 conference. The 2016 conference included the UK's announcement of three new large MPAs, and the announcement of the US expansion of Papahānaumokuākea. Ongoing ENGO efforts to spread the large MPA norm will continue to be the

primary mechanism for its diffusion in the immediate future, but there are already signs that the norm is becoming increasingly internalized in global politics despite it being only a decade old. For all of its emphasis on the emergence of the large MPA norm, this chapter has not addressed how it has diffused differently in various jurisdictions. The next chapter examines variation in large MPA norm diffusion in depth.

Chapter 3: The Diffusion of the Large MPA Norm

The previous chapter explains why and how the large MPA norm emerged, but it does not explain differences across large MPAs. As we have seen, large MPAs vary in a number of ways. Many are no-take, others mixed-use, and some have no new restrictions. Some of them were no-take immediately, whereas states introduced regulations in others gradually. Some management plans are fixed and permanent, and others deliberately more dynamic. Some are remote from a state's economic activity, often in its overseas territories, while others encompass the majority of a state's EEZ. The mere existence of a large MPA does not necessarily tell us much about how or even if a given marine space is better protected. It also does not tell us how various industry and local community stakeholders influence and are impacted by a large MPA. This chapter will build on the civil society explanation of the emergence of the large MPA norm by explaining how the norm has diffused differently across large MPAs.

This chapter explains the diffusion of the large MPA norm using a coalitions-based environmental norm diffusion framework. By employing this framework, I explain how stakeholder coalitions form around a given MPA based on the salience of industry interests in a given region. It measures that salience using four key indicators: intensity of activity, factor specificity, asset specificity, and exogenous stressors. These indicators are important not only to determine the strength of industry preferences in a given region, but also state interests. States are the ultimate MPA decision makers, so how state interests align with other relevant stakeholders is central to explaining MPA outcomes. Political institutions also play a prominent role in determining the range of policy options available to policy makers. My overarching theoretical claim is that this combination of industry salience and institutional variables can explain how governments make decisions about MPA location and management across cases.

This chapter has two goals. The first is to outline a new two-stage strategic actor framework of environmental norm diffusion. The two stages are norm adoption followed by norm localization. The second goal is to apply this framework to the large MPA norm, and in doing so construct a theory that explains where states establish large MPAs and how they manage them. Through a discussion of the global emergence of the large MPA norm in the previous chapter, I addressed the typical process through which a new state adopts the large MPA norm, so this chapter focuses on the norm

localization stage. The norm localization framework and large MPA theory that I outline below have their foundations in political economy literature.

The framework that I use to construct a theory of large MPAs is, as noted, adapted from Gourevitch and Shinn's (2005) seminal work on corporate governance structure, but updated and expanded to explain environmental policy outcomes. It combines elements of political ecology and global environmental politics literatures with their coalitions-based political economy model. The result is a framework that also incorporates environmental change. As ecosystems further decline, and as resources are increasingly depleted, the configuration of stakeholder interests can and often does shift. This dynamic framework outlines an ongoing and adaptive governance process that can account for these shifts. By integrating industry interests with environmental change this framework is a tool for explaining how states localize environmental norms in varying economic and ecological contexts.

I use this framework to develop a theory of when states establish large MPAs and how they manage them, but it may also have applications to any area-based environmental policy process, including those for smaller MPAs and terrestrial protected areas. In this framework, industry groups and political institutions are key determinants of the likelihood and the comprehensiveness of environmental protections. How much industry depends on a given area has a major influence on the likelihood that a government will enact policies to protect it, as well as the extent of that protection. Whether the industry is extractive or non-extractive is a major component of this. For example, an area that is essential to the commercial fishing industry is less likely to receive stringent protections, but the reverse is true for an area essential to the ecotourism industry. In some cases, even extractive industries may prefer some protection. For example, recreational fishers may want commercial fishing banned in their preferred fishing areas. These dynamics are at play whether an area is a few square kilometers or larger than Texas, and whether stakeholders debate it at a local town hall or a national capital.

There are two practical implications in applying this framework to explain the diffusion of large MPAs. The first is that local communities tend to be less prominent as a distinct stakeholder. Their interests are often aggregated over such large spaces through industry associations. The line between local community and industry becomes blurred in these cases. The exception to this is when a local community affected by a large MPA comprises the majority or entirety of a country or overseas territory's population, as they do in Palau and the Pitcairn Islands. The larger scale

nonetheless means that industry and state interests are more prominent relative to local interests than they would be in a typical MPA. The second implication is that large MPA decisions tend to be made at a higher level than their smaller counterparts. It is typically the head of state or a high-level minister whom decides to establish a large MPA. Local or state-level governments, or often the civil service itself, generally make smaller protected area decisions.

This chapter will work towards its two goals simultaneously by presenting the framework while concurrently applying it to the large MPA norm throughout. This chapter will open by presenting a general overview of this environmental norm diffusion framework and placing it within our broader understanding of how norms diffuse in the international system. It will then discuss the preferences of the most prominent types of domestic stakeholder groups involved in large MPA policy processes. This chapter will then outline a series of theoretical claims that predict variance in MPA location and management. It will do so by applying the norm localization portion of the framework to the large MPA norm.

A Strategic Actor Framework of Environmental Norm Diffusion

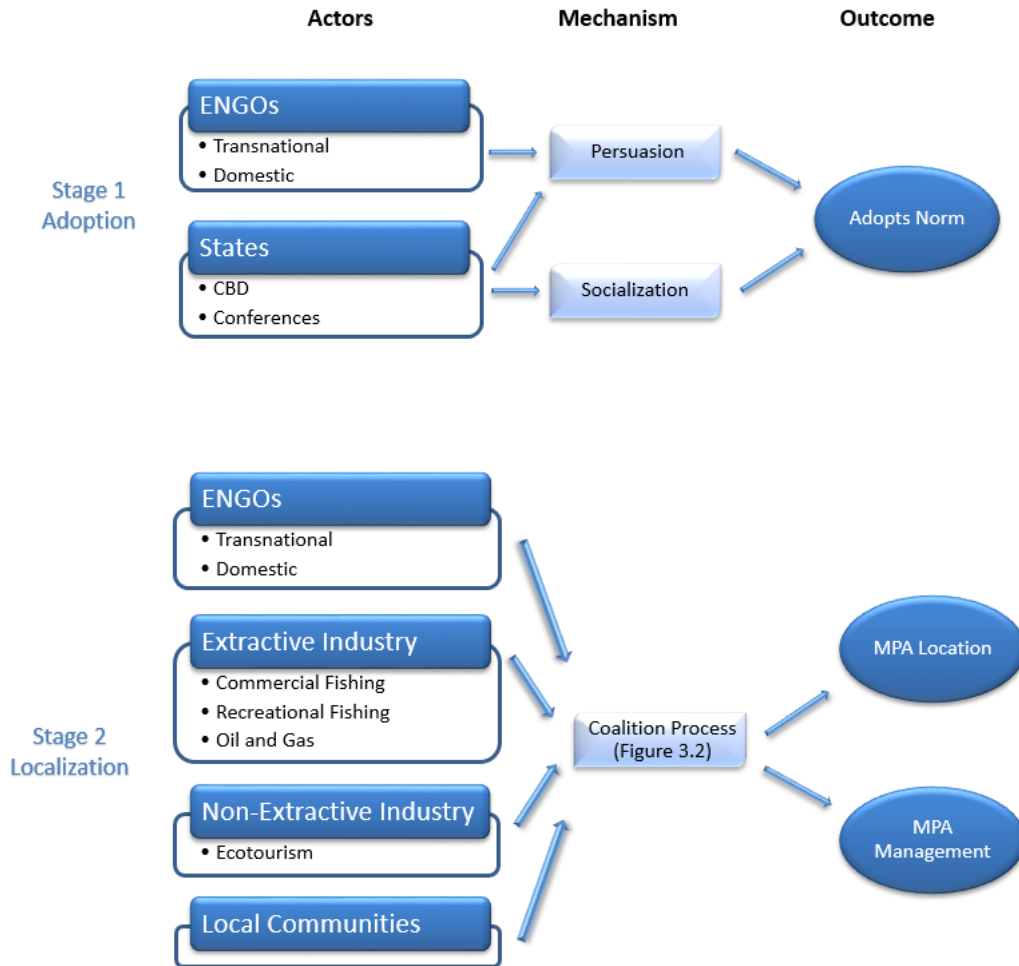
The spread of a global norm is a two-level process. It involves an international process by which early adopter states promote their preferred norms, and if successful other states are eventually socialized into adopting them. But this adoption process is not uniform. International norms also become localized at the domestic level. In other words, domestic actors adapt them to suit a given political, economic and cultural context (Cortell and Davis 2000; Acharya 2004). As previously noted, the diffusion of a new norm is therefore reflective of a two-level game, with policy makers trying to appease both international and domestic actors (Putnam 1988). The international relations literature fairly comprehensively explains the mechanisms through which international norms spread at the international level (Keck and Sikkink 1998; Price 1998; Rucht, Kriesi, and della Porta 1999; Khagram, Riker, and Sikkink 2002; Tilly 2005). Norms scholars have, however, paid less attention to explaining the mechanisms through which domestic actors localize international norms. Those that do tend to emphasize the influence of local culture, or pre-existing domestic norms, in shaping how an international norm diffuses (Acharya 2004; Capie 2008; Prantl and Nakano 2011; Acharya 2013, Betts and Orchard 2014).

My explanation for the spread and localization of the large MPA norm is broadly consistent with the premise of a two-level game, as I noted in chapter 2. ENGOs have so far been highly influential in lobbying states to create large MPAs. That influence is bolstered by the MPA targets

embedded in the Convention on Biological Diversity (CBD). These ENGOs combined with the CBD represent the international arena through which states are engaged with large MPAs. Broadly speaking, we can attribute the spread of the large MPA norm to the international influences that I discussed in the previous chapter. But even once a state has adopted the large MPA norm in principle, where they locate and how they manage large MPAs are questions better answered through an understanding of strategic actors in the domestic arena. In the domestic arena, transnational ENGOs are joined by domestic ENGOs, industry, and local communities as the prominent actors. Transnational ENGOs operate in both arenas because they tend to have local offices that allow them to function as domestic ENGOs, getting involved not just in the initial lobbying for a large MPA, but in the ongoing domestic political process leading to a policy decision.

Figure 3.1 depicts this two-stage process, with the various actors and outcomes specific to the large MPA norm. I elaborate on the coalition process of the norm localization stage in detail later in this chapter. As with a standard two-level game a given state is the final decision maker. It attempts to appease both an international and a domestic audience. But I refer to this as a two-stage process rather than a two-level game because unlike a standard two-level game, little bargaining occurs at the international level. Although states engage in bargaining around setting international targets through the CBD and other fora, this framework treats states' creation of those targets as exogenous. Calling this a process rather than a game better reflects the steps leading toward an environmental policy outcome, in this case a new large MPA designation and management plan. In the first stage, ENGOs (and other states as the norm continues to spread) work to persuade a given state that establishing large MPAs is a worthwhile endeavor, as I discussed in the previous chapter. The mechanisms at work in this stage are persuasion or socialization rather than bargaining. Once a state is convinced of the merit of large MPAs in principle, however, it then engages in a domestic bargaining process. It is this domestic bargaining that produces variation across large MPAs in where and how governments decide to locate and manage them, or even if they ultimately establish one.

Figure 3.1 – Two-Stage International Environmental Norm Diffusion Framework



International relations scholars often treat rationalist and constructivist explanations as opposing arguments, giving primacy to material or ideational explanations respectively (Fearon and Wendt 2002). Put differently, the tendency is to posit one type of explanation over the other, but not necessarily both simultaneously. By problematizing strategic actors in the domestic arena this work follows largely in the tradition of rationalist accounts of international norm diffusion (Akerlof 1980; Jones 1984; Axelrod 1986; Elster 1989; Morrow 1994; Fearon and Laitin 1996). But the goal of this framework is to explain how a combination of material and ideational factors produce conservation policy decisions. The key variables here measuring the salience of industry interests all reflect a materialist ontology, but this framework will also incorporate some of the ideational causes of policy outcomes. It does so through the persuasion and socialization mechanisms specific to Stage 1, but also through its inclusion of environmental change in Stage 2 (elaborated on below). As

Finnemore and Sikkink put it, “nothing about rational choices requires [a material] ontology” (Finnemore and Sikkink 1998). This framework is therefore an attempt to further break down the rationalist-constructivist divide in international relations. It is intended to provide a coherent framework for analyzing state conservation policy decisions that incorporates elements of both in as systematic a way as possible.

This framework also integrates variables that are common to either political economy or environmental politics, but rarely both. Environmental change can have a profound impact on industries that rely on natural resources. The collapse of a fish stock is both an ecological and an economic disaster. Among other effects it can dramatically increase the factor specificity of commercial fishers, forcing them to rely on fewer economically viable areas for their catch and intensifying competition. Similarly, coral bleaching has the potential to dramatically reduce the intensity of ecotourism activity in a region. Divers and snorkelers will not pay to visit a bleached or dead reef. Environmental change is therefore an important determinant of stakeholder preferences in an environmental protection bargaining process. The politics of which areas get protected and how well they get protected cannot be divorced from the health of the areas themselves. Environmental change can change stakeholder ideas about the importance and content of MPA regulations.

In sum, applying this framework to the large MPA norm yields a political economy-focused theory of why and how states establish large marine protected areas. This theory integrates a combination of material and ideational factors to explain various aspects of the emergence of the large MPA norm, its spread, and its diffusion to various domestic constituencies. The rest of this chapter presents this theory, specifically by applying Stage 2 of this environmental norm diffusion framework to the large MPA norm. Before turning to the specific theoretical claims that I make about how and why coalitions form to produce MPA policy outcomes, I first outline the determinants of various stakeholder preferences.

Stakeholder Preferences

The domestic context for norm diffusion depends on the preferences of four stakeholder groups: the state, industry, ENGOs, and local communities. I distinguish between preferences and interests. Preferences refer to a general set of assumptions about what a given actor desires to maximize its utility. They tend to be static, but new ideas can alter stakeholder beliefs about how best to pursue those preferences. For example, in an environmental bargaining process industry

prefers outcomes that maximize their profits and their autonomy from regulation, usually followed by the belief that minimal environmental protections are desirable. But industry groups may alter this belief if they come to see environmental degradation as a threat to the longevity of their business (i.e., their long-term profits). Interests refer to the specific application of an actor's preferences in a given political or economic context. A commercial fishing operator may have a strong interest in a certain area remaining open to fishing because it relies heavily on it for its take, for example. This section will outline the preferences of MPA stakeholders, while the following section will pay particular attention to the salience of industry interests.

State

The state is the ultimate decision maker for establishing MPAs, so it serves as a strategic actor in its own right. States have multiple constituencies, so their preferences tend to be less parsimonious than other stakeholders. They are concerned about growing their economies, and therefore facilitating industry interests. But they also care about meeting their international obligations and appeasing often influential environmental groups. Local communities form the electorate so satisfying their interests is an important component of state preferences. I treat state preferences as contingent on the interests of these other three stakeholder groups. In other words, state preferences for where to locate a large MPA and how to manage it are not independent of the interests of other stakeholders.

States are especially responsive to industry preferences. As the driver of economic growth and exchange among states, industry tends to maintain a privileged position in politics (Nye and Keohane 1971; Cutler, Haufler, and Porter 1999). Policy changes that threaten investment or resource yield are likely to trigger automatic recoil against the government, so industry interests permeate most environmental policy decisions (Lindblom 1982). When industry presents a unified front in environmental negotiations—international and domestic—it can have a strong influence on the outcome (Clapp 2006; Newell 2006). This privileged position is further bolstered by ongoing and rapid global economic integration as globalization makes it costly for states to exercise policy autonomy over decisions that impact their national economy (Frieden and Rogowski 1996; Milner and Keohane 1996; Rodrik 1997; Rodrik 2011). The importance of a particular industry to a state's national economy and economic relations with other states determines the extent to which state interests reflect industry's. Foreign industry interests also line government coffers through fishing licenses in particular, exerting influence over government policy and creating cross-border

environmental impacts (Dauvergne 1997; Dauvergne 2008). Neither local communities nor ENGOS wield the same degree of power and influence, which is what makes industry so influential in marine conservation outcomes.

The industry influence on state conservation preferences has limits despite this privileged position for two reasons. The first is that the weight of that influence depends on how salient industry interests are in a specific geographic space. Industry influence and interest wanes in areas that it does not heavily rely on. The second is that industry itself can be divided. When industry is divided its influence wanes greatly as competing industry groups can often cancel each other out (Clapp 2006). I will elaborate on these two features of industry interests below. For now, it is enough to note that these two features mean that states do have choices to make about how they want to align their interests in various contexts.

States are of course not unitary actors in reality, so synthesizing state preferences can be complex. Different branches of government have diverse priorities. Politicians and political parties similarly have different policy priorities depending on their constituencies and supporters. Disambiguating the state in this framework would, however, come at great cost to its parsimony without greatly improving its accuracy. This framework can still account for factions within the state that are against a government decision to pursue an MPA. These factions tend to be opposing political parties, but can potentially be local politicians or various government departments as well. Politicians that oppose the government position on a particular policy proposal often act as de facto industry representatives, or as de jure local community representatives. Industry and local community preferences therefore tend to represent their positions well. Unlike industry and local communities, however, they potentially have the capacity to disrupt the establishment of a given MPA. This capacity is still accounted for in this framework through political institutions, discussed below. Treating the state as a unitary actor therefore enhances the explanatory power of this framework without neglecting the influence of other state-level actors.

As I discussed in the previous chapter, ENGOS tend to deliberately target state leaders in their large MPA lobbying efforts. They target state leaders because they tend to have the required decision-making authority to establish a large MPA. 'State' in this framework does not necessarily need to refer to state leaders, however. It can refer to the policy maker or organization with the responsibility and authority to establish MPAs. In the case of large MPAs these policy makers have historically been state leaders or high-level ministers, but they can theoretically be other levels of

government or government departments instead. In the case studies to follow I often refer to coalitions involving the state as 'Executive' rather than 'State' coalitions. I do this for clarity and specificity, but there is nothing about this framework that requires executive-level coalitions to explain environmental policy decisions.

Industry

Industry has preferences for profitability above all, followed by autonomy (Cutler, Haufler, and Porter 1999). Autonomy refers to the freedom to operate free from government control or regulation. Industry groups generally prefer that government not interfere with their activities, but there are exceptions to this when profitability is at stake. Industry operators may prefer government involvement in instances where a commons resource is being depleted. They typically want another industry competing for a given commons resource further regulated, but in some instances even prefer regulation of their own industry. Ecotourism outfits may want to see commercial fishers banned from surrounding reefs, for example. Or commercial fishers may want limits imposed on the number of vessels allowed to operate in a given region to limit competition for resources from their own industry. Industry preferences for profit and autonomy therefore do not necessarily mean they will be opposed to new protected areas.

Industry preferences for protected areas are nonetheless generally divided between extractive industry and non-extractive industry. Extractive and non-extractive industries have distinct interests that tend to pit them against one another in a new MPA process. The dichotomy between these two types of industry and the relative influence that each is able to exert over the policy process has a profound impact on where states locate and how they choose to manage a large MPA. The main extractive industries involved in MPA processes are commercial fishing, recreational fishing, and oil and gas, while non-extractive generally refers to the ecotourism industry. Not all tourism is eco-friendly, but so far ongoing or proposed tourism activity in large MPAs appears (and claims) to be ecotourism. The tourism sector nonetheless has an interest in regulations that enhance non-extractive industry access while limiting extractive industry access, so tends to support large MPAs. This is especially true in areas where both extractive and non-extractive industries are competing. Extractive industries tend to be the main local threat to a marine ecosystem, so the purpose of an MPA is usually to limit or prohibit extractive activity. Extractive industries are concerned about the location and restrictions of MPAs that could limit their ability to extract resources. They therefore tend to be opposed to new MPAs.

In some scenarios, a particular extractive industry may have an interest in supporting a protected area, contrary to other extractive industries' preferences. This happens when different industries are competing for the same resource. The most likely instance of this competition is between recreational and commercial fishers (Campling, Havice, and Howard 2012). Recreational fishers may well be in favor of a new MPA if it is to remain open to recreational fishing, but not commercial. The relative interests of the recreational and commercial fishing lobbies can influence which regulations a state decides to implement for a new MPA. This kind of division of extractive industry interests is rare, however. The majority of commercial fishing tends to occur further out to sea, often in pelagic waters, while recreational fishers tend to stay closer to shore. Their interests are therefore often aligned on large MPAs that cover coastal and pelagic waters, with both preferring no regulation.

Non-extractive industry tends to be in favor of new conservation initiatives. This is especially true of high profile initiatives such as large MPAs that attract a lot of publicity, and by extension potential customers. Ecotourism and conservation therefore often go hand in hand, providing an opportunity for economic growth and development that is relatively eco-friendly (Campbell, Gray, and Meletis 2007). It is a way for nature to "pay its own way," potentially increasing the appeal of conservation beyond just environmentalists (Duffy 2006). But publicity is only one of the benefits of protected areas for non-extractive industry. MPAs lead to healthier ecosystems, thereby improving the resource that the ecotourism industry depends on to attract tourists, with resort operators being the greatest benefactors (Oracion, Miller, and Christie 2005). The benefits of an MPA also tend to be quick and direct for ecotourism operators, whereas to fishers they tend to be long-term and diffuse.

Industry is often willing to sacrifice some level of autonomy if government regulations through protected areas are likely to increase profits. A preference for profitability means that industry's position on a proposed MPA is not preordained, despite the resulting loss in autonomy that further regulation would yield. Whether an industry is extractive or non-extractive is central to this dynamic. The salience of both extractive and non-extractive industry interests is key to MPA outcomes, so it is the basis of the framework presented below. The other major source of variation in industry preferences is the effect of environmental change. Rapidly declining marine ecosystems, and therefore marine resources, can alter an industry's view of how important its autonomy is relative to its long-term profitability, and even long-term survival. Variation in industry preferences

therefore stems from the notion that a reduction in autonomy can sometimes improve profitability, be it through decreasing the amount of competition or through better management of resources.

One final point to note is the distinction between transnational and domestic industry. These groups share the same set of preferences, with the main distinction being that transnational industry operate in multiple arenas. This is especially common in the commercial fishing sector, in which fishing fleets in a nation's EEZ are commonly from other countries. That these fleets are foreign, however, does not significantly alter the domestic bargaining process for any given large MPA. When transnational industry groups engage in this domestic bargaining process they try to frame their interests within the context of a local economy. Similarly, when governments assess the salience of an industry's interest in a region they do so with a view to understanding its domestic economic impacts. This impact tends to be higher for domestic companies that are more deeply integrated into the local economy. Transnational businesses with minimal integration into the local economy, and whose main interests lie elsewhere, are therefore often at a disadvantage in a domestic bargaining context, since they lack the leverage that their domestic counterparts might have.

ENGOS

ENGO preferences are foremost for environmental protection and for long-term financial stability. By definition ENGOS have a mandate of protecting the environment in the same way that industry has a mandate to maximize profits. The environmental protection preference is more explicitly ideationally-motivated than the industry profit preference, but that does not make it any less salient. ENGOS tend to be the primary advocates of new protected areas, devoting extensive time and resources to their campaigns for them. Industry groups often criticize ENGO involvement in given region on the basis that the ENGO is not really a stakeholder in it. This criticism overlooks that ENGOS are foremost representatives for the environment as a stakeholder that would otherwise go unrepresented. This criticism is primarily reserved for large transnational ENGOS that often lack local roots. These transnational ENGOS act as stewards of the planet more generally, but in doing so often bring substantial resources to bear in various local contexts. They seek out local allies, including domestic ENGOS, but their power and influence locally often breeds resentment, especially from many local industries. But above all, ENGOS, transnational or domestic, seek out conservation initiatives that they think will meaningfully protect the environment.

The ability of ENGOs to achieve their environmental protection goals nonetheless also depends on their financial stability. All ENGOs, and especially large transnational ENGOs, require some level of funding to continue pursuing their environmental goals. They therefore need to engage in activities that will ensure the continued support of their backers. Those backers may include governments, a few wealthy donors, or smaller scale fundraising. Some ENGOs alternatively raise funds in part through their publications and museums, as National Geographic (NGS) does. Regardless of how they achieve their financial stability, ENGOs tend to like high profile initiatives that will attract a lot of attention. These initiatives help ENGOs to garner public and donor interest in their work, allowing them to ensure the continuation of their environmental advocacy work in the long-run.

But ENGOs are not a monolith, and often have competing visions for how to pursue a particular environmental objective. These competing visions often lead to competing proposals to government and local communities about the best approach to protecting the environment in a given area. With MPAs this often means different views about the relative importance of conservation and sustainable resource management. ENGOs such as Pew, NGS, and Greenpeace advocate stricter conservation measures, whereas Conservation International (CI), The Nature Conservancy (TNC), and World Wide Fund for Nature (WWF) work to integrate human use into a broader management scheme. This type of tension is present in many large MPA cases, including the Coral Sea and Palau case studies to follow. Once a government decides on a given proposal or direction, however, these ENGOs tend to form ranks and support it.

ENGO preferences for environmental protection and long-term financial stability nonetheless generally make large MPAs attractive initiatives for them. Large MPAs have the dual benefit of being ambitious conservation tools as well as high publicity ones. Protecting hundreds of thousands of kilometers of ocean space generates a lot of international publicity. High profile marine conservationists such as Jean-Michel Cousteau and Sylvia Earle, and celebrities such as James Cameron and Leonardo DiCaprio, frequently get involved in large MPA campaigns which further enhances their exposure. ENGOs tend to be especially proactive in the advocacy phase for new MPAs because it is the most essential for achieving a positive conservation outcome, and subsequently attracting the most attention from backers (Benson-Wahlén 2013). Large MPAs are nonetheless a win-win for ENGOs looking to achieve ambitious environmental protections and raise funds. It is not surprising that many prominent transnational ENGOs have shifted their marine

conservation priorities toward large MPAs in the previous decade, nor that domestic ENGO coalitions have emerged to further advocate for them. ENGO interest in large MPAs stems directly from their core preferences.

Local Communities

Local communities have a preference for protecting the resources that they depend on for their subsistence and livelihoods above all. In many communities these goals depend on ocean resources, particularly in developing countries where much greater numbers of people depend on reef resources despite contributing little to reef degradation (Donner and Potere 2007). When governments intervene in local economies by establishing MPAs and imposing regulations they change the distribution of benefits from the resources contained within. When this is done with little local community involvement it can lead to local resistance from segments of the population that see their access to resources diminished (Oracion, Miller, and Christie 2005). State failure to account for local interests when it establishes and regulates an MPA can threaten the MPA's viability. Compliance with regulations tends to be low when a state does not incorporate local interests into its management plan (Peterson and Stead 2011). A state's capacity to credibly enforce MPA regulations is not only a capacity issue, but one of distributive conflict and local opposition as well.

But local communities can also be strong voices in favor of a new MPA. They can be important both for the creation of a new MPA and for its long-term effectiveness. MPAs in which local communities retain their resource access but that prohibit commercial resource exploitation will likely serve local interests. In these scenarios, local communities are often involved with ENGO campaigns to put political pressure on governments to establish an MPA. And when states integrate local dependencies into an MPA management plan it tends to be more effective because there is less noncompliance (Persha et al. 2010). Integrating local dependencies usually means zoning an MPA to allow local access to certain regions, or more commonly making an exception for local subsistence and livelihood use. Ultimately when states decide to establish an MPA and determine who has rights to the resources it contains, they are involved in a negotiation (tacit or otherwise) with local stakeholders. Those stakeholders may be integrally involved from the beginning, or they may demonstrate resistance after the fact. Either way, they represent an often-influential interest group that has bearing on the decisions states make.

Despite the sway of local stakeholders in many MPA decision-making processes, they are less influential in the politics of large MPAs. There are some exceptions, but even in these exceptions local communities are not the driving force. In the Pitcairn Islands, the entire population of less than 50 islanders were supportive of the Pitcairn Islands Marine Reserve. Their role was primarily to add their voice to ENGO lobbying efforts in the UK. This case is an exception due to the small population of Pitcairn Island, and is not reflective of large MPA processes more generally where such comprehensive community consultation is infeasible. For MPAs over 200,000 km² local communities are often dispersed (and sometimes not present at all), and therefore less unified in their interests and more limited in their ability to collectively organize. As noted above, industry associations tend to represent the interests of subsets of local communities over such broad areas. I include local communities in this framework because they are often influential in environmental norm diffusion, but their interests are represented in the large MPA case studies to follow primarily through industry groups. This is largely due to the cases selected, which I elaborate on in chapter 7.

Local community interests being represented through industry groups is not, however, a necessary feature of all large MPAs. There are in fact cases in which a distinct and unified local resistance to a large MPA emerged that is quite distinct from industry and the political economy of an area entirely. The Chagos Marine Protected Area (UK) and Easter Island Marine Park (Chile) are particularly problematic. Other scholars have noted the troubling human rights issues that these two large MPAs raise. The Chagos MPA undermines the right of displaced native Chagossians to return to the islands; a problem that had coalesced into a court case at the European Court of Human Rights (De Santo, Jones, and Miller 2011). The more recent Easter Island MPA is already raising similar concerns, with local islanders claiming they were not consulted, and that the MPA reinforces Chile's control over the island. The broader concern is that these large MPAs are a form of ocean grabbing, in which states look to exert greater control over territory (Bennett, Govan, and Satterfield 2015). Although I do not include any of these cases in this research, local community interests can be unified and salient.

Preferences Summary

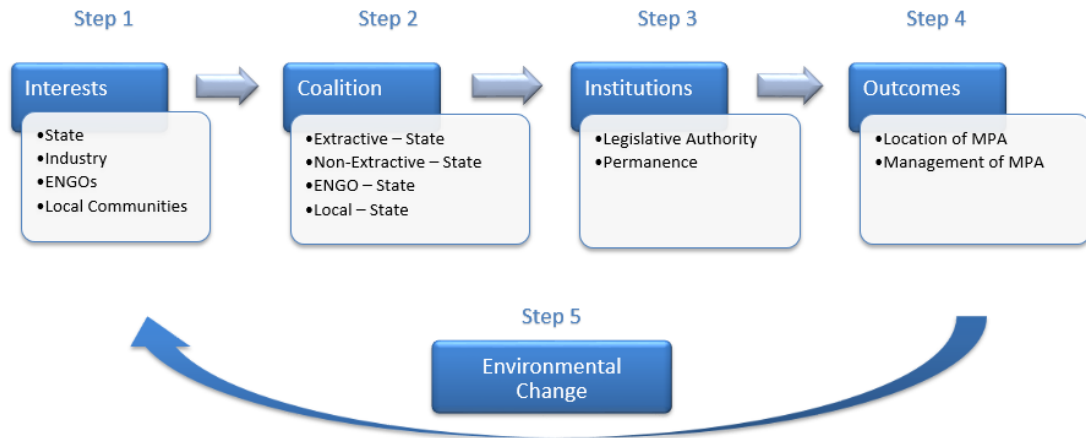
These four stakeholder groups encompass the strategic actors all pursuing their interests in a new protected area process. The state is the ultimate decision maker, but its preferences are not independent of the interests of industry, ENGOs, or local communities. The interests of these other three groups are central to why states make the protected area decisions that they do. How those

preferences translate into interests in a particular conservation process is fundamental to this framework. In most large MPA processes, ENGO interests generally eventually align, and local interests tend to be aggregated and reflected in industry interests. Because the interests of these two groups tend to be similar across large MPA cases, it is variation in the composition and salience of industry interests that best explains government decisions about where to locate and how to manage large MPAs. The coalition process (Stage 2) of this environmental norm diffusion framework is useful for explaining how these interests interact to produce a range of MPA outcomes.

The Coalition Process

The coalition process unfolds in five steps, depicted in Figure 3.2, which includes large MPA-specific coalitions and outcomes. In the first step, the state and various industries determine their interest in a given environmental policy outcome based on their core preferences. The state has already adopted the given environmental norm in principle by this point (in Stage 1) but the norm has not been localized. In this case localization refers to where to locate or how to manage a large MPA. In step two, these interests aggregate and coalitions form around a preferred policy outcome. Figure 3.2 only lists coalitions involving the state because the state makes the final decisions with respect to large MPAs. Who the state decides to collaborate with determines MPA policy outcomes. This is a deviation from Gourevitch and Shinn's model, which does not include the state as a strategic actor. In the next step, institutions intervene between coalitions and policy outcomes. They play an important role in determining if a state leader (or other decision maker) is able to impose her or his preferred policy outcome. In the fourth stage, the type of coalition and institutional setup combined predict an environmental policy outcome, which here refers to how a state decides to locate and manage a large MPA. The final stage incorporates environmental change into the framework. I apply this coalition process portion of the framework below to make a series of theoretical claims about how large MPA coalitions form, how institutions intervene, and ultimately where states locate and how they manage large MPAs.

Figure 3.2 – Coalition Process



Salience of Industry Interests

How coalitions form for a given MPA process depends on the salience of various industry interests in a region. When industries do have a strong interest in a particular region those interests tend to overshadow those of other stakeholder groups. Larger regions tend to increase the significance of industry interests because they encapsulate more marine resources. In other words, industry is more likely to be invested in MPA decisions about larger areas simply because they are more likely to have a stake in them. Further, organized industry groups generally have more impact than more diffuse non-industry groups, due to the asymmetry of motivation, resources, and mobilization between them (March and Olsen 1983). Simply put, industry groups are predisposed toward having a greater impact because they are better organized and have clearer goals.

Table 3.1 describes the four indicators that measure the salience of industry interests in a given geographical space. Those indicators are: intensity of activity, factor specificity, asset specificity, and exogenous stressors. Combined they specify how dependent a particular industry is on a given region for its operations. When it is highly dependent on the region, then the salience of industry interests is high, and vice versa. Using an ordinal scale (low-moderate-high) to assign values for each variable provides an indication of a given industry’s interest salience.

Table 3.1 – Salience of Industry Interest Indicators

Indicator	Description
Intensity of Activity	The total economic output of a region for an industry, including relative to that industry’s overall output and its contribution to the national economy.

Indicator	Description
Factor Specificity	The ability of an industry to substitute land, labor, and capital resources elsewhere (i.e., coral reefs, fish stocks, oil deposits).
Asset Specificity	The ability of an industry to move assets from one activity to another (i.e., equipment suitability, vessel range).
Exogenous Stressors	The pressure an industry faces from factors outside of the specified region that limit its ability to absorb area restrictions.

These variables will take on values that are heavily influenced by a given economic and ecological context. The case studies below will elaborate on this in detail, but there are two general trends worth noting. First, the factor specificity of the fishing industry is linked to the size of the EEZ that it can operate in and its ability to attain licenses elsewhere. If a large MPA is only a small portion of the EEZ it is licensed to fish in, fishing fleets are much less likely to depend on it. The reverse is true in cases where a large MPA comprises most or all of a country's EEZ. And second, ecotourism operators almost always have high factor and asset specificity. They exist in the locations that they do because of the surrounding natural habitat (Hazari 1983). While fishing vessels can often travel to new waters, resorts and dive sites cannot be easily relocated or substituted. These two aspects of industry interests feature prominently across most large MPA case studies.

Of these four indicators, I place less weight on exogenous stressors to measure the overall salience of industry interests. This is because a high value on the exogenous stressors indicator absent high values on the other three suggests that the industry is still not dependent on the area in question. If it were, some combination of its intensity of activity, factor specificity, and asset specificity would be high as well. Exogenous stressors include threats to an industry that exist outside of the proposed MPA area, such as the unexpected denial of fishing permits in other fishing grounds, minimum wage hikes, or a global decline in fish stocks. These stressors can strengthen an industry's resolve around its interests in a particular area, and they can sway governments to adopt a potentially more industry-friendly policy. But an industry still needs to convince the government that a particular area matters to its profitability, and exogenous stressors alone do not suggest that it does.

When combined these four indicators give us a sense for how much an industry depends on a given region. In the case studies to follow I aggregate these indicators to provide one overall measure of each industry's salience of interests in the proposed MPA area. Like the individual

indicators themselves, I assign an overall value on a low-moderate-high ordinal scale. These values predict the coalitions that will form in an MPA process.

Coalition Formation

The salience of industry interests predicts which stakeholder group the state will align itself with in an MPA process. The state coalition is not necessarily the only coalition to form. For example, an extractive Industry-State coalition may be opposed by an ENGO-Local or ENGO-Non-Extractive coalition. These opposing coalitions may be able to extract concessions during the process, but MPA outcomes more generally will reflect the state coalition. The following theoretical claims predict which state coalition will emerge based on industry interests.

C1(a) – An Extractive-State coalition is more likely to form when the salience of extractive industry interests is high.

C1(b) – An Extractive-State coalition is more likely to form when salience of extractive industry interests is moderate, but the salience of non-extractive industry interests is moderate or low.

C2 – A Non-Extractive-State coalition is more likely to form when the salience of non-extractive industry interests is high, but the salience of extractive industry interests is moderate or low.

C3 – An ENGO-State coalition is more likely to form when the salience of extractive and non-extractive industry interests is low.

C4 – A Community-State coalition is more likely to form when the salience of extractive and non-extractive industry interests is low, and ENGOs have not expressed interest in a region (i.e., too low profile).

It is more accurate to think of these coalitions as representing a certain type of MPA politics rather than exclusive arrangements. For example, ENGOs may be supportive of a Non-Extractive-State coalition and even operate in ways similar to how they would operate in an ENGO-State coalition. The distinction lies in the stated reasons for the coalition, and the distinct type of politics that those different reasons produce. When a state establishes a large MPA because it is expected to yield substantial benefits to the ecotourism industry it relies on a different set of supporting arguments than it would for a strictly conservation-motivated MPA. The predicted outcomes for these two coalition types are often similar, but the process for arriving at that outcome is different. A Non-Extractive-State coalition is also better suited to overcoming moderate extractive industry interests than an ENGO-State coalition because the state can claim to be bolstering rather than hindering the economy.

In the case studies to follow I refer to specific industries when I refer to a coalition type for clarity and specificity. Rather than an Extractive-State coalition I will refer to a Commercial Fishing-State coalition to accurately reflect the industry that the government is collaborating with in a particular MPA process. This helps to convey exactly which industries are prominent in a given coalition. This leads to coalition names that are different from those listed above when combined with also specifying state decision makers: for example, an Extractive-State coalition potentially becomes a Commercial Fishing-Executive coalition.

Institutional Factors

In this framework, institutions are an intervening variable between coalitions and outcomes that can influence whether a state coalition is able to achieve its preferred policy outcome. This influence takes two forms with respect to large MPAs: legislative authority and permanence. Legislative authority is the ability of the decision maker to enact legislation for its preferred MPA outcome. Even state leaders face checks and balances, so opposition within the government may prove insurmountable to a preferred outcome. Institutions that circumvent those checks and balances are therefore vital for new MPA legislation.

H1 – When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.

This claim is deliberately broad because there are a number of potential mechanisms through which it can work. In parliamentary systems, a state leader in a majority parliament has the ability to push through any legislation consistent with the law. There are virtually no veto points between executive preference and legislation. In a presidential system, on the other hand, it is usually difficult for an executive to enact legislation that needs congressional approval. The ability of the executive to achieve its preferred policy outcome may depend on the degree of authority that the executive has over protected area designations. In other instances, political approval may not be required at all. Instead a civil service organization may have a mandate with the authority to identify and establish protected areas. When ENGOs initially lobby a state to create a new MPA, they target the branch of government that has the greatest likelihood of being able to legislate a new area.

Institutions are also important for determining the permanence of that legislation. The initial designation of an MPA is often not enough to ensure its longevity. Future governments can theoretically abolish them or alter their management plans.

I2 – When an existing protected area’s legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.

The permanence of an MPA and its management plan is best thought of as being on a spectrum. Technically any piece of legislation can be overturned with the right level of support. How high the threshold to overturn an MPA is determines its level of permanence. If that threshold is unfeasibly high, an MPA has a high level of permanence. If a management plan can easily be altered through regulation rather than legislation, then that management plan has a low level of permanence. Permanence is ultimately a measure of how likely it is that a government can alter an existing MPA.

This claim is specific to a new coalition process that emerges in response to environmental change. As environmental conditions change, stakeholder beliefs about how best to pursue their preferences, and their interests, may shift. This shift can lead to a new coalition forming that may want to alter the existing management arrangement of an MPA. Whether the new coalition strengthens or weakens the restrictions of an area depends on the reasons the new coalition formed. Increasingly depleted fish stocks, for example, may motivate a government to strengthen them. Either way, the permanence of MPA legislation has bearing on how dynamic of a process management of that MPA is.

MPA Outcomes

Coalition type determines how states make decisions about where to locate and how to manage MPAs. The following claims predict the relationship between coalition type and MPA outcomes. These theoretical claims are also contingent on intervening institutions being favorable to the state coalition’s preferred policy outcome.

The first set of claims predict how states make decisions about the proposed location of an MPA. By location these claims refer not only to the geographical location of the proposed site of a large MPA—which is often already determined by the localization stage—but to the boundaries of the eventual MPA as well. To reiterate, at this stage a state has already adopted the large MPA norm in principle. These hypotheses reflect how the coalition process affects the adoption of that norm.

L1 – When Extractive-State coalitions form, states are more likely to relocate proposed MPAs to more remote regions, or not establish them at all.

L2 – When Non-Extractive-State coalitions form, states are more likely to establish MPAs in areas with a higher commercial value.

L3 – When ENGO-State coalitions form, states are more likely to establish MPAs in areas more remote from commercial activity.

L4 – When Community-State coalitions form, states are more likely to establish MPAs in an area that a local community depends on for subsistence and livelihoods.

These claims are not surprising since they predict what we would expect based on the industry indicators used to predict coalition formation. Once a state has committed to establishing an MPA, however, it may be easier to pursue its coalition goals through the management plan for the MPA than to relocate it. The outcome in this scenario is a ‘paper park’ with few conservation benefits. These poorly managed MPAs are quite common, and states establish them in part to appease interest groups with little intention of properly investing in them (Fox et al. 2012; Rife et al. 2013). In other words, the state may feel it is politically easier to establish an MPA and not manage it well than to risk upsetting local community or environmental groups.

The next set of claims predict how a state chooses to manage an MPA once it has decided on its location. These outcomes are again a reflection of the state coalition that forms.

M1 – When Extractive-State coalitions form, MPAs are more likely to be ‘paper parks’ that lack comprehensive management or meaningful enforcement.

M2 – When Non-Extractive-State coalitions form, MPAs are more likely to have comprehensive management and enforcement plans that limit extractive activity.

M3 – When ENGO-State coalitions form, MPAs are more likely to have comprehensive management and enforcement plans that limit extractive activity.

M4 – When Community-State coalitions form, MPAs are more likely to have management plans that prohibit commercial use but secure local rights to resources.

Comprehensive management and enforcement plans are those that have clear restrictions on use that the government then actively tries to enforce. The most comprehensive type of management plan is to create a fully no-take reserve, in which the state bans all extractive uses. When a state sees a no-take reserve as being impractical, there are a range of other planning techniques it can use. It may ban only certain extractive industries, impose stricter limits on vessels or catch, or designate specific zones that industry can still operate in. These types of reserves are called mixed-use MPAs, and have fewer conservation benefits than no-take MPAs. Others may be nothing but lines on a map – an MPA in name but with business-as-usual commercial activity on the water.

One final point worth noting is that these claims refer specifically to management and enforcement plans, rather than efficacy. Many smaller countries lack the resources to effectively implement these plans, despite the motivation to do so. The policy outcome of interest is therefore whether a management and enforcement plan is comprehensive relative to the capacity of the

country. It would distort my findings to compare MPA implementation in the US and Palau without taking into account their wildly divergent respective financial and technical resources. Management and enforcement planning is therefore a function of intent rather than capacity.

Environmental Change

The final stage of this process incorporates environmental change. Once a state establishes an MPA and its management plan is set, neither are necessarily permanent. They can respond to changing environmental conditions. Environmental change refers to changes in the underlying ecosystems an MPA protects. This change can take a number of forms. For example, it can refer to increasingly declining fish stocks or coral bleaching, but it can also refer to species recovery or ecosystem restoration. The decades-old moratorium on the Northwest Atlantic cod fishery in response to a total collapse of fish stocks in the 1990s is one (extreme) example of environmental change leading to a revised management plan (Walters and Maguire 1996).

This process is iterative because the underlying ecological and economic incentive structures in an area shift. Economic incentives contribute to the environmental policy decisions that states make, but those decisions also lead to environmental change that can in turn reshape economic incentives. The fishing industry does not like restrictions on take, but they also care about the long-term viability of their industry in various fisheries (Webster 2009). Healthy marine ecosystems are similarly the cornerstone of the ecotourism industry. The political economy of an area and environmental change within it are inextricably linked. The evolution of fisheries management techniques in recent years is indicative of this link, as it has struggled to keep pace with the growth of the fishing industry.

As noted earlier, the increasing technological sophistication and overcapitalization of the fishing industry has rapidly devastated fish stocks over the past several decades (DeSombre and Barkin 2011; Barkin and DeSombre 2013). Large-scale development in developing countries has also long contributed toward a trend of overexploitation of fish stocks and poor fisheries management (Chapman 1989). These changes are leading to subsequent changes in how governments and the industry itself are managing fisheries (Campling, Havice, and Howard 2012). The increasing scarcity of fish stocks is increasingly leading to the use of MPAs as fisheries management tools to ensure the long-term sustainability of the industry in various places. Increasing scarcity is leading to conflict between recreational fishing, commercial fishing, and non-fishing industries such as ecotourism over how MPAs should be managed and for whom (Campling, Havice, and Howard 2012). What all of

these trends point to is that threats to the long-term viability of their businesses can shift industry interests toward stricter government regulation of marine resources through MPAs.

A decline in marine resources can be a precursor to better management over time. The commercial fishing industry in some fisheries has been more open to area management strategies in recent years as they realize that business-as-usual management practices are failing to ensure sustainable fish stocks (DeSombre and Barkin 2011; Campling, Havice, and Howard 2012). When their preferred less costly and less effective schemes fail to preserve fish, many fisheries management groups have over time adopted stricter and more effective management strategies (Webster 2009). MPA management is therefore not static, but is an iterative process that must take into account dynamic underlying incentive structures. Even after a state establishes an MPA, changes to the ecosystem and marine resources it contains can shift stakeholder beliefs about how best to pursue their preferences.

Environmental change is the reason that the coalition process that I outline above is an iterative one. No group is so locked into its interests for a given MPA that rapid environmental decline would not give it pause for thought. The industry profit-motive is not strictly a short-term one, and businesses care about their longevity. As resource scarcity threatens long-term viability, many businesses will prefer outcomes that may reduce their short-term profits.

Coalition Process Summary

Table 3.2 summarizes the 15 theoretical claims that I make, derived from applying the coalition process portion of this environmental norm diffusion framework to the large MPA norm.

Table 3.2 –Diffusion of the Large MPA Norm Theoretical Claims

Step	Theoretical Claim
Coalition Formation	C1(a) – An Extractive-State coalition is more likely to form when the salience of extractive industry interests is high.
	C1(b) – An Extractive-State coalition is more likely to form when the salience of extractive industry interests is moderate, but the salience of non-extractive industry interests is moderate or low.
	C2 – A Non-Extractive-State coalition is more likely to form when the salience of non-extractive industry interests is high, but the salience of extractive industry interests is moderate or low.
	C3 – An ENGO-State coalition is more likely to form when the salience of extractive and non-extractive industry interests is low.
	C4 – A Community-State coalition is more likely to form when the salience of extractive and non-extractive industry interests is low, and ENGOS have not expressed interest in a region (i.e. too low profile).

Step	Theoretical Claim
Institutional Factors	<p>I1 – When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.</p> <p>I2 – When an existing protected area’s legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.</p>
MPA Outcomes – Location	<p>L1 – When Extractive-State coalitions form, states are more likely to relocate proposed MPAs to more remote regions, or not establish them at all.</p> <p>L2 – When Non-Extractive-State coalitions form, states are more likely to establish MPAs in areas with a higher commercial value.</p> <p>L3 – When ENGO-State coalitions form, states are more likely to establish MPAs in areas more remote from commercial activity.</p> <p>L4 – When Community-State coalitions form, states are more likely to establish MPAs in an area that a local community depends on for subsistence and livelihoods.</p>
MPA Outcomes – Management	<p>M1 – When Extractive-State coalitions form, MPAs are more likely to be ‘paper parks’ that lack comprehensive management or meaningful enforcement.</p> <p>M2 – When Non-Extractive-State coalitions form, MPAs are more likely to have comprehensive management and enforcement plans that limit extractive activity.</p> <p>M3 – When ENGO-State coalitions form, MPAs are more likely to have comprehensive management and enforcement plans that limit extractive activity.</p> <p>M4 – When Community-State coalitions form, MPAs are more likely to have management plans that prohibit commercial use but secure local rights to resources.</p>

This coalition process explains variance in how remote MPAs are and how comprehensive their management plans are. It explains the localization of an international norm after a state has adopted it in principle; Stage 2 of my broader norm diffusion framework.

Summary

This chapter proposed a new two-stage environmental norm diffusion framework and applied it to construct a theory of the diffusion of the large MPA norm. The previous chapter explains the norm adoption stage (Stage 1) of the diffusion of the large MPA norm by explaining how it emerged. The norm localization stage (Stage 2) that I presented in this chapter explains how states localize an environmental norm in a given economic and ecological context. This domestic process involves a set of strategic actors all pursuing their interests, forming coalitions that suit those interests, then reaching an environmental policy outcome that the state favors based on how it amalgamates and integrates those interests with its own.

The three chapters to follow present case studies of the Pacific Remote Islands Marine National Monument in the US, the Coral Sea Commonwealth Marine Reserve in Australia, and the Palau National Marine Sanctuary in Palau. These three cases will demonstrate how the large MPA norm took hold in each country, and how domestic stakeholders interacted to produce a diverse set of MPA outcomes. They show that the salience of various industry interests in a region determines how states make decisions about how well it needs to protect a given ecological space.

Chapter 4: Pacific Remote Islands Marine National Monument: ENGO-Executive Coalition

The Pacific Remote Islands (PRI) are a combination of seven islands, atolls and reefs located southwest of Hawaii. The Pacific Remote Islands Marine National Monument (PRIMNM) was created by President Bush in 2009, and then expanded six-fold from its original 225,000 km² to 1,270,000 km² by President Obama in 2014. The reserve was at the time the largest non-contiguous marine reserve in the world. It covers an area that is entirely uninhabited. Aside from occasional military personnel or conservation workers, the islands themselves see no visitors. There was, however, a small amount of commercial fishing within the boundaries of the reserve prior to its creation. This commercial fishing would become a point of contention between the fishing industry and Congressional Republicans on the one side, and ENGOs and President Obama on the other.

The PRI reserve is a telling example of how the emergence of a new large MPA norm influenced how marine conservation decisions are made in US politics. Executive action to create large marine reserves was unprecedented in the first 100-year history of the 1906 Antiquities Act, but it became common practice. The precedent that President Bush set with his multiple uses of the act to establish marine reserves paved the way for President Obama to pursue even more ambitious marine conservation initiatives, like the PRIMNM expansion. US Republicans now openly refer to Bush's use of the Antiquities Act as an "unfortunate mistake" (*Oversight Hearing on Marine National Monument Designations* 2015). Environmentalists and the public widely supported the initial establishment and later expansion of the highly remote PRI reserve despite a vocal minority opposition.

The PRI reserve is what many marine conservationists would call a 'low-hanging fruit': it is remote, has no indigenous population, and commercial activity is minimal.²² It is located in an area where local human impacts on the marine environment are low. The process leading to the creation of the reserve has nonetheless been hotly contested by industry groups and Republican politicians on the grounds that it poses a threat to the long-term viability of the US Western Pacific commercial fishing industry and is an overreach of presidential authority.

²² Interview with Program Director, Sea Around Us, University of British Columbia, Vancouver, BC, 17 August 2015.

This chapter will explore the politics of marine conservation in the US through an in depth case study of President Obama's 2014 expansion of the PRI reserve. The US system is a convoluted one, with a handful of acts delegating authority to establish MPAs to a number of different agencies, at various levels of government. The outcome is a large number of small MPAs with often conflicting objectives, and managed by different agencies. The use of the Antiquities Act to establish large MPAs is a new development in US marine conservation. This chapter will demonstrate how ENGOS took advantage of the Antiquities Act to encourage the Bush and Obama administrations to circumvent industry opposition to large MPAs. In doing so, it will make two arguments about the PRIMNM. The first is that the Obama expansion of the PRI reserve was made possible by the emergence of a large MPA norm that has its roots in the earlier US marine conservation efforts by President Bush. The second argument is that a coalitions-based political economy model can explain the emergence of an ENGO-Executive coalition and the subsequent expansion of the monument to create the world's largest non-contiguous marine reserve. The political dynamics that this model predicts are at work even in as remote an area as this, with its minimal commercial presence.

The Origin of Large Scale Marine Conservation in the US

The US has not only adopted the large MPA norm; it has been a key driver of it globally. It boasts three MPAs exceeding 200,000 km², which along with Australia is the second highest tally among all countries, behind only the UK's six. In addition to the 2009 PRI reserve, President Bush established the Papahānaumokuākea and Marianas Trench Marine National Monuments in 2006 and 2009 respectively. President Obama would later expand two of these: the PRI reserve in 2014, and Papahānaumokuākea in 2016. Combined these three monuments now cover over 3 million km² of US waters. In 2014 the US also initiated and hosted the first ever *Our Ocean* conference, where the US formally announced the PRIMNM expansion. Other states followed suit, announcing several new large MPAs at subsequent *Our Ocean* conferences in 2015 and 2016. A separate program, *Big Ocean*, was also initiated by US officials as a peer-learning network for MPA managers to share and coordinate on best ocean management practices, with managers from every large MPA in the world currently participating. Aulani Wilhelm—one of the original NOAA managers of Papahānaumokuākea—was instrumental to its founding and initial design.²³

²³ Interview with Program Director, National Oceanic and Atmospheric Administration, Silver Spring, MD, 24 September 2015.

This prominent US role in ocean conservation is only possible because of the 1906 Antiquities Act. Without it, none of the US’s three large MPAs would have been created, and without these reserves the US would not have the legitimacy to promote large-scale ocean conservation globally. Papahānaumokuākea, Marianas Trench, and the Pacific Remote Islands are all formally designated as ‘national monuments’ in the US legal system. This means that they were the product of a US President using her or his authority under the Antiquities Act to set aside space “of historic or scientific interest” (Lacey 1906). The initial intention of the act was to give the President authority to protect indigenous sites of significance, but its use has expanded to include other areas of scientific or historical interest, including natural areas. The act allows the President to bypass both Congress and the civil service to create protected areas, thereby allowing for the quick and unimpeded designation of new monuments. Both Bush and Obama used the act to circumvent what they saw as obstacles to marine conservation.

These obstacles take two forms: bureaucratic and political. At the root of both types of obstacle lies a fairly convoluted legal structure around MPA designation. This convoluted legal structure leads to competing processes at different government departments, and occasional jurisdictional battles. It also provides a source of political discontent when one type of designation is used to circumvent the preferred process of a given stakeholder group, as was the case with the fishing industry and the PRI reserve. At the federal level alone, there are four distinct marine area management designations: refuges, marine sanctuaries, fisheries management areas, and monuments. Table 4.1 summarizes the four types of designation, and the agencies and authorities associated with them.

Table 4.1 – US Federal MPA Designations

Designation	Legal Basis	Administered By	Parent Agency
Refuge	1966 Refuge Administration Act	Fish and Wildlife Service (FWS)	Department of the Interior
Sanctuary	1972 The Marine Protection, Research, and Sanctuaries Act (MPRSA)/1992 National Marine Sanctuaries Act of (NMSA)	National Oceanic and Atmospheric Administration (NOAA)	Department of Commerce
Fisheries Management Area	1976 Magnuson-Stevens Fishery Conservation and Management Act (MSA)	Regional Fishery Management Councils, NOAA	Department of Commerce
Monument	1906 Antiquities Act	Council on Environmental Quality	Executive Office

Refuges are created and administered by the Fish and Wildlife Service (FWS) for a number of different reasons, varying from responses to crises, the personal preferences of officials and legislators, funding, social program priorities, donations, and wildlife needs (Fischman 2006). These refuges are all designed with specific conservation and sustainability goals in mind, with management practices designed to reflect those goals.²⁴ The refuge system currently includes 563 refuges, with 180 of those being marine refuges.²⁵ Refuges can only extend up to 12 nautical miles from shore. Beyond 12 miles, the waters are legally federal waters and typically under NOAA jurisdiction.²⁶

A federal MPA under NOAA jurisdiction can refer to either a sanctuary or a fisheries management area, depending on which division of NOAA oversees it. There is a bureaucratic and philosophical divide within NOAA between its Office of National Marine Sanctuaries (NOAA Sanctuaries) and its National Marine Fisheries Service (NOAA Fisheries).²⁷ The 1972 Marine Protection, Research, and Sanctuaries Act (MPRSA)—later amended and now formally known as the 1992 National Marine Sanctuaries Act (NMSA)—gave NOAA the authority to identify and designate national marine sanctuaries that are of “national significance” following a public review process (Studds 1992). The 1976 Magnuson-Stevens Act, on the other hand, established eight regional fisheries management councils that are mandated to manage fisheries to achieve maximum sustainable yield (Magnuson and Stevens 1976). NOAA Sanctuaries runs the sanctuaries program, while NOAA Fisheries in conjunction with the eight fisheries councils are responsible for fisheries management areas. Both NOAA Sanctuaries and NOAA Fisheries operate in the same ocean space, with the former having a strictly conservation mandate and the latter a sustainable extraction mandate. There is a provision within NOAA’s statute for Sanctuaries to take over if Fisheries fails to achieve sustainability goals for a given area, but use of this is rare, if not entirely non-existent.²⁸ As

²⁴ Interview with Branch Manager, US Fish and Wildlife Service, Arlington, VA, 22 September 2015; Interview with Program Coordinator, US Fish and Wildlife Service, Arlington, VA, 22 September 2015.

²⁵ Interview with Branch Manager, US Fish and Wildlife Service, 22 September 2015; Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

²⁶ Interview with Branch Manager, US Fish and Wildlife Service, 22 September 2015; Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

²⁷ Interview with Program Director, National Oceanic and Atmospheric Administration, 24 September 2015.

²⁸ Interview with Program Director, National Oceanic and Atmospheric Administration, 24 September 2015.

of 2013 the fisheries councils had established 182 fishery management areas with various levels of protection, while NOAA Sanctuaries has established 13 sanctuaries (NOAA 2015).

The eight fisheries management councils established by the Magnuson-Stevens Act feature prominently in the politics of marine conservation in the US. They tend to be opposed to executive action on MPAs, seeing it as an infringement on their efforts to manage their respective areas. These councils tend to be closely affiliated with the fishing industry of their respective regions, with council members often drawn directly from it. The councils, while each a government body under NOAA, are de facto industry organizations but with a government mandate to ensure sustainable fisheries. This industry-friendly composition has led to some mixed results in terms of ensuring sustainable fisheries. The North Pacific Fishery Management Council (NPFMC) has generally performed well in achieving maximum sustainable yield, for example, whereas the Northwest Atlantic Fisheries Organization (NAFO) failed to prevent the collapse of cod stocks in the region (*Oversight Hearing on Marine National Monument Designations* 2015). The Western Pacific Regional Fishery Management Council (Wespac) is the council responsible for the area where the three US marine national monuments are located, and is the main source of opposition to the PRI reserve.

In addition to these federal MPA designations through the FWS, NOAA, and its affiliated fisheries councils, there are also hundreds of state-level MPAs. All told, the US has nearly 1,800 MPAs of various federal- and state-level designations (NOAA 2015). The vast majority of these, however, have fairly weak management provisions. According to the National Marine Protected Areas Center—the MPA research arm of NOAA—85% of US MPAs allow some form of extractive activity (National Marine Protected Areas Center 2013). As of 2013 only 3% of US continental waters were officially designated as no-take (National Marine Protected Areas Center 2013). Many of these refuges, sanctuaries and fisheries management area MPAs may be achieving important local conservation and sustainability goals, but they are not leading to a comprehensive MPA network that is ecologically representative of the marine life of the US. This is not surprising given the distinct processes in place at multiple levels of government.

It was President Bush's dissatisfaction with the pace and effectiveness of these other processes that led to his use of the Antiquities Act to establish Papahānaumokuākea, the first marine national monument in the US.²⁹ The Northwestern Hawaiian Islands (NWHI)—where Papahānaumokuākea is

²⁹ Interview with Executive, Environmental Defense Fund, phone, Raleigh, NC, 23 September 2015.

located—had seen various protected area designations dating as far back as 1903. When Bush took an interest in the area in 2006 it had been undergoing the NOAA sanctuaries process for five years, having been initiated by President Clinton in 2001.³⁰ The sanctuaries process was at a standstill because of what was becoming a turf war between NOAA Sanctuaries and NOAA Fisheries over the region.³¹ The Council on Environmental Quality (CEQ)—the environmental arm of the executive branch—repeatedly set deadlines for NOAA that it always missed.³² Frustrated with the slow process Bush asked his advisors how he could expedite it.³³ These advisors proposed using the Antiquities Act to establish a marine monument after consulting with Department of the Interior legal counsel.³⁴ Bush agreed, and his use of the act to establish Papahānaumokuākea in 2006 set a precedent for the creation of large MPAs in the US.

Bush’s creation of Papahānaumokuākea had a direct and immediate impact on further marine conservation efforts in the US. President Bush was so pleased with the positive response to Papahānaumokuākea from the environmental community and the public that he became committed to the idea of leaving a blue legacy.³⁵ Both Marianas Trench and the initial PRI reserves were the byproduct of Bush’s desire.³⁶ As discussed in chapter 2, leaving a blue legacy is one of the main appeals that conservation ENGOs make to state leaders in order to expand the large MPA norm.³⁷ One ENGO executive refers to Papahānaumokuākea as one of the reserves that marked a “turning point in marine conservation that set a new global standard.”³⁸ The Marianas Trench and PRI reserves were the continuation of this new US commitment to large MPAs, borne out of the Bush designation of Papahānaumokuākea. Decision makers began to view reserves in Marianas Trench, the Pacific Remote Islands, and even the more commercially active northeast coast as credible possibilities.³⁹ By the time ENGOs were lobbying Obama for the PRI expansion Bush had already internalized the large MPA norm in US marine conservation policy. This internalization was only

³⁰ Interview with Executive, Marine Conservation Institute, phone, Glen Ellen, CA, 24 September 2015.

³¹ Interview with Former Executive, Pew Charitable Trusts, phone, Juneau, AK, 7 October 2015.

³² Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

³³ Interview with Executive, Marine Conservation Institute, 24 September 2015.

³⁴ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

³⁵ Interview with Program Director, Marine Conservation Institute, Washington, DC, 24 September 2015.

³⁶ Interview with Executive, Environmental Defense Fund, 23 September 2015.

³⁷ Interview with Program Director, National Geographic Society, Washington, DC, 17 September 2015.

³⁸ Interview with Executive, Marine Conservation Institute, 24 September 2015.

³⁹ Interview with Executive, Conservation International, Arlington, VA, 17 September 2015.

possible because of the Antiquities Act, which would later become a major source of contention between industry groups and the executive branch.

Use of the Antiquities Act for marine conservation facilitates the creation of large MPAs for a number of reasons. First, the President can unilaterally invoke it, bypassing any potential congressional opposition to a given reserve. Second, the President can also invoke it rather easily, with the only major stipulation for the creation of a nature monument that there be a scientific basis for it.⁴⁰ Third, the act does not require any kind of public consultation, including with industry groups. Although it is not a legal requirement, every marine national monument created to date has nonetheless included some form of public engagement (*Oversight Hearing on Marine National Monument Designations 2015*). And fourth, the Antiquities Act allows a US President to bypass the civil service. Bypassing the civil service is beneficial because NOAA is required to engage in public consultation, and as discussed is internally divided. According to prominent ENGO lobbyists, the civil service is also often the biggest opposition to large-scale conservation because it tends to be slow moving, and large marine national monuments tend to realign authorities within the bureaucracy, leading to some pushback.⁴¹

Invoking the Antiquities Act involves an obvious trade-off: public engagement is sacrificed in favor of expedience. This lack of public engagement is one of the major criticisms stemming from the fishing industry about the designation and expansion of the PRI reserve. The public largely supports the reserve but industry stakeholders argue that they are being excluded, and furthermore that the Antiquities Act is an illegitimate way of avoiding the regional fisheries councils. These councils are heavily influenced by industry, so it is no surprise that they are their preferred MPA designating body. This tension between executive action and the established, more industry-friendly mechanisms is central to how coalitions have formed and influenced marine conservation outcomes in the US over the past decade, and the PRI reserve expansion is no exception.

Pacific Remote Islands Marine National Monument Overview

The creation of the PRIMNM happened in two phases, depicted in Figure 4.1 below, with both phases involving a similar set of industry and ENGO stakeholders. In the first phase, President Bush invoked the Antiquities Act to create the reserve in five distinct zones around seven islands, atolls and reefs southwest of Hawaii. The announcement was made on 6 January 2009 alongside a similar

⁴⁰ Interview with Executive, Marine Conservation Institute, 24 September 2015.

⁴¹ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

announcement creating the Marianas Trench Marine National Monument in an effort to build his blue legacy.⁴² The reserve extended 50 nautical miles from the shores of these seven fixtures – a limit that Bush felt was sufficient to achieve conservation goals and one that would not overly antagonize the fishing industry.⁴³ The process involved direct collaboration between ENGOs and the executive branch. Leaders from The Pew Charitable Trusts, National Geographic (NGS), and the Marine Conservation Institute (MCI), among others, collaborated directly with the Council on Environmental Quality, Vice President Dick Cheney, First Lady Laura Bush, and President Bush himself. Although both Bush and Cheney were concerned about the impact of the reserve on commercial fishing in the Western Pacific, the industry had little direct involvement in the decision-making process.⁴⁴

The second phase was Obama's expansion of the reserve around three of the seven zones created by Bush at Jarvis Island, the Johnston Atoll, and Wake Island. Following in his predecessor's footsteps, Obama invoked the Antiquities Act to expand the reserve. Secretary of State John Kerry formally announced the expansion at the inaugural *Our Ocean* conference on 25 September 2014. The presidential declaration expanded the three zones from their previous 50 nautical miles from shore to the maximum 200 nautical mile limit, covering the entire EEZ of the areas. The expansion was widely praised by environmental groups, but it actually fell short of their goal to expand all five zones (Howard 2014). Obama initially considered expanding all five zones but industry concern convinced him to designate a more modest area. Like Bush he was worried about overly antagonizing the fishing industry, which effectively lobbied against the more ambitious expansion.⁴⁵ The expansion process was more secretive under Obama than Bush.⁴⁶ Even some senior staff from some of the ENGOs involved in the initial designation of the reserve were not aware of the expansion plans until they were formally announced.⁴⁷ This closed door approach exacerbated industry and congressional Republican apprehension about the lack of public engagement in executive action on marine conservation.

⁴² Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁴³ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

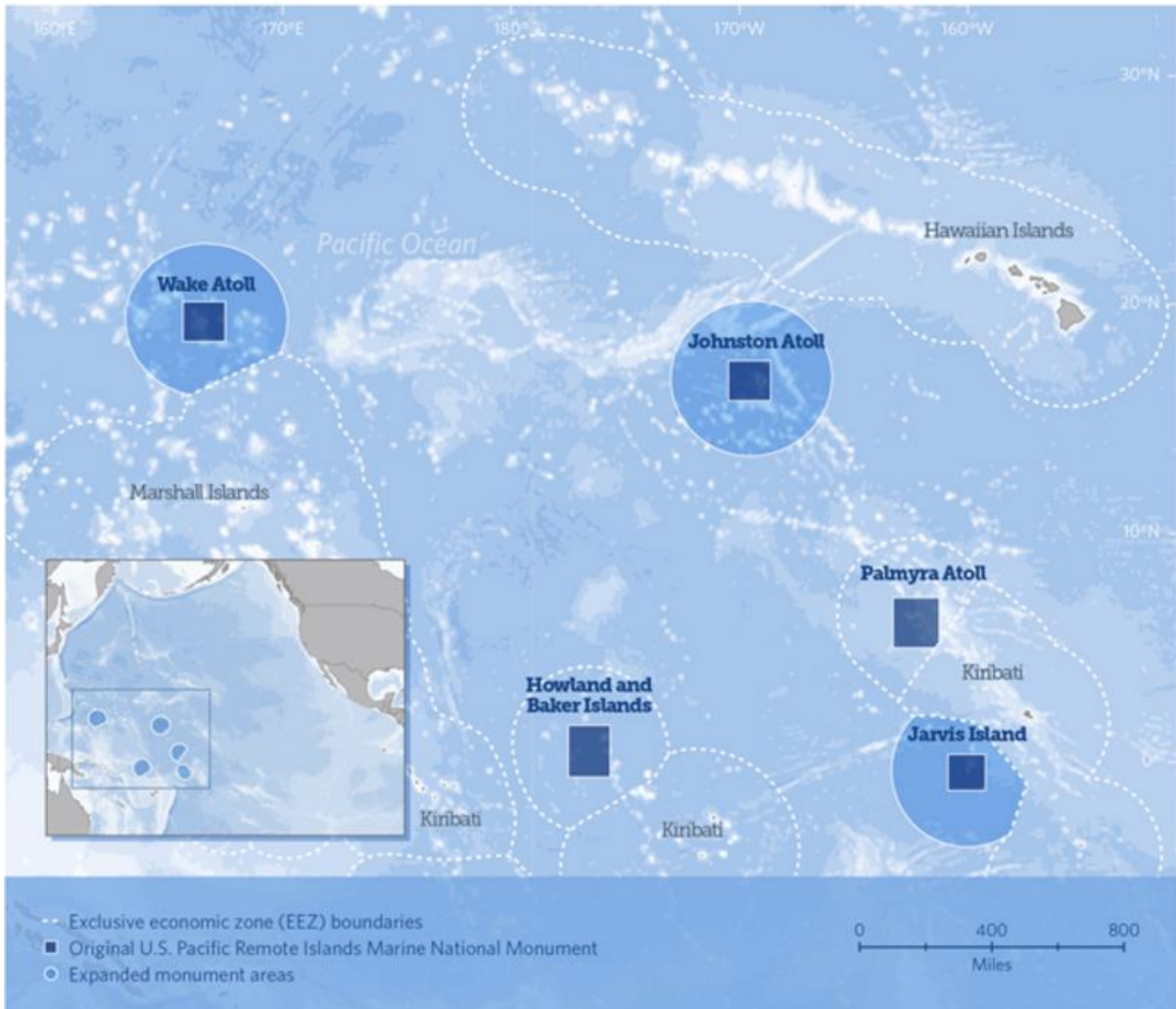
⁴⁴ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁴⁵ Interview with Manager, Western Pacific Regional Fishery Management Council, phone, Honolulu, HI, 1 October 2015.

⁴⁶ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁴⁷ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

Figure 4.1 – Pacific Remote Islands Marine National Monument Map



Source: The Pew Charitable Trusts (2014)

Despite the secrecy noted above, both the Bush and Obama decisions involved a clear ENGO-Executive coalition, with the commercial fishing industry lobbying from outside the formal process. The rest of this chapter will explain why this coalition formed, and why it led to what was at the time the world's largest non-contiguous marine reserve.

Coalition Formation

Industry Interests

Recreational fishing and ecotourism interests did not factor into the politics of the PRI reserve given their minimal stake in the region. The recreational fishing lobby is particularly powerful in the US and is often a major obstacle to marine conservation.⁴⁸ Closing an area to fishing is difficult when

⁴⁸ Executive, Environmental Defense Fund, 23 September 2015.

recreational fishing interests are salient in a region, and even basic protections for small areas have been hard fought and painfully slow to come to fruition.⁴⁹ Recreational fishing in the PRI region is so insignificant that the Bush and Obama administrations did not see a need to ban it, so it remains open to sport fishing. Boosting ecotourism is one of the most common arguments in favor of new marine reserves but was nonexistent in the PRI, so the ecotourism industry similarly had no stake in the politics of the reserve.

The commercial fishing industry stake in the PRI region is limited to the small, domestic commercial fishing presence of fleets based primarily out of American Samoa and Hawaii. The modest 37-boat US Western Pacific industry contributes less than 2% of total US landings revenues, but it has an important regional presence as the biggest industry in American Samoa. The commercial fishing industry is strongly opposed to the PRI reserve, but was minimally involved in the process, especially the highly secretive 2014 expansion.⁵⁰ Between 2014 and 2016 the US Western Pacific fishing industry came under a number of pressures. It was pushed out of its traditional fishing grounds in Kiribati, there was a global decline in tuna prices in 2015 due to oversupply, and the federal minimum wage was extended to American Samoa increasing the costs for boat operators and the two canneries on the island, one of which shut down in 2016. Given all of these pressures, the industry tends to be opposed to any additional fishing restrictions, no matter how minimal their impact, including the PRI reserve. Industry advocates see the PRI reserve as just another form of restriction imposed from authorities far removed from both the region and the industry.⁵¹

The main challenge the Western Pacific fishing fleet faces is that it depends on increasingly contentious fishing licenses in the Pacific. Fishing in the region is coordinated by the Western and Central Pacific Fisheries Commission (WCPFC) which includes all of the states with a stake in commercial fishing in the area, including the US. To increase their bargaining power Pacific island states formed the 17-member Pacific Island Forum Fisheries Association (FFA). It serves as an advisory group to its member states. In 1988 the US and the FFA negotiated the South Pacific Tuna Treaty, which allots the US Western Pacific fishing fleet a specific number of aggregate fishing days across the EEZs of its member states. This agreement does not specify which countries would

⁴⁹ Interview with Former Executive, Pew Charitable Trusts, 7 October 2015.

⁵⁰ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁵¹ Interview with Chief of Staff, Member of US Congress, Republican Party, phone, Washington, DC, 22 September 2015.

provide the fishing days, which became a challenge for the US industry in 2014 following a major policy shift in Kiribati.

In 2014 Kiribati declared that it would reduce the number of fishing days permitted to US vessels from its 2014 allotment of 4,313 to just 300 in 2015 (Annesley 2015). This reduction was in part an effort to develop its domestic fishing industry, but also in order to sell more lucrative permits to China and Taiwan instead. The WCPFC's Tropical Tuna Measure also limits the number of days that the commission's member states can fish in the high seas. This limit is based on historical uses of the high seas, which do not reflect the US fleet's recent de facto exile from Kiribati waters.⁵² The US fleet cannot make up its lost Kiribati fishing days on the high seas because of this limit.⁵³ The reduction in days in Kiribati combined with the typically low high seas allotment has forced the US fleet to the EEZs of the other FFA members, which are much further away from American Samoa than Kiribati, which dramatically increases costs. The drop in fishing days in Kiribati combined with preexisting high seas limits have created major challenges for the US Western Pacific fleet.

The drop in tuna prices in 2015 further complicated regional fishery politics. The South Pacific Tuna Treaty is generally renegotiated on a five-year basis, but in recent years the parties have had to settle for one-year interim agreements. In August 2015 the US agreed to pay \$67 million for 5,700 days of fishing access in 2016, but when the price of skipjack tuna plummeted in the latter half of the year the agreement was no longer tenable. US industry operators have claimed they cannot afford to pay their respective fees to the island nations, instead asking to renegotiate the number of fishing days down to 3,700. In January 2016 the FFA stopped granting licenses to US operators for their failure to pay fees owed, and the National Marine Fisheries Service (NMFS)—the US's fishing regulator—grounded the US fleet. For their part, many FFA countries rely on the region's \$3 billion tuna industry for nearly 10 % of their GDP (Pacific Islands Forum Fisheries Agency 2014), so they cannot afford to renegotiate down to a lesser value. The challenge the US fleet faces is that the agreement is to pay for fishing days irrespective of current catch value, so in poor years such as 2015 the industry suffers. The State Department eventually announced that it would intervene to prevent the potential collapse of the Western Pacific fleet, though a long-term solution to the problem seems elusive. Some industry representatives have called the future of the South Pacific

⁵² Interview with Program Director, US commercial fishing business, phone, 22 January 2016.

⁵³ Interview with Program Director, US commercial fishing business, 22 January 2016.

Tuna Treaty into question since its value to US operators is greatly diminished if Kiribati remains effectively closed.⁵⁴

The industry's presence in the region is poised to change without better access to closer waters. The US Western Pacific fleet is limited to 40-boats by federal regulation, so the total biomass removed from the ocean remains relatively constant despite various closures.⁵⁵ What changes with these access issues is where the industry does its fishing, and where it takes its catch to port. American Samoa's economy is highly dependent on tuna with canned tuna being the territory's primary export, and its two tuna canneries alone accounting for 13.1% of its labor force (Central Intelligence Agency 2016a). If US boats are forced to fish further away from US processing facilities, they are likely to take their catch to places like Thailand instead.⁵⁶ The closure in Kiribati and high seas limits only increases the fleet's reliance on the US EEZ for its catch. The industry sees marine monuments as just another type of closure that does not actually reduce the biomass that it takes from the sea, but forces their operations to costlier locations that jeopardize its role in the American Samoan economy.

Adding to this industry malaise, American Samoa has also recently lost its minimum wage waiver. American Samoa is classified as a Small Island Developing State (SIDS), exempting it from a number of federal regulations. This included the federal minimum wage until it was rolled out across the US territories in recent years. American Samoa has repeatedly delayed the roll out through Congress, citing the negative impact it would have on the territory's tuna industry. Its October 2015 attempt failed to pass, pushing the minimum wage hike through after previous successful attempts to avoid it. In addition to losing its traditional fishing grounds the industry is also facing cost increases through this minimum wage hike.

The Western Pacific Regional Fishery Management Council is the formal body responsible for representing these industry interests in the Western Pacific. Wespac has emerged as the primary political opposition to the PRI reserve, and has taken a fairly aggressive stance against the designation of marine monuments in the Western Pacific as a matter of principle. It sees executive action on marine monuments as undemocratic and a threat to the long term viability of the Western

⁵⁴ Interview with Program Director, US commercial fishing business, 22 January 2016.

⁵⁵ Interview with Program Director, US commercial fishing business, 22 January 2016.

⁵⁶ Interview with Program Director, US commercial fishing business, 22 January 2016.

Pacific fishing industry.⁵⁷ When a monument is established through the Antiquities Act, Wespac no longer has the authority to manage the space within it. Wespac claims that this threatens regional autonomy because the local fishing industry is excluded from decisions that can have a major impact on it.⁵⁸ These monuments nonetheless have widespread public support despite claims of executive overreach, which Wespac acknowledges.⁵⁹ This support, Wespac argues, is primarily the result of well-funded ENGO campaigns that it cannot compete with.⁶⁰ Wespac (and by extension the commercial fishing industry) has very little political influence over the designation of marine monuments in its allocated fishery. This lack of influence has led Wespac to take a firm stance against any and all uses of the Antiquities Act in the Western Pacific.

The Political Economy of the PRI Reserve

The commercial fisheries dependence on the area now protected by the PRI reserve was minimal prior to its establishment. The Western Pacific fleet did not rely on the reserve area for the vast majority of its catch, its traditional fishing grounds have historically been located elsewhere, and its trawlers and gear are not in any way specific to the site of the reserve. The challenge the industry faces in the region revolves almost entirely around the exogenous stressors of reduced fishing days in Kiribati and the decreasing profitability of its operations due to declining tuna prices and the wage increase discussed above. While the price of tuna is only a short-term stressor, reduced fishing days in Kiribati and the wage increase are potentially permanent. Table 4.2 summarizes the factors that determine the salience of the commercial fishing industry’s interests in the area now protected by the expanded PRI reserve.

Table 4.2 – Industry Interests in the PRI Reserve

Industry	Intensity of Activity	Factor Specificity	Asset Specificity	Exogenous Stressors	Overall
Commercial Fishing	Low	Low	Low	High	Low

The entirety of the Western Pacific fleet’s annual catch is a modest portion of the entire US fishing industry’s annual catch. In 2012 the total landings revenue of the US fishing industry was just

⁵⁷ Interview with Executive, Western Pacific Regional Fishery Management Council, phone, Honolulu, HI, 1 October 2015.

⁵⁸ Interview with Manager, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁵⁹ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁶⁰ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

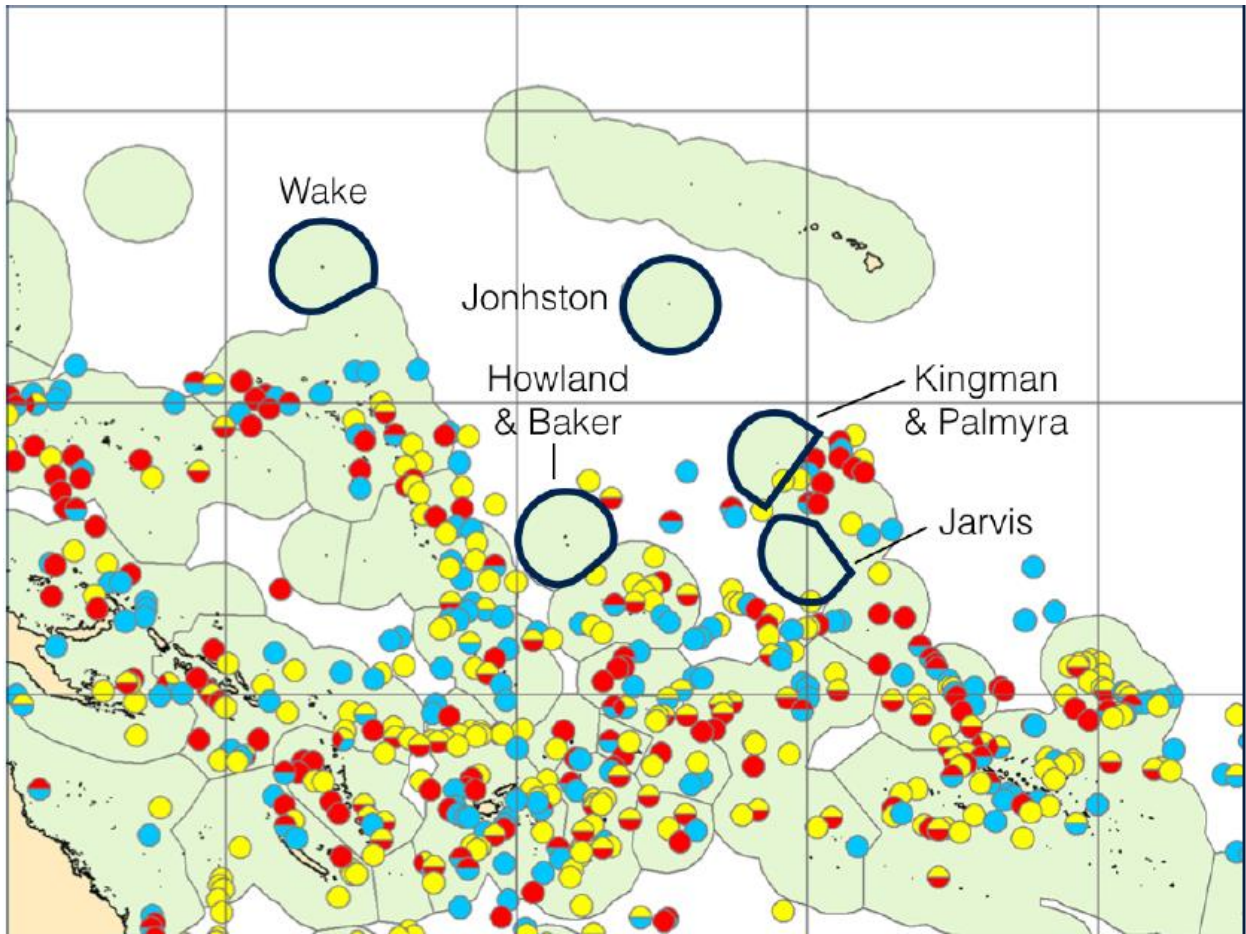
shy of \$5.1 billion (US Department of Commerce 2014). The Western Pacific fleet's total landings revenue for the same year was just over \$91.5 million, or just 1.8% of the national total (US Department of Commerce 2014). A 2014 ENGO report to the US government providing the case for the PRI expansion noted that "tuna fishing occurs episodically in the proposed area" (Sala et al. 2014). The report uses data from the Hawaii-based Longline Logbook Summary Report to produce figures representing the industry's reliance on the area. In 2012 the Honolulu-based longline fleet set only 4% of its hooks in the PRI area, while the largely American Samoa-based purse seine fleet caught only 5% of its annual catch there (Sala et al. 2014). The landings revenue for the area now covered by the PRI reserve was therefore at most around \$4.6 million in 2012, or 0.09% of the national total.

The 2014 ENGO report was also providing figures for the expansion of the reserve to the 200 nautical mile limit around all five of the zones Bush established. President Obama ultimately decided to only expand the reserve around three of these zones. The \$4.6 million figure cited above therefore significantly overstates industry revenue in the region, especially considering that the two zones Obama did not expand housed the most relatively productive fishing areas of the five. So the actual figure is even lower. The intensity of industry activity in the region was minimal not only from a national perspective, but from a regional one as well. For decision makers in Washington, it was clear that establishing the reserve would have a fairly minor impact on both the national and regional fishing industry.⁶¹

The industry's factor specificity was also low. The Hawaii- and American Samoa-based fleets were not overly reliant on fishing within the specified boundaries of the PRI reserve prior to its expansion. As Sala et al. (2014) noted, only 4-5% of their catch was within the boundaries of the proposed expansion, which itself was nearly 600,000 km² larger than the 1.2 million km² PRI reserve is now. The seamounts within the PRI reserve do not harbor productive tuna fisheries (Sala et al. 2014). Figure 4.1 depicts seamounts with high catch rates of tuna in the South Pacific. The PRI reserve area is actually a less productive source of tuna than the surrounding waters, so the Western Pacific fleet is not dependent on tuna resources within the reserve since it can, and does, achieve more economically efficient results elsewhere.

⁶¹ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

Figure 4.2 – Seamounts with High Tuna Catch Rate in the South Pacific



The initially proposed PRI expansion is outlined in dark blue. Only the three zones around Jarvis Island, the Johnston Atoll, and Wake Island were expanded. Circles depict seamounts with the relative catch of yellowfin tuna (yellow), bigeye (red), and albacore (blue) depicted. Sources: Morato et al. (2010); Sala et al. (2014)

Industry representatives counter that the area could become a more important fishing grounds in the future.⁶² Climate modeling of tuna habitats predicts that as ocean temperatures rise tuna will migrate further eastward into the waters now protected by the PRI reserve.⁶³ The future value of these waters for the Western Pacific fleet is therefore not necessarily well represented by historical catch figures. Tuna also migrate eastward during El Niño years, increasing the importance of these waters in certain years.⁶⁴ Of course rapidly depleting tuna stocks due to overfishing are another reason the area might become more commercially important, but the industry downplays this. The industry argument about its dependence on the PRI reserve waters tends to revolve around its

⁶² Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁶³ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁶⁴ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

hypothetical worth in the future, or in certain years. The argument is not without merit, but weighed against historical catch figures along with the conservation potential of such a reserve it has largely fallen on deaf ears in Washington.

The industry's assets are also highly transferable, so its asset specificity in the region is low. The boats and gear used in the waters now occupied by the PRI reserve were not designed specifically for use in it. These longliners and purse seiners are just as effective throughout the rest of the South Pacific, where they have been predominantly used so far anyway. In short, there are virtually no industry assets formerly deployed in the PRI waters that cannot be easily redeployed elsewhere.

Unlike these other three factors the exogenous stressors facing the industry do pose a major challenge. The Western Pacific fleet is suffering because of issues removed from the PRI reserve. The reduction of fishing days in Kiribati, the tuna price decline in 2015, the challenges around negotiating a mutually beneficial South Pacific Tuna Treaty between the US and the FFA, and the wage increase on operators in American Samoa have all contributed to a hostile business climate. Each of these factors individually has had a greater impact on the industry in the region than the expansion of the PRI reserve did. For many of these there is currently no obvious long-term solution, so the future looks rather bleak. A rebound in tuna prices will undoubtedly assuage much of the distress facing the fleet, but US boats in the region depend on regional cooperation to maximize their profitability, and that cooperation is currently strained. The political economy of the PRI reserve is therefore less about the economics of the reserve itself, and instead embedded deeply in the political dynamics of the Western Pacific regional fisheries. The PRI reserve is ultimately removed from the more serious challenges facing the industry. Because these challenges are distinct from the reserve, industry groups like Wespac had only minimal influence during the process leading up to the government decision to expand it.

Institutions

Despite a presidential system with checks and balances and an elaborate legal system, the US is ideally situated for ENGOs to promote large MPAs. The Antiquities Act serves as an example of just how important institutions can be to MPA outcomes. Without this act US MPAs would inevitably be bogged down in NOAA's sanctuaries process with its stakeholder engagement requirements, likely leading to much smaller and potentially mixed-use MPAs instead. New legislation to establish large MPAs would be infeasible given Republican opposition to them and a generally dysfunctional US Congress. Once an institution takes hold it tends to become stable, with changes occurring slowly

and incrementally over a long period of time (North 1990). Bush's enactment of the Antiquities Act in 2006 was only an incremental change in how US presidents used the legislation, but it fundamentally altered the possibilities for marine conservation in the US.

The Antiquities Act was instrumental to the formation of a coherent ENGO-Executive coalition. It allowed ENGOs a high degree of influence over marine conservation outcomes in the US, while simultaneously reducing the influence of industry stakeholders. The lack of a stakeholder consultation requirement in the Antiquities Act diminishes the power and influence of industry. ENGOs are left with direct and uncontested access to the executive branch. Sala et al. (2014) compiled the expert report to provide the scientific justification required by the act, meeting its only major requirement. This report reiterated the conservation benefits of protecting the PRI from a previous report delivered to Bush in 2009, added information about how the expansion would benefit migratory species, noted the minimal economic impact of the proposed expansion, discussed the President's legal authority to expand it, and emphasized the legacy that such an action would leave. It did all of this without interference or commentary from industry actors. The act effectively empowers ENGOs by removing veto points between the executive branch and the creation of large MPAs.

ENGO-Executive Coalition Summary

The minimal salience of industry interests in the PRI region and the favorable institutional setup led to a coherent ENGO-Executive coalition in the lead-up to the expansion of the reserve. This coalition echoed the one that formed between ENGOs and the Bush White House in the initial designation of the reserve, but now with an administration willing to be even more aggressive on marine conservation. ENGOs framed the expansion as a policy choice that would be a big win for conservation with minimal impact on US commercial interests. This should be no surprise given that ENGOs focused their lobbying efforts on the area largely because it is remote and removed from industry interests. The small industry presence in the reserve area was minimal enough to convince Obama and the CEQ that protecting it would not have any substantial political backlash. The minimal industry stakes in the PRI area and the legal authority bestowed on the President through the Antiquities Act made the formation of an ENGO-Executive coalition all but preordained in the PRI case. This coalition was highly influential in the process leading up to the announcement of the PRI expansion, the public engagement that followed it, and the final decisions made about where the reserve would be established and how it would be managed.

PRI Reserve Process and Outcome

The process leading up to the PRI expansion was undertaken primarily by the CEQ in consultation with Obama and a handful of ENGO leaders. As noted, it was kept so quiet that senior employees of some of the ENGOs involved did not know about the expansion until the official announcement, leaving them scrambling to piece together last minute promotional campaigns to rally public support.⁶⁵ As with the Bush White House, ENGO leaders from Pew, NGS, and MCI were the main advisors to the Obama White House on the expansion of the reserve.

With the large MPA norm already embedded in US marine conservation policy their task the second time around was fairly straightforward. They had already made the case for the fully expanded reserve in 2009 with the Bush White House, so in 2014 all they needed to do was provide updated scientific information about the benefits of large MPAs to migratory species (Sala et al. 2014). Bush limited the reserve to 50 nautical miles from shore because he was worried about potential losses to the Western Pacific tuna fleet.⁶⁶ Obama, as one ENGO insider put it, was “more predisposed toward [environmental] precaution and less predisposed toward minor industry interests.”⁶⁷ On 17 June 2014, Kerry announced that the Obama administration would expand the PRIMNM around all five of the existing zones—a commitment that would later be scaled back.

All of the major components of the large MPA norm were important to Obama’s expansion of the PRI reserve. ENGOs both lobbied the executive branch and provided the scientific reporting that it required to justify the expansion. They convinced Obama and the CEQ that an even larger PRI reserve would yield greater conservation benefits and would be politically popular. They did so by appealing directly to a state leader. The secrecy of the process and the quick implementation of the reserve both suggest that Obama, like Bush, acted as a political entrepreneur (Tiberghien 2007), intent on pushing the reserve through once he was convinced of its merit. By 2014 the large MPA norm was so deeply engrained in the US that ENGO leaders now take for granted that the more progressive President Obama followed suit. The prevailing view is that if Bush did it, Obama undoubtedly would too. The question was never whether Obama would designate a large MPA, but rather when and where. In 2015 the Obama White House pursued another large marine monument (albeit less than 200,000 km²) in Cashes Ledge off the New England coast. The administration

⁶⁵ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁶⁶ Interview with Executive, Environmental Defense Fund, 23 September 2015.

⁶⁷ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

ultimately decided against a Cashes Ledge large MPA due to industry pushback, but that a more commercially active area was on the agenda was a clear indication that the norm had taken root.

Kerry's PRI expansion announcement nonetheless came as a surprise to most of the ENGO community, the industry, and the public alike. ENGOs and industry lobbyists quickly began to mobilize support for their respective interests. ENGOs began rallying support from high profile elites, politicians, and the public, particularly in Hawaii and the US territories in the Pacific. Obama was flooded with letters of support for the expansion from a variety of interests. A small group of high profile ocean conservation luminaries including the likes of Sylvia Earle and James Cameron touted the conservation benefits of the reserve (Ocean Elders 2014). A similar letter signed by over 200 cultural leaders in the Pacific Islands stated the importance of the reserve to protecting the ancestral and cultural heritage of the area. Another letter from a group of over 50 marine scientists from the ENGO community and academia reaffirmed the science behind large MPAs, particularly their importance for protecting species at risk. Yet another representing six marine research institutes in the region echoed the scientific case. A letter similarly touting the reserve's conservation potential from virtually all of the world's major marine conservation ENGOs lauded the announcement, including the likes of CI, Environmental Defense Fund (EDF), Greenpeace, NGS, Oceana, Pew, Sierra Club, and the World Wide Fund for Nature (WWF), among several others. Obama was inundated with these letters stating strong support for the reserve.

The June announcement also came with the promise of public engagement, the main form of which was a town hall held in Honolulu on 11 August 2014. The lead up to this town hall meeting became an arms race between ENGOs and Wespac, as both tried to rally their supporters to attend the meeting in numbers. Wespac reportedly brought out roughly 50-70 detractors, compared to the much larger number of supporters for the reserve that the ENGO community rallied.⁶⁸ According to Wespac the meeting was poorly organized and many of their supporters were relegated to the hallways due to the small size of the meeting space.⁶⁹ Wespac nonetheless provided testimony at the town hall stating its case in opposition to the reserve. Although Wespac had the support of a number of local politicians and industry groups it was unable to compete with a better financed

⁶⁸ Interview with Program Director, Marine Conservation Institute, 24 September 2015.

⁶⁹ Interview with Manager, Western Pacific Regional Fishery Management Council, 1 October 2015.

ENGO campaign that also benefitted from presidential support.⁷⁰ The public was widely supportive of the reserve, not just in the mainland US, but in Hawaii and the Pacific territories as well.⁷¹

Wespac eventually submitted its own report on the PRI expansion to the CEQ on 9 September 2014, just two weeks before the expansion was formally signed into law (Western Pacific Regional Fishery Management Council 2014). This report included testimony from a handful of local politicians and industry groups opposing the reserve. It also challenged both the scientific and economic justifications for the reserve included in the Sala et al. (2014) report. Wespac's argument is that the reserve does not have any conservation value because turtles and seabirds are already highly protected in the region, and the reserve would not contribute in a meaningful way to reducing overfishing of highly migratory tuna stocks. Put simply, despite being the largest marine reserve in the world at the time, Wespac argued that it was too small to have a meaningful impact on tuna overfishing. The Sala et al. (2014) report nevertheless seems to be more consistent with the growing scientific consensus that large MPAs do contribute to healthier ecosystems, even those that depend on highly migratory large predatory fish like tuna.⁷²

Wespac's economic argument is that where tuna is caught is highly dynamic, and varies considerably from year to year. For example, the US purse seine fleet catch in the PRI area was 21% in 1997, 10% in 1998, and just 6% in 1999. Wespac's point is that the PRI waters might be more important for the Western Pacific fleet in certain years. Its use of figures from nearly two decades ago demonstrates this point well, but it also suggests that the fleet's dependence on the region has been fairly low since then. This economic argument is also somewhat contradictory to the claim that large MPAs cannot protect migratory species. The purpose of the reserve is to allow species such as tuna a reprieve from commercial fishing in a given ocean area, so years in which they are in the reserve area in higher concentration only increases the potential conservation value of the reserve.

The Wespac report raises a number of important questions about the conservation potential and economic impact of large closures, but it reflects a broader strategy of opposing large MPAs on any and all grounds, many of which prove to be incorrect or contradictory. Conservationists often argue that the creation of a large MPA in one place can encourage other states to follow suit. In a critique of this argument the Wespac report claims that "Kiribati has no intention of closing all

⁷⁰ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁷¹ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁷² Interview with Fisheries Scientist, University of British Columbia, Vancouver, BC, 29 October 2015.

fishing in its EEZ around the Phoenix Islands” and that “No country this dependent on fishing will close off entirely a major part of its EEZ to fishing. Not even Palau, where fishing is [the] second biggest earner after tourism” (Western Pacific Regional Fishery Management Council 2014). Since the release of the report, Kiribati did in fact close PIPA to all commercial fishing, and Palau closed 80% of its EEZ to foreign fishing, with the remaining 20% set aside for the domestic fishing industry. These statements amount to little more than failed predictions, but they reflect a certain blindness to the growing importance of large MPAs as a tool for global marine conservation.

Similarly, in questioning the science of large MPAs one Wespac representative claimed that Papahānaumokuākea was failing to achieve its goals because the endangered monk seal population was doing better outside of the reserve because it has struggled to compete with the resurgent top predator biomass within it.⁷³ This point certainly raises questions about how best to protect endangered monk seals, but it is also a tacit acknowledgement that large MPAs do have clear conservation benefits. Top predator biomass is one of the most important indicators of ecosystem health (DeMartini et al. 2008), so an increase in Papahānaumokuākea suggests that the then 10-year old reserve was contributing to a healthier, more resilient ecosystem. Wespac’s hard line opposition to large MPAs likely only serves to alienate it from having a more influential role in marine conservation discussions. This hard line strategy has led many politicians, the ENGO community, and often the media to perceive Wespac as being dogmatic in its opposition to large MPAs, rather than reasoned and balanced. This perception unfortunately detracts from Wespac’s more valid claims about the dynamism of fisheries and the minimal stakeholder engagement in the establishment of marine monuments.

Wespac’s report and lobbying efforts nevertheless did influence Obama’s final decision about the PRI expansion. The CEQ responded favorably to the Wespac report and acknowledged that Wespac did have valid concerns about the potential impact of the expansion on the Western Pacific fleet.⁷⁴ There was also some concern expressed by regional Democrats about what the expansion meant for their constituents and their re-electability. Senator Schatz of Hawaii spoke with the CEQ and had a meeting at the White House to articulate his concerns about the potential political backlash if the full expansion plans were formally approved.⁷⁵ In the end the reserve was only

⁷³ Interview with Executive, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁷⁴ Interview with Manager, Western Pacific Regional Fishery Management Council, 1 October 2015.

⁷⁵ Interview with Executive, Saving Seafood, phone, Washington, DC, 15 October 2015; Interview with Manager, Saving Seafood, phone, Washington, DC, 15 October 2015.

expanded around three of the five zones that Obama initially considered. Like Bush, Obama was not ambivalent about the potential industry impact of the reserve on the tuna industry, however minimal it was likely to be. Industry alongside some local politicians still managed to achieve this partial victory in its lobbying efforts despite the process being predominantly ENGO-driven.

The process leading to the announcement nonetheless demonstrates the unrivaled access to and influence on the executive branch that ENGOs had in the lead up to the June 2014 announcement. The PRI reserve expansion was conceived and executed through collaboration between ENGOs and the White House. Despite this ENGO dominated process, industry still managed to influence the size of the reserve in the months between the official announcement and its signing into law. The scaling back of the originally-proposed expansion shows that even in one of the most remote marine areas on the planet where economic interests are minimal, they can still influence state decisions about the size and location of large MPAs.

PRI Reserve After Designation

As of early 2017 a comprehensive management plan for the PRI reserve is still pending, with government departments awaiting the secretariat order that will outline their respective responsibilities.⁷⁶ The Secretary of the Interior has been slow to produce a management plan in large part because of the complexity of the responsibility sharing around marine national monuments. Papahānaumokuākea serves as a telling example of this complexity. It is co-managed by the State of Hawaii, the Department of Interior, and the Department of Commerce. Its three-member executive board is comprised of a representative each from the state of Hawaii, the FWS and NOAA. Its management board includes representatives from 7 different state and federal agencies, with an interagency coordinating committee that draws from another 11 agencies. Compounding the complexity of this interagency cooperation is that the original secretariat order for the 2009 PRI reserve was vague about which laws were to be used in specific circumstances, leaving these agencies to sort it out on a case by case basis.⁷⁷ The Secretary of the Interior has been slow to produce a new order for the expanded zone in part to clarify some of this uncertainty.⁷⁸ These management challenges have reportedly created some administrative headaches, but have not had a major impact on conservation outcomes in either Papahānaumokuākea or the PRI reserve.

⁷⁶ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

⁷⁷ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

⁷⁸ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

As with other large MPAs the main challenge with managing the reserve is ensuring compliance given its sheer size and remoteness. The scope of the area can make it difficult, for example, to determine the status of various species in the area.⁷⁹ Its remoteness means that the main monitoring efforts required to track improper use are for illegal, unregulated, and unreported (IUU) fishing.⁸⁰ ENGOs and government officials are less concerned about enforcement of the PRI reserve because of the rapidly declining costs of satellite and drone technology for monitoring marine reserves coupled with the US's substantial state capacity.⁸¹ The issues facing proponents of the PRI reserve since its establishment have been less about implementing the reserve, and more about the political backlash that it generated in Washington.

Since the expansion, congressional Republicans representing commercial fishing industry interests have taken up arms against Obama's use of the Antiquities Act. Their opposition coalesced at the *Oversight Hearing on Marine National Monument Designations* in September 2015 where they voiced their condemnation for the lack of transparency in the process. The purpose of the hearing was both to raise opposition to future uses of the Antiquities Act and to criticize Obama's use of it for the 2014 expansion. At this hearing Republican members of Congress referred to "extremist environmental groups" and the "creeping cancer of federal government overreach" (*Oversight Hearing on Marine National Monument Designations* 2015). For many Republicans Obama's use of the Antiquities Act was just one instance among many of what they considered executive overreach. One member stated that "the [Bush] administration made a mistake [by using the Antiquities Act to designate MNMs], but that Obama is on steroids." The Republican opposition to the PRI reserve and future uses of the Antiquities Act is adamant. Whether it has any impact on future uses remains to be seen, but their opposition is unlikely to have any influence over the future of the PRI reserve.

Detractors have no viable option for overturning the PRI reserve without bipartisan support in Congress. Congress can overturn a monument designation, but both Republicans and Democrats acknowledge that doing so is only possible with both parties supportive (*Oversight Hearing on Marine National Monument Designations* 2015). Numerous bills have been introduced in Congress

⁷⁹ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

⁸⁰ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015.

⁸¹ Interview with Program Coordinator, US Fish and Wildlife Service, 22 September 2015; Interview with Branch Manager, US Fish and Wildlife Service, 22 September 2015; Interview with Program Director, Pew Charitable Trusts, Washington, DC, 16 September 2015.

to overturn monuments in the 110-year history of the Antiquities Act, but they rarely succeed, and even then only in response to highly controversial designations (Hartman 2011). Opposition tends to wane fairly rapidly over time as industry shifts its activity elsewhere and politicians move on to newer issues (Hartman 2011). Despite attempts from various industries there has also never been a successful court challenge to an Antiquities Act designation (Rutzick 2010). There is additionally no legal precedent for a current or future President to overturn a previous use of the act (Rutzick 2010). A President could attempt to overturn or modify a previous monument designation, but this would immediately lead to a legal challenge for the courts to decide. In the case of these remote, largely uncontentious monuments, the difficulty of having them overturned likely exceeds the willingness of most presidents to do so, although President Trump issued an executive order in 2017 calling for their review. Whether he has the authority to alter these monuments will be for the courts to decide. But once a monument is established under the Antiquities Act it is, as it stands now, effectively permanent, with rare exception.

The current management provisions for the PRI reserve are relatively stable. In some cases—such as PIPA in Kiribati or the Coral Sea Commonwealth Marine Reserve in Australia—governance is evolutionary or adaptive. How MPAs are managed often fluctuates with new information about ecosystem health and economic impacts, as societal or international pressure mounts over time, or in response to changes in government. The already strict no-take status of the PRI reserve and the permanence of the legislative action that created it suggest that it will be less prone to these fluctuations.

Summary

The emergence of a large MPA norm originating in the US made the expansion of the PRI reserve possible. Bush's designation of the Papahānaumokuākea, Marianas Trench and Pacific Remote Islands Marine National Monuments paved the way for Obama's subsequent expansion of two of them. It rallied ENGOs around the cause of promoting large MPAs and it established a legal precedent for their creation. By 2014 the only issue Obama needed to consider was just how ambitious of an expansion he should commit to. A minimal commercial stake in the PRI region coupled with an ideal institutional setup facilitated an ENGO-Executive coalition that drove the process leading to the PRIMNM expansion.

The evidence presented in this PRIMNM case study supports a political economy framework for explaining how this large MPA emerged, and why the decision was made to manage it as a strict, no-

take marine reserve. The minimal industry stakes in the region led to the coherent ENGO-Executive coalition that this framework predicts:

C3 – An ENGO-State coalition is more likely to form when the salience of extractive and non-extractive industry interests is low.

The Western Pacific fishing industry was typically reliant on the PRI region for less than 5% of its annual catch according to historical catch data. This minimal dependence gave President Obama the reassurance that collaborating with ENGOs on an ambitious large MPA in the region would not have a meaningful economic impact. Low intensity of activity, factor specificity, and asset specificity caused much of the industry's opposition to fall on deaf ears.

Marine monuments in the US are only politically feasible because of an ideal institutional set up, highlighting how critical institutions are for the creation of large MPAs. ENGOs make their appeals for large MPAs directly to state leaders, so institutions that remove veto points between an executive and MPA creation are essential:

I1 – When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.

The Antiquities Act gives the US President this authority. Without it, large MPA proposals would be subject to either Congress, the civil service, or both, effectively eliminating the possibility of large no-take MPAs in the US. Marine monuments are also of relatively high permanence:

I2 – When an existing protected area's legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.

Overturning a marine monument currently requires bipartisan support in Congress, all but eliminating the possibility as long as the filibuster remains a viable option.

Finally, an ENGO-Executive coalition predicts a remote MPA and a government commitment to a comprehensive management plan:

L3 – When ENGO-State coalitions form, states are more likely to establish MPAs in areas more remote from commercial activity.

M3 – When ENGO-State coalitions form, MPAs are more likely to have comprehensive management and enforcement plans that limit extractive activity.

The PRI reserve is, of course, remote from commercial activity, with only minor commercial fishing activity prior to its inception. ENGOs lobbied specifically for the PRI expansion to be fully no-take, and ultimately achieved their objective without much pushback. Industry efforts to limit the scope

of the expansion did succeed, but this industry victory only partly detracts from what became a 1.2 million km² marine reserve. Obama's concession to industry on the scope of the expansion shows just how important commercial interests are to marine protection. There are no marine areas in the US EEZ more remote than the Pacific Remote Islands, yet commercial interests still prevented roughly 600,000 km² of ocean from being protected.

A coalitions-based political economy framework explains the process and outcome of the PRI reserve well. The weak industry claim to reliance on the region was exploited by ENGOs that used the remoteness of the area as the basis for both the scientific and political justification for the reserve. Coupled with an historic institution that provided the legal authority for executive action, the PRI reserve was a clear case of ENGO-Executive collaboration leading to a large, no-take MPA.

Chapter 5: Coral Sea Commonwealth Marine Reserve: Extractive-State Coalition

The campaign to designate Australia's portion of the Coral Sea as an MPA reveals just how contentious large marine reserves can be. The earliest efforts to protect the Coral Sea began as far back as 2005, with the Labor government of Julia Gillard (2010-2013) eventually announcing the Coral Sea Commonwealth Marine Reserve (CMR) in 2012. But as of early 2017 there was still no management plan in effect on the water, so the area remains effectively unregulated. The delays have been the result of a contentious stakeholder battle between environmental groups, and the commercial and recreational fishing industries. This battle became highly politicized early on in the process, with federal political parties capitalizing on the divide to shore up political support from these stakeholder factions. To further complicate the issue, Australia was undergoing a tumultuous political period with four different prime ministers from 2013 to 2016. This political climate has made the Coral Sea CMR process a veritable slog for environmental groups and industry stakeholders alike.

Australia shares the Coral Sea with New Caledonia, Papua New Guinea, the Solomon Islands, and Vanuatu. The campaign to protect it was an effort to protect the 990,000 km² that falls within Australia's vast EEZ that is not already protected in the Great Barrier Reef Marine Park (GBRMP). Australia boasts the world's third largest EEZ, behind only France and the US. The Coral Sea CMR is adjacent to the 345,000 km² GBRMP, extending MPA coverage from the outer border of the Great Barrier Reef all the way to the 200 nm limit of Australia's EEZ. It also connects to New Caledonia's 1,369,000 km² Natural Park of the Coral Sea. Taken together these three areas form an over 2.7 million km² contiguous area, by far the largest contiguous MPA network on the planet in 2017. Australia is also the only country with a large MPA prior to 2006, with the Australian government establishing the GBRMP in 1975. This pre-existing experience with large-scale marine conservation in Australia would serve to both help facilitate the diffusion of the MPA norm into Australia, but surprisingly also led to some backlash from certain stakeholder groups.

This chapter will make two arguments. The first is that the large MPA norm was influential in the Coral Sea process. ENGOs inserted the idea of a large, contiguous, no-take area into an already ongoing bipartisan government process to improve protections for the Coral Sea. This altered the terms of the debate around how to protect the Coral Sea, and had the unintended consequence of

further polarizing environmental groups and the fishing industry on the issue. Second, even fairly modest extractive industry interest in the Coral Sea led to a largely industry-driven decision-making process about how the government would manage the Coral Sea CMR. This industry influence was not specific to either governing party, but permeated the process through a series of Labor and Liberal governments. The efforts of environmental groups to promote the large MPA norm in Australia were strained because of a strong industry backlash.

NGOs—once again led by The Pew Charitable Trusts, alongside the Australian Marine Conservation Society (AMCS)—were nonetheless ultimately successful in promoting the large MPA norm. The Gillard Labor government formally established the Coral Sea CMR, and the widespread expectation is that the current Liberal government under Malcolm Turnbull—who assumed leadership in 2015 and won re-election in 2016—will legislate a large portion of it as no-take. But the ENGO campaign generally underestimated the influence that industry stakeholders would have. The Coral Sea is the most remote portion of Australia’s EEZ, but it is still frequented by a handful of commercial fishers, game fishers, and dive operators. Economic activity in the Coral Sea does not reflect a large percentage of industry activity for each of these three industries, but there are a number of businesses that are nonetheless critically dependent on it. The outcome of the Coral Sea campaign will be a large mixed-use MPA with at least five distinct zone types, with each zone having regulations around what commercial activities are permitted. This zoning was an effort by both the previous Labor and current Liberal governments to cater to industry concerns.

The Great Barrier Reef and National MPA Network

Australia has a unique history with large-scale marine conservation that no other nation can boast. The 1975 GBRMP was the first MPA in the world to exceed 200,000 km², and would be the world’s largest for over 30 years. In 1998, the Australian government also started working towards a Nationally Representative System of Marine Protected Areas (NRSMPAs) to protect important biodiversity regions throughout the rest of Australia’s EEZ. In 2012 the Australian government formally announced 60 Commonwealth Marine Reserves (CMRs), which included the 272,000 km² South-West Corner CMR as well as the Coral Sea CMR. Both the GBRMP and the early efforts towards these CMRs of course predate the emergence of the large MPA norm in the mid-2000s. Australia is therefore the only country to have previous experience with a large MPA prior to the mid-2000s. But despite this experience these two initiatives only partially embody the characteristics of the large MPA norm. They do reflect a commitment to protecting large ocean

spaces, but they did not emphasize the importance of large no-take zones, nor did they emphasize the importance of protecting pelagic waters.

Despite being the world's largest MPA for nearly 30 years, the Great Barrier Reef is in actuality a hub of commercial activity. The primary activity on the Reef has by far always been ecotourism, and it remains the greatest economic contributor of the region. In 2013 (the most recent government reporting), tourism expenditures amounted to A\$6.4 billion, or 91% of the total direct expenditures on the Great Barrier Reef (Deloitte Access Economics 2013). It also contributed over 64,000 full time jobs, which is more than 93% of the overall employment contribution of the Reef. Yet until nearly 30 years after its designation, at most only 4.6% of the GBRMP was designated as no-take. The Australian and Queensland governments managed the Great Barrier Reef according to pre-existing standards of behavior around what constituted good marine conservation. UNESCO's 1982 classification of the Great Barrier Reef as a World Heritage Area also did not lead the government to designate a larger portion as no-take. So despite being a natural wonder of the world, a UNESCO World Heritage Area, and a commercial zone heavily reliant on ecotourism, the Great Barrier Reef did not include large no-take areas.

In 2004, the government rezoned the Great Barrier Reef and increased the no-take area from the previous 4.6% to 33%. It has for decades been in decline due to the combined impacts of ocean warming, acidification, and coastal pollution. This rezoning was an effort by the Australian government to increase its resilience by reducing the impact of commercial and recreational fishing through an increase in no-take areas, what it calls 'green zones.' It involved an extensive public consultation process that was partly intended to help inform the government on how to limit the impact on commercial and recreational fishers. The apparent disconnect between the primary sources of the Great Barrier Reef's decline (climate and coastal pollution) and the intent of the rezoning (reducing fishing impact) would become a major source of contention in Queensland marine politics in the ensuing decade. Some in the fishing industry—particularly high-level representatives from various fishing industry associations—felt aggrieved that they were being unfairly targeted when the main source of the problem lied elsewhere.⁸² They admonished the rezoning as 'unscientific' for locking out fishers who were not the main source of the problem.

⁸² Interview with Executive, Australian National Sportfishing Association, Sydney, NSW, 10 May 2016.

There are three distinct sectors of the fishing industry in Queensland: commercial, charter, and recreational. Industry association representatives from all three groups strongly opposed the rezoning, but in reality fishers were divided on the issue. According to one study about the social effects of the rezoning, three years after implementation 59% of recreational fishers supported it, compared to only 18% of charter fishers and 7% of commercial fishers (McCook et al. 2010). These figures represented a 10% increase in support from recreational and charter fishers in the three years after the rezoning, but a 10% decline in support from the commercial sector (McCook et al. 2010). The rezoning was unpopular within the charter and commercial sectors, and divisive within the recreational sector. Many recreational fishers reportedly felt aggrieved by the rezoning, since the rezoning excluded them from many of their favorite fishing spots.⁸³ This led to the emergence of a vocal minority of recreational fishers that would go on to strongly lobby against any and all closures in the region, including the Coral Sea.

Although fishers were not the greatest threat facing the Great Barrier Reef, MPAs are most effective when they are large and no-take (Edgar et al. 2014). A study of the Great Barrier Reef rezoning demonstrated that the increased protections had already started paying dividends by 2010 (McCook et al. 2010). Previously exploited fish stocks had partly rebounded in the new no-take areas, with some species of fish doubling in size and number. Further, there was no evidence that the protections simply shifted fishing efforts, resulting in the exploitation of other areas, but rather represented a genuine improvement in fish stocks for the area. This study demonstrated the merits of no-take areas to marine ecosystem health, even in well managed fisheries. The Great Barrier Reef rezoning to 33% no-take reflected Australia's growing willingness to designate larger spaces as no-take.

The Nationally Representative System of Marine Protected Areas that the government initiated in 1998 was a push for a network of small, mixed-use MPAs. Although one of the guiding principles of the process was to create a smaller number of larger marine reserves, by the end of the process there were 60 reserves spread out across Australia's large EEZ. These reserves themselves were carved up into various zones, some of which include little protections on the water above business-as-usual. Many marine scientists consider these types of representative and comprehensive networks to be a gold standard for marine conservation, since they directly target the most vulnerable ecosystems for protection when they are designed and managed effectively (Roberts et

⁸³ Interview with Former Program Director, Pew Charitable Trusts, phone, Brisbane, QLD, 15 May 2016.

al. 2001; Almany et al. 2009; Gaines et al. 2010). The Australian government undertook exhaustive scientific and socioeconomic study of these areas in preparation for the implementation of management plans for the reserves. Whether experts consider this network a conservation success or a business-as-usual initiative will largely depend on decisions around these management plans.

Of these 60 MPAs, two are in fact large MPAs: the Coral Sea CMR (990,000 km²) and the South-West Corner CMR (272,000 km²). The original idea was to manage these zones much in the same way that the Great Barrier Reef Marine Park Authority (GBRMPA) had managed the Great Barrier Reef for decades. Specifically, these large MPAs were originally intended to be zones that would be carved up with a wide range of protection levels within them. It reflected the more common marine practice of carving up ocean spaces into smaller segments rather than Australia's adoption of the large MPA norm, with its emphasis on large, contiguous, no-take areas where possible.

The ENGOs that were initially campaigning for better protection for the Coral Sea and South-West Corner also demonstrated a desire for protections in line with what the government was doing for the Great Barrier Reef. These campaigns reflected the prevailing norms around marine conservation at the time they were launched. Forming in the mid-1990s, the Protect Our Coral Sea and Save Our Marine Life campaigns advocated for better marine protections for the Coral Sea and South-West of Australia respectively. These groups were coalitions of domestic and transnational ENGOs that have since merged into a single coalition. They advocated for the creation of MPAs that encompassed these areas, but originally with the expectation that they would be mixed-use and divided into various protection levels.

The NRSMPA initiative was also, notably, a bipartisan initiative. Marine conservation initiatives in Australia are frequently bipartisan for two reasons. First, more than 80% of the Australian population lives within 50 km of the coast, and marine ecosystems are a central feature of Australian life and industry. Second, the mixed-use approach to marine conservation appeals broadly across the political spectrum. How the government decides to manage a new MPA can range from strict prohibitions on use to integrating industry use quite explicitly. The Labor and Liberal parties therefore find a lot of room to manoeuvre on the nature and extent of protections, which is where much of the debate ultimately happens, rather than around if an area should be protected.

The Coral Sea quickly became a high-profile component of the broader NRSMPA initiative⁸⁴: it is large, the most remote portion of Australia’s EEZ, adjacent to the Great Barrier Reef, and home to a vast array of marine life, most notably large species of whale, ray, and shark. It became the focal point for the battle between conservationists and fishers that ensued as the Coral Sea campaign progressed. As one industry representative put it, they fought as hard as they did over the Coral Sea despite limited commercial interest because the “Coral Sea is the jewel in the crown [of the NRSMPA], so it is important for the long run.” The fishing industry chose the Coral Sea as the region to make its principled stand against closures in what they argued are sustainable fisheries. The NRSMPA process was ongoing throughout Australia’s EEZ for nearly two decades, but the lobbying in Canberra revolved largely around the Coral Sea throughout most of that time.

The initial lobbying was relatively reserved to what came later since the initial ENGO proposals were what would now be considered industry-friendly. The Cairns and Far North Environment Centre (CAFNEC) and the Northern Queensland Conservation Council (NQCC) submitted a proposal to the government in 2005 modelled after the 2004 GBR rezoning. The proposal was to identify ecologically important areas of the Coral Sea for full protection, while much of it would remain open to ongoing commercial fishing. CAFNEC and NQCC saw oil and gas, and mining exploration as the main threats to the Coral Sea rather than commercial fishing.⁸⁵ Following a meeting with NQCC, the World Wide Fund for Nature (WWF) was convinced of the merits of this approach and adopted a similar proposal of its own.⁸⁶ While industry was not in favor of these proposals, they represented a continuation of the then prevailing norms around marine conservation: they advocated a mixed-use zoning process, with minimal protections for pelagic ecosystems. It was not until Pew’s advocacy for a large no-take Coral Sea MPA beginning in 2007 that tensions between ENGOs and industry reached a boiling point.

Coral Sea CMR Overview

Of my three large MPA case studies, the Coral Sea CMR was by far the most contentious. Tensions between environmental groups and the fishing industry were already high in Queensland following the Great Barrier Reef rezoning, but Pew’s involvement beginning in 2007 further divided

⁸⁴ Interview with Program Director, Pew Charitable Trusts, Canberra, ACT, 6 May 2016; Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

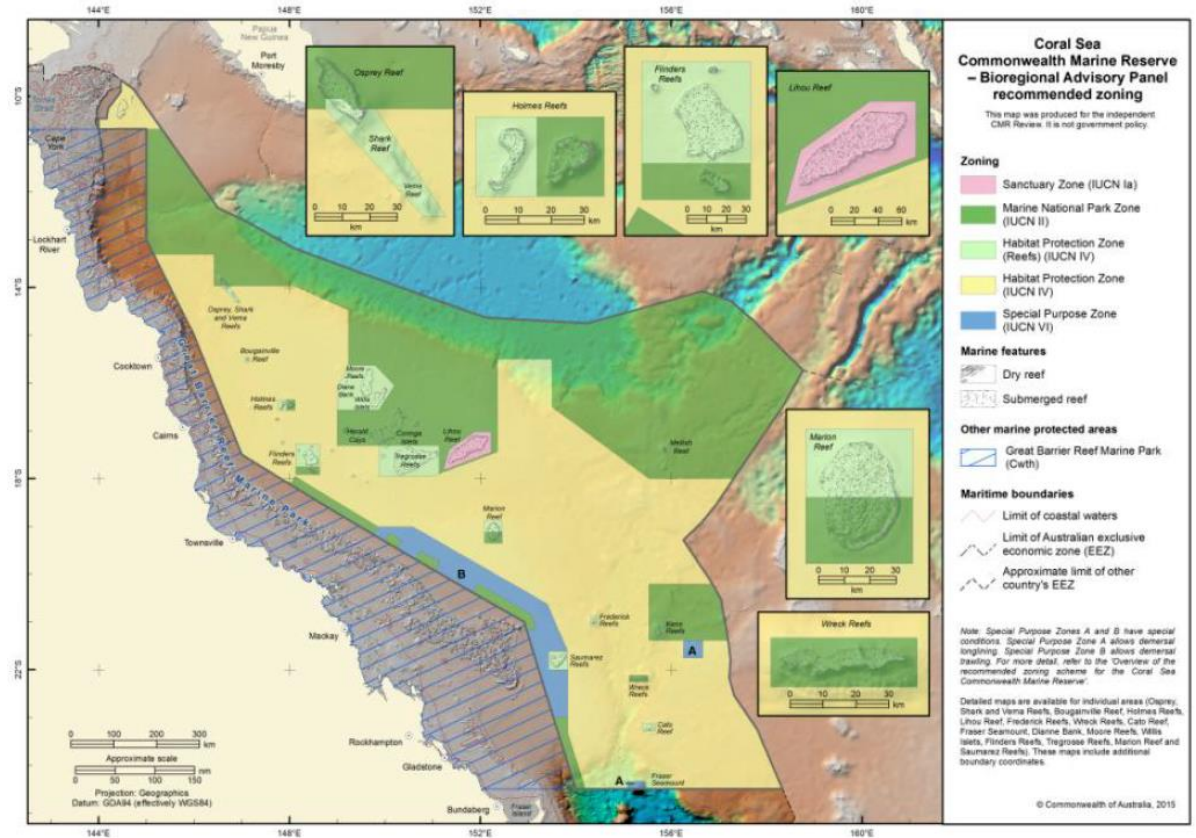
⁸⁵ Interview with Former Campaigner, Cairns and Far North Environment Centre, Skype, Italy, 31 May 2016.

⁸⁶ Interview with Former Campaigner, Cairns and Far North Environment Centre, 31 May 2016.

the two groups. The source of this division was that Pew's initial objective for the Coral Sea was to designate the entire area as a contiguous, no-take MPA. Pew also had the financial resources to escalate the comparatively low-key lobbying of local ENGOs like CAFNEC and NQCC to a high-profile national campaign. This campaign included a large coalition of ENGOs, some of which were partly financed by Pew; a documentary about the Coral Sea with regular screenings; extensive promotional material on TV, in cinemas, in shopping malls, and on airlines; and even a mascot in the form of Barry the Wrasse, used to instill a sense of bewilderment at the beauty of the Coral Sea. The fishing industry felt besieged by these efforts to close off nearly one million km² of Australia's EEZ, so escalated its rhetoric in response. The Gillard government, the Liberal government of Tony Abbott (2013-2015), and the Turnbull government found themselves in the midst of these diametrically opposed interests. As a result, the process for a large MPA in the Coral Sea involved what was most likely the most comprehensive consultation process of any large MPA to date.

The federal government was ultimately highly responsive to the concerns of the fishing industry, and the fishing industry was consulted extensively throughout the process under all three governments. One of the goals of the consultation process was to minimize industry impact, but what the government was really seeking was a business-as-usual solution. It was looking to protect the Coral Sea in a way that did not effectively change industry activity in the region. The Gillard government proved more willing to undermine some industry interests in the region, and earmarked A\$100 million to buy out those businesses most affected by the zoning. The Gillard government's management plan included 502,654 km² of mostly contiguous no-take zoning for the Coral Sea, but was located at the furthest reaches of Australia's EEZ where commercial activity was already minimal. Only a handful of businesses would have been seriously impacted had the government ultimately implemented this management plan. When Abbott took power and scrapped the Gillard management plan, he made it his priority to keep all businesses in the region in operation. Turnbull has taken the same approach, with the outcome of the most recent review a recommendation for 405,258 km² of no-take zoning, also located on the fringe of the EEZ as depicted in figure 5.1 (Buxton and Cochrane 2016). So while the pressure of ENGOs and the bipartisan NRSMPA commitment made protections for the Coral Sea inevitable, the influence of the fishing industry led to rather weak protections.

Figure 5.1 – Coral Sea Commonwealth Marine Reserve Map



Source: Buxton and Cochrane (2016)

The rest of this chapter will turn to demonstrating that the salience of fishing industry interests led to a Commercial Fishing-State coalition throughout the Coral Sea process, and that this coalition can best explain its business-as-usual outcome. This coalition transcended partisan lines, with subsequent Labor and Liberal governments both highly responsive to the fishing industry. The modest level of industry activity in the Coral Sea also demonstrates the importance of the other determinants of industry interest salience, namely factor and asset specificity. The dependence of a select few businesses on the Coral Sea to stay in operation proved to have a dramatic influence on government decisions. The Coral Sea CMR is an important case study demonstration of how a state can adopt the large MPA norm, yet implement it in a way that is highly responsive to the political economy of the region, with conservation goals being secondary.

Coalition Formation

Industry Interests

There are four main industries with a stake in the area covered by the Coral Sea CMR: commercial fishing, charter fishing, recreational fishing, and ecotourism. Each of the three fishing industry groups strongly opposed any closures within the Coral Sea, and advocated strongly against them. Commercial and charter fishers were concerned about the direct impact these closures might have on their businesses, while the recreational fishing lobby was more concerned about the precedent the closure would set rather than any direct impact. The ecotourism industry was comprised of just a few dive operators that ventured as far out from shore as the Coral Sea. It largely avoided injecting itself in the debate between ENGOs and the fishing industry over protections for the broader region, instead concerning itself with gaining stronger protections for the handful of reefs within the Coral Sea that it relied on.

Commercial Fishing

There are a handful of Commonwealth and Queensland fisheries that operate in the Coral Sea, but the two most prominently affected by the Coral Sea CMR are the Commonwealth Eastern Tuna and Billfish Fishery (ETBF), and the Commonwealth Coral Sea Fishery (ABARES 2012). The other fisheries that overlap with the Coral Sea overlapped to such a small extent that the Department of Agriculture, Fisheries and Forestry (ABARES) did not include them in their 2012 social and economic impact assessment of the initial management plan for the reserve. The Coral Sea CMR is too remote to significantly impact Queensland managed fisheries.⁸⁷

The ETBF covers the entire east coast of Australia from Cape York at the country's northern tip down to South Australia-Victoria border in the south, and includes albacore, bigeye, and yellowfin tuna, broadbill swordfish, and striped marlin. Fishers bring their catch to port all along the coast, with ETBF operators that use the Coral Sea based primarily out of Cairns and Mooloolaba. The Australian Fisheries Management Authority (AFMA) manages the fishery, and by most accounts had managed it effectively. Representatives from Greenpeace and Pew, for example, acknowledge that Australia's fisheries management is effective relative to global management.⁸⁸ AFMA conducts frequent risk assessments, and updates its catch limits annually.

⁸⁷ Interview with Policy Officer, Fisheries Queensland, phone, Brisbane, QLD, 13 May 2016.

⁸⁸ Interview with Campaigner, Greenpeace Australia, Sydney, NSW, 29 March 2016; Interview with Program Director, Pew Charitable Trusts, 6 May 2016.

ETBF fishers' interest in the Coral Sea is limited. The ETBF fishery includes a handful of operators that have access to an expansive area, of which the Coral Sea is only a small portion. The one exception to this is Great Barrier Reef Tuna, a vertically-integrated, family-run business based in Cairns. The entirety of the company's fishing effort throughout its more than 25-year history occurs in the Coral Sea, and they are critically dependent on access to it to continue operations. The company holds about 9 percent of the quota for the ETBF (ABARES 2012). The family that owns and operates the business—the Lamasons—have been one of the focal points of government reporting and consultations around the Coral Sea CMR. One of the key differences between the Labor and Liberal governments' approaches to the Coral Sea CMR has been whether or not it wants to include buyout funds. Under the Labor management plan, the Lamasons were set to be bought out, effectively ending their operations. One of the key motives behind the Abbott-Turnbull review was to prevent such buyouts, with the area ultimately rezoned to keep Great Barrier Reef Tuna in business.

Throughout the process the Lamasons have fought to stay in operation, and were bewildered by the initial government efforts to shut down a sustainably managed fishery.⁸⁹ After nine years of extensive consultations, the Lamasons desired certainty above all so they could run their business or move on (with buyout funds in hand).⁹⁰ The Lamasons are heavily invested in the Coral Sea, and cannot easily shift efforts elsewhere. Their home port and the retail portion of their business are in Cairns, with the next closest port 1,800 km away. The ETBF is not a highly productive tuna fishery, so profit margins are already small. Because of their vulnerable position the Lamasons lobbied against any closures. They were concerned about increased fishing trip costs and being overcapitalized for a smaller fishing area with closures in effect.⁹¹ For ETBF operators based out of other ports along the east coast, the Coral Sea closures were at most an inconvenience and perhaps a concerning precedent. But for the Lamasons, the future of their business depended on how the government decided to manage the Coral Sea CMR.

The Coral Sea Fishery overlaps entirely with the Coral Sea CMR, with all of the fishing activity occurring around a handful of reef systems. This fishery includes sea cucumber, aquarium species, lobster and trochus, as well as a line, trap, and trawl sector. The primary concern for this sector was

⁸⁹ Interview with Owner, commercial fishing business, phone, Cairns, QLD, 30 May 2016.

⁹⁰ Interview with Owner, commercial fishing business, 30 May 2016.

⁹¹ Interview with Owner, commercial fishing business, 30 May 2016.

a fully no-take Coral Sea that would ultimately put these operators out of business. This sector was heavily impacted by the 2004 rezoning of the Great Barrier Reef, losing access to 85% of offshores reefs and 25% of onshore.⁹² Many operators took a one-off A\$50,000 payment from the government to relinquish their licenses, while others went through a structural adjustment process.⁹³ Cairns Marine is the largest collector of aquarium fish on the Great Barrier Reef, and aggressively negotiated for a A\$3.8 million settlement from the government. This settlement facilitated their shift toward using the Coral Sea instead, where it has been operating since. Once the proposal for a fully no-take Coral Sea was rejected, the government made it clear that the Coral Sea Fishery was not the target of the management provisions for the CMR. The 2016 review dismissed managing a fishery that was “low impact as long as [it] maintained [its] established pattern of rotational fishing on reefs...to avoid localised depletion” (Buxton and Cochrane 2016). The 2004 Great Barrier Reef process that saw a large sector of this fishery bought out and displaced was not to be replicated in the Coral Sea. Although there was some haggling between fishers and dive operators over which reefs would allow fishing, companies in this sector were not threatened in the same way the Lamasons were, despite their similar reliance on the Coral Sea.

Charter Fishing

There are only a handful of charter operators that use the Coral Sea. One marine campaigner estimated that only a couple charter operators would be affected by even a fully no-take Coral Sea, and even then, it would only affect 20-25% of their business.⁹⁴ Because of this minimal reliance the charter fishing sector was overlooked in the initial consultations for the Gillard management plan.⁹⁵ The review looked to fill this gap. The charter sector had two major concerns: ensuring continued access to reefs in the Coral Sea, but also preventing any scaling up of commercial fishing efforts.⁹⁶ Chartered boats to the Coral Sea are high end charters that target the wealthy, and typically book trips anywhere from 3-4 years in advance.⁹⁷ These charters rely on various reefs throughout the Coral Sea as staging areas on charter trips to more distant locations (Buxton and Cochrane 2016). Continued access to these reefs was therefore a priority. But some charter operators also express concern about commercial fishing. An industry representative argued that longlining was not

⁹² Interview with Manager, commercial fishing business, Cairns, QLD, 30 May 2016.

⁹³ Interview with Manager, commercial fishing business, 30 May 2016.

⁹⁴ Interview with Former Campaigner, Cairns and Far North Environment Centre, 31 May 2016.

⁹⁵ Interview with Executive, Sunfish Queensland, phone, Margate, QLD, 3 June 2016.

⁹⁶ Interview with Executive, Sunfish Queensland, 3 June 2016.

⁹⁷ Interview with Executive, Sunfish Queensland, 3 June 2016.

compatible with a marine reserve, and that allowing it would “leave the door open for a supertrawler.”⁹⁸ A tentative application for a supertrawler in the Coral Sea already exists, so the supertrawler concern is not a hypothetical. The charter sector’s interests were therefore not aligned with the commercial fishing sector. That said, its concern was less with existing commercial fishing efforts, and more with the risk that the government would allow increased efforts in the future.

Recreational Fishing

Recreational fishers have virtually no direct stake in the Coral Sea, with the exception of a handful of professional game fishers. The recreational fishing lobby was nonetheless one of the most vocal opponents of the Coral Sea CMR. This opposition was baffling to many. Former Environment Minister⁹⁹ Tony Burke (2010-2013) questioned lobbyists behind closed doors about why they cared given the minimal interest.¹⁰⁰ Many Coral Sea campaigners refer to the lobby’s opposition as “irrational.”¹⁰¹ Others refer to the lobbyists in Canberra as “hardliners” and “not representative.”¹⁰² Even recreational fishing lobbyists acknowledge that a Coral Sea CMR would not directly affect recreational fishing.¹⁰³ These lobbyists—and the ENGO community—also note that there is a divide between the lobbyists’ position and the position of the local recreational fishing community.¹⁰⁴ One ENGO campaigner noted that 30% of the membership of the Save Our Marine Life campaign are recreational fishers, amounting to 40,000-50,000 people. The recreational fishing lobby was vocal, but its influence was limited because it represented the views of just a subset of recreational fishers.

Lobbyists’ opposition was based on principle, despite the negligible impact the Coral Sea CMR would have on the sector. They opposed the reserve out of concern over the precedent it would set for what they consider to be unscientific ‘lock-outs.’¹⁰⁵ The argument was that recreational fishing was sustainable, so banning it amounted to arbitrary regulation with no conservation benefit. The science for fully no-take marine reserves shows that they are effective, however. The argument that

⁹⁸ Interview with Executive, Sunfish Queensland, 3 June 2016.

⁹⁹ Since 2007, there have been seven formal (verbose) titles for the federal Environment Minister. For consistency, I refer simply to the “Environment Minister” throughout this chapter.

¹⁰⁰ Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

¹⁰¹ Interview with Former Marine Campaigner, Australian Conservation Foundation, phone, Melbourne, VIC, 27 May 2016.

¹⁰² Interview with Marine Campaigner, Australian Marine Conservation Society, phone, WA, 3 June 2016.

¹⁰³ Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

¹⁰⁴ Interview with Executive, Australian National Sportfishing Association, 10 May 2016; Interview with Marine Campaigner, Australian Marine Conservation Society, 3 June 2016.

¹⁰⁵ Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

no-take reserves are ‘unscientific’ is actually a political one. The issue is ultimately not about the science, but about the politics of whether a given area should be managed according to a fisheries management approach or a conservation approach, as discussed in depth in chapter 2. As one ENGO campaigner put it, “MPAs are not fisheries management tools; they are conservation management tools.”¹⁰⁶ But part of the challenge that the Australian government faces in managing recreational fishing is that accurate data are difficult to collect, and reported catch levels are likely underestimated.¹⁰⁷ Governments ultimately use a combination of fisheries management and conservation tools based on the needs of a given region. It is an odd choice for the recreational fishing lobby to have such staunch opposition to a conservation management approach in the Coral Sea—a region too remote for nearly all recreational fishers.

There are two reasons that lobbyists targeted the Coral Sea. First, some recreational fishers felt aggrieved by the 2004 Great Barrier Reef rezoning, and saw closures in the Coral Sea as the next phase in a cumulative process that would lead to them losing their fishing rights in the region entirely.¹⁰⁸ Lobbyists also used Pew’s initial proposal for an entirely no-take Coral Sea to galvanize support from a minority of Queensland recreational fishers.¹⁰⁹ The rezoning coupled with the fully no-take proposal was enough to raise the ire of this vocal minority in the region. By contrast, the proposed no-take areas off the coast of Western Australia received no recreational fishing backlash.¹¹⁰ Second, as noted above, the Coral Sea was a high-profile initiative, and considered the ‘crown jewel’ of Australia’s marine reserve network. Lobbyists saw it as important to their long-term goal of protecting recreational fishing rights.¹¹¹

Ecotourism

The Coral Sea was also an important region for a small subset of Australia’s large dive tourism industry. Only five dive operators in Queensland have boats that travel as far out as the Coral Sea (Stoeckl et al. 2010). The rest of Queensland’s substantial dive tourism industry operate in the GBRMP, which is more accessible. The Coral Sea requires a minimum 3-day trip, with 4-7 day trips being more common, due to its relative remoteness. Bougainville Reef and Osprey Reef are the two primary dive sites, located roughly 100 km from the Coral Sea CMR’s border with the Great Barrier

¹⁰⁶ Interview with Marine Campaigner, Australian Marine Conservation Society, 3 June 2016.

¹⁰⁷ Interview with Campaigner, Greenpeace Australia, Sydney, NSW, 29 March 2016.

¹⁰⁸ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹⁰⁹ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹¹⁰ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹¹¹ Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

Reef Marine Park. As a predominantly pelagic ecosystem, the Coral Sea boasts larger marine species than the Great Barrier Reef, and attracts divers willing to spend more time and money to see those larger species. Coral Sea diving is therefore a small industry that caters to dive enthusiasts, in contrast with the Great Barrier Reef's greater accessibility. According to one study, live-aboard dive tourism in the Cairns and Port Douglas region generates A\$15-18 million of income per year, including indirect expenditures such as hotels and restaurants (Stoeckl et al. 2010). The dive tourism industry is important to the Queensland economy, and it relied on this importance to try to influence the Coral Sea CMR process.

Dive operators were concerned foremost with protections for their main dive sites, and mostly avoided getting involved with the broader debate about fishing rezoning throughout the Coral Sea.¹¹² For them, the bargaining revolved primarily around whether game fishers had access to a handful of reefs. Dive operators were doubly concerned about the impacts of fishing on these reefs because of the abundance of resident species, notably reef sharks.¹¹³ Reefs are far apart in the Coral Sea, so these species do not exhibit the same migratory behavior that they do in the Great Barrier Reef (Barnett et al. 2012). This means that sustained fishing pressure in any one region has the potential to disproportionately affect the reef. These reefs are also highly vulnerable to climate impacts. Flinders Reef was decimated and rendered unusable by a bleaching event in 2002, forcing businesses to relocate from Townsville to Cairns.¹¹⁴ Bougainville and Osprey sustained heavy bleaching in 2016. Dive operators are deeply concerned about the vulnerability of the reefs they depend on, so they have concentrated their efforts on ensuring the best local protections possible for these reefs. Their stance was a pro-conservation stance in line with environmental groups, but aside from a few public statements of support were not willing to get politically invested in a large MPA.

The Political Economy of the Coral Sea CMR

There are an array of fishing and ecotourism stakeholders in the Coral Sea that have led to a contentious bargaining process between industry, ENGOs, and the government. But the overall interest salience of these industry groups was not particularly high. Instead, it was the dependence of a handful of businesses from the commercial fishing and ecotourism sectors on the Coral Sea that

¹¹² Interview with Manager, dive tourism business, Cairns, QLD, 30 May 2016.

¹¹³ Interview with Manager, dive tourism business, 30 May 2016.

¹¹⁴ Interview with Manager, dive tourism business, 30 May 2016.

drove the process. The ecotourism industry had little to lose from a new large MPA, whereas the commercial fishing industry was going to be most affected by it. The federal government—both Labor and Liberal administrations—were highly responsive to the needs of the fishing industry as a result. Table 5.1 displays the interest salience of the four main industry stakeholder groups involved in the Coral Sea process. The rest of this section will justify the values assigned to each industry.

Table 5.1 – Industry Interests in the Coral Sea CMR

Industry	Intensity of Activity	Factor Specificity	Asset Specificity	Exogenous Stressors	Overall
Commercial Fishing	Low	Moderate	Moderate	High	Moderate
Charter Fishing	Low	Moderate	Low	Low	Low
Recreational Fishing	Low	Low	Low	Low	Low
Ecotourism	Low	Moderate	Moderate	Moderate	Moderate

The most thorough reporting on the impact of the Coral Sea CMR on commercial fishing is a 2012 Department of Agriculture and Water Resources (ABARES) report assessing the social and economic impact of the original 2012 management plan (ABARES 2012). This management plan was going to designate 51% of the area as no-take, most of which was on the outer fringe of Australia’s EEZ. The value of the entire ETBF fishery was A\$31.1 million in 2014-2015 (AFMA 2016), with the 2012 management plan estimated to displace about A\$3.8 million, or about 12% of the fishery. The estimated total value of Australia’s tuna fisheries in 2014-2015 was A\$58.2 million, so the 2012 plan’s displacement amounted to roughly 6.5% of Australia’s overall annual tuna catch. Data are not available for the displacement value of a fully no-take Coral Sea, but the values would be similar since the no-take area set aside in the 2012 plan was largely residual, with little tuna fishing occurring there anyway.¹¹⁵ The Coral Sea is therefore not a primary source of tuna for Australia at the national scale. This is especially true considering that this displacement value does not factor in that some operators would be able to relocate their efforts elsewhere. The Coral Sea Fishery’s annual gross value of production in 2011 was only A\$730,000, so this fishery is not a major source of national revenue. Despite some activity from operators in these two fisheries, the overall intensity of commercial fishing activity in the Coral Sea is relatively low.

¹¹⁵ Interview with Former Marine Campaigner, Australian Conservation Foundation, 27 May 2016; Interview with Marine Campaigner, Australian Marine Conservation Society, 3 June 2016.

It is the factor and asset specificity of a few operators in these fisheries that have motivated industry backlash throughout the process. As noted above, the Lamasons' account for 9% of the ETBF, worth an estimated A\$2.8 million annually. Unlike some of their competitors, their business is vertically integrated and tied to Cairns, so they are limited by geography. Profit margins are already low in the sector, so the business cannot afford to seek out new fishing grounds. They depend on the Coral Sea for their catch and their assets in Cairns are non-transferrable. While the vast majority of ETBF operators do not rely on the Coral Sea, this one operator critically depends on it.

A fully no-take Coral Sea would also severely diminish the Coral Sea Fishery. The 2012 management plan was set to displace about 52% of it. This displacement would have shifted the intensity of fishing activity rather than ended it. But many operators were already forced to relocate to the Coral Sea after the 2004 Great Barrier Reef rezoning, so their relocation options are increasingly limited.¹¹⁶ The factor specificity of Coral Sea Fishery operators therefore depended on the extent of the no-take zoning around reefs in the Coral Sea. One industry representative estimated that the 2012 zoning would only allow three to five of the eight businesses operating in the area to stay in business.¹¹⁷ The 2016 review recommended more generous access to reefs for operators in this fishery, as long as they continued to rotate their fishing effort to avoid depletions (Buxton and Cochrane 2016). These businesses also have assets that are not transferable, such as Cairns Marine's husbandry and shipping facility in Cairns.

In the aggregate, both the factor and asset specificity of commercial fishers for the Coral Sea is mixed. Only one ETBF business is critically dependent on it, whereas the entire Coral Sea Fishery sector would likely collapse if denied access. On balance, some industry actors have low factor and asset specificity, while for others it is quite high, so I have assigned an overall value of 'moderate' value to this indicator. The businesses most involved in the Coral Sea process were predictably those with a high value on these two indicators of industry interest salience.

The Australian commercial fishing industry is under a lot of pressure from exogenous stressors. The same global tuna price decline experienced in the US has also affected Australian industry. But beyond this Australia's waters lack the nutrients needed to support larger fish stocks, so are relatively unproductive (Hobday et al. 2006). Australia's fisheries are also managed for maximum sustainable yield, further limiting the fishing industry's short-term catch. As a result, Australia

¹¹⁶ Interview with Manager, commercial fishing business, 30 May 2016.

¹¹⁷ Interview with Manager, commercial fishing business, 30 May 2016.

imports as much as 70% of its seafood to meet the domestic demand for cheap fish, primarily from Asian countries with more productive waters and minimal regulation (Ruello 2011). Half of Australia's fisheries production (A\$1.2 billion) is actually exported to markets in Japan and elsewhere, predominantly of premium products such as rock lobster and bluefin tuna (Department of Agriculture 2015). Australia similarly relies on positioning itself as selling premium products in the aquarium species trade due to its inability to compete on price with competitors in countries with minimal sustainability regulation. Despite boasting the world's third largest EEZ, Australian industry struggles to compete in a global market often characterized by aggressive overfishing.

As discussed above, neither the charter nor recreational fishing industries are particularly invested in the Coral Sea. Aside from a select few fishing sites that act as staging posts on more far-reaching, high-end charter vessels, and a small amount of game fishing, these industries have a minimal stake. The intensity of activity is low, there is no shortage of alternative sites (particularly given the Coral Sea's mixed zoning), their assets are suitable for alternative sites, and the industries do not face any challenges beyond business-as-usual. Because a select few charter vessels do rely on Coral Sea sites as stops on longer trips, the charter industry has, at most, moderate factor specificity. On all other categories of interest salience, the two industries have little stake.

The ecotourism industry is similarly not heavily invested in the Coral Sea with just five operators that travel so far out, so the intensity of activity—particularly relative to the neighboring Great Barrier Reef—is low. Coral Sea reef ecosystems and species are distinct from those of the Great Barrier Reef, so these dive sites are not entirely interchangeable. Those few businesses that do travel there succeed because they offer a distinct experience to Great Barrier Reef dive operators. They have similarly invested in assets devoted to longer dive trips, such as larger live-aboard vessels. The factor and asset specificity of the ecotourism sector is therefore moderate due to the Coral Sea's unique dive sites and the industry's investment in longer range assets. The interest salience of the ecotourism industry is therefore broadly reflective of the political economy of the commercial fishing sector, although it does not face the same barrage of exogenous stressors. That said, climate impact, and particularly coral bleaching, pose an existential threat to the industry in the medium-term – a threat that further motivated dive operators to advocate for greater marine

protections for the Coral Sea.¹¹⁸ Massive bleaching events in 2016 and 2017 that devastated corals in the Great Barrier Reef have only exacerbated this concern.

Institutions

The 1999 Environmental Protection and Biodiversity Act (EPBA) provides the legal basis for Commonwealth marine reserves. As with the US Antiquities Act, this legislation affords a high degree of authority to one decision-maker, in this case the Environment Minister. The Minister has the authority to proclaim a marine reserve in Commonwealth waters, as well as to approve a management plan for the reserve. Although the legislation requires that the Minister present the management plan to Parliament, parliamentary approval is not required, and a Commonwealth marine reserve becomes official legislation with the Minister's formal approval. This high level of authority allows the governing party to pursue new marine reserves with near-impunity. The EPBA requires a justification for a new reserve, public consultations, and tabling the management plan in Parliament, but none of these requirements serve as institutional veto points.

Where this Australian legislation differs significantly from the US is that it has weaker requirements for the permanence of new reserves. In fact, the EPBA even sets a maximum management plan duration of 10 years, meaning that regulations are frequently re-evaluated by law. This can lead to more responsive and effective protection of biodiversity, but it can also lead to the weakening of regulations over time. Moreover, the Minister has the authority under the EPBA to revoke an existing management plan and issue a new one at any time. The management plan for a Commonwealth reserve in Australia is therefore highly fluid, and potentially subject to the whims of the sitting government. The sitting Environment Minister has substantial leeway in deciding how to manage existing reserves. Revoking a reserve or parts of one is more difficult, and requires a resolution to pass in both houses of Parliament. The flexibility that the Minister has in deciding how to manage reserves means that spending the political capital to revoke one is unlikely to be an attractive option. Instead, it seems more likely a Minister would choose to alter the management plan to achieve her or his objectives, as was the case with the Abbott government's review of the Gillard government's Coral Sea management plan before it came into effect.

¹¹⁸ Interview with Manager, dive tourism business, 30 May 2016.

Commercial Fishing-State Coalition Summary

Three successive Australian governments under Gillard, Abbott, and Turnbull were responsive foremost to the commercial fishing industry throughout the Coral Sea process. Although commercial fishing intensity was not particularly high in the region, subsets of the industry were critically dependent on continued access to stay in business. While the Gillard government was willing to buy out some of the companies affected, the Abbott review sought to keep them in business, as previously discussed. In either case, the government was devoted to minimizing and mitigating the impact of the reserve on the fishing industry. As with every large MPA, ENGOs were influential in pushing for the reserve, but their influence waned in the management plan consultations in the face of entrenched industry interests. The flexibility afforded to the Environment Minister under the EPBA made it easy for the Gillard government to proclaim the reserve in 2012, but also for the Abbott government to put the management plan under review. Fishing industry interests were the focal point of the Coral Sea designation process, as the government worked closely with the fishing industry to design a reserve that was compatible with its interests.

Coral Sea CMR Process and Outcome

The Coral Sea CMR is a more complex case study because it was contested, and discussions about how to best protect the Coral Sea evolved over a long period of time. Table 5.2 provides a timeline of major events and decisions throughout the Coral Sea CMR process, including relevant marine conservation policy decisions that predate it. This section outlines the process leading to the official designation of the Coral Sea CMR in 2012, while the next section turns to the political decisions that followed its designation, and delayed its implementation.

Table 5.2 – Coral Sea CMR Timeline

1975	Australian government establishes the Great Barrier Reef Marine Park (GBRMP), the world's first MPA exceeding 200,000 km ²
1998	Australian government begins work with bipartisan support on Nationally Representative System of Marine Protected Areas (NRSMPAs)
2004	Australian government rezones the Great Barrier Reef Marine Park, increasing no-take zoning from 4.6% to 33%
2005	WWF proposes zoning of Coral Sea similar to 2004 GBRMP rezoning (following CAFNEC and NQCC proposal)
2007	Pew launches campaign for large, no-take MPA in Coral Sea WWF joins Pew and AMCS-led coalition for no-take Coral Sea
2009	Environment Minister Peter Garrett declares the Coral Sea a "conservation zone"

2012	Gillard government formally declares 25 new or expanded marine reserves as part of the NRSMPA initiative, including the Coral Sea CMR
2013	Gillard government proposes initial 10-year management plan for Coral Sea, including A\$100 million to buy-out commercial fishers
	Tony Abbot's Liberal coalition wins election
	Abbott government re-proclaims the Coral Sea CMR
2014	Consultations for a revised management plan for the Coral Sea CMR begin
2015	Malcolm Turnbull replaces Abbott as leader of the Liberal Party
2016	Consultations completed on revised management plan, with a recommendation to reduce the no-take area of the Coral Sea CMR by nearly 100,000 km ²
2017	Management plan expected to come into effect

The campaign for a large MPA in the Coral Sea was contentious from the beginning, even between NGOs. Pew's initial involvement in the Coral Sea came at the behest of the WWF, who were pursuing a mixed-use MPA in the Coral Sea in the image of the 2004 Great Barrier Reef rezoning.¹¹⁹ WWF approached Pew for funding support for the initiative, which Pew turned down. The approach had nonetheless piqued Pew's interest, and in August 2007 Global Ocean Legacy founder Jay Nelson partook in a WWF-arranged trip to the Coral Sea. Pew was not enthusiastic about WWF's mixed-use approach to the Coral Sea, opting instead to pursue their own campaign for a fully no-take MPA. Pew was intrigued by the Coral Sea because it had an easy-to-sell name, numerous reefs, it was adjacent to the Great Barrier Reef Marine Park and a large MPA in New Caledonia, and it was the most remote area of Australia's EEZ.¹²⁰ The Coral Sea campaign therefore began with two of the world's largest NGOs running competing campaigns with different philosophical outlooks on how the Australian government should protect the Coral Sea. Although there was an internal debate at Pew about whether it was sensible to compete with WWF, eventually Pew's superior financial resources won out, with the WWF withdrawing its initiative and eventually joining the Pew-led efforts.

Pew worked alongside the Australian Marine Conservation Society to form a domestic coalition of NGOs under the Protect Our Coral Sea banner. This coalition served two purposes. First, it acted as a focal point for NGO and activist efforts to improve protections in the Coral Sea, effectively

¹¹⁹ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹²⁰ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

streamlining those efforts into one devoted campaign. And second, it also attempted to mask Pew's influence throughout the process by embedding it as just one organization among the 15 members of the coalition.¹²¹ Realistically, Pew was providing the bulk of the financial resources for the campaign, including funding full-time marine campaigner positions at other ENGOs in the coalition. This heavy influence led to significant backlash, particularly from politicians opposed to the Coral Sea reserve. During one parliamentary debate, MPs referred to Pew as "cancerous," "putrid," and "gangrenous," and lamented that they kept "hearing about the Pew foundation and them being everywhere" (House of Representatives 2013). This childish rhetoric aside, the problem was that Pew was a well-funded, influential US organization that many MPs and constituents saw as attacking Australian fishing culture through its advocacy for 'lock-outs.' Pew therefore had good reason to not want to be seen as driving the Coral Sea efforts. Unfortunately for Pew, its efforts to stay out of the spotlight self-admittedly failed, hence these attacks in Parliament.¹²² CAFNEC—after years of providing a regional ENGO voice in the campaign—even began to distance itself from Pew as a campaign strategy, and stopped receiving funds from the organization in mid-2013.¹²³

Fishers were already feeling aggrieved after the Great Barrier Reef rezoning, but two missteps exacerbated the public backlash to the Coral Sea campaign. First, Pew vastly underestimated the degree of public and industry opposition to a fully no-take Coral Sea. Pew's ambitious goal of a fully no-take Coral Sea had the unintended consequence of polarizing the issue of Coral Sea protections, with a large number of commercial and recreational fishers suddenly vehemently opposed to the reserve.¹²⁴ The Coral Sea—unlike Pew's other large MPA projects to date—is adjacent to high levels of ongoing commercial and recreational fishing. WWF, CAFNEC, and potentially others were more attuned to the prospective backlash, hence their reluctance to join, but Pew initially remained committed to its broader goal of promoting large, no-take MPAs. Pew officials were inspired by the large MPA successes of Papahānaumokuākea and Chagos, wanting to replicate these models in Australia.¹²⁵ Eventually Pew was forced to relent, abandoning the fully no-take proposal, and instead consulting more closely with local and industry stakeholders. But by then, much of the damage was

¹²¹ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹²² Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹²³ Interview with Former Executive, Cairns and Far North Environment Centre, Cairns, QLD, 2 June 2016; Interview with Former Campaigner, Cairns and Far North Environment Centre, 31 May 2016.

¹²⁴ Interview with Former Marine Campaigner, Australian Conservation Foundation, 27 May 2016.

¹²⁵ Interview with Program Director, Pew Charitable Trusts, Canberra, ACT, 6 May 2016.

already done, with clear dividing lines between pro-conservation and pro-industry more deeply entrenched.

The second misstep was out of campaigners' hands entirely, and instead was the result of a particularly enthusiastic Environment Minister from 2007-2010, Peter Garrett. Garrett was the former President of the Australian Conservation Foundation (ACF), and Australian conservationists see him as a "rock star" in the conservation community (and he also happens to be a literal former rock star).¹²⁶ Unbeknownst to campaigners, Garrett spontaneously declared the Coral Sea a conservation zone in May 2009. Under the EPBA, an Environment Minister has the authority to declare an area a conservation zone as a temporary measure to protect the biodiversity in an area while it undergoes assessment for inclusion in a Commonwealth reserve (Commonwealth of Australia 1999). This decision was controversial because a conservation zone has no requirement for public consultations, and is generally a prelude to a formal Commonwealth reserve. The conservation zone proclamation only served to further galvanize fishing industry opposition to a Coral Sea reserve. Roughly 1,000 recreational fishers protested Garrett's decision in Cairns, appalled by what they saw as a cynical move to disenfranchise them.¹²⁷

In 2012, then Environment Minister Tony Burke formally proclaimed the Coral Sea CMR. The announcement was made alongside the rest of the NRSMPA network, making it a part of the world's largest marine reserve network. The three years between Garrett's proclamation of the Coral Sea Conservation Zone and Burke's proclamation of the Coral Sea CMR consisted of ongoing campaigning and lobbying from stakeholder groups. During this time, the government was in the process of designing the entire NRSMPA network, while stakeholder groups actively lobbied the government for favorable zoning. Although there was considerable stakeholder input into the process prior to 2012, the formal proclamation officially triggered legal requirements for public consultation on the Coral Sea, elevating what was already becoming a contested and lengthy stakeholder bargaining process.

Coral Sea CMR After Designation

The Coral Sea CMR process is the most rigorous research and public consultation process of any large MPA to date. One campaigner estimated that the research and consultation expenditures for the CMR network from the early 2000s was about A\$9 million, much of which was spent on new

¹²⁶ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

¹²⁷ Interview with Former Program Director, Pew Charitable Trusts, 15 May 2016.

scientific research in the Coral Sea.¹²⁸ The Australian government received 566,377 submissions in the consultation process for the CMR network, 487,435 (86%) of which were for the Coral Sea (Marine Division 2012). Of these Coral Sea submissions, 99.76% were from formal campaigns, and 87% of those were generated by the Protect Our Coral Sea campaign coalition. Of the Protect Our Coral Sea submissions, 76% were from overseas, demonstrating the global reach of the transnational ENGOs participating in the coalition, most notably Greenpeace, Pew, and WWF. These submissions indicated strong support for better marine protections in the Coral Sea, even excluding campaign submissions, as shown in Table 5.3. But by 2012, the commercial and the recreational fishing lobby felt that the government consulted them too late in the process, so were already feeling threatened by it. There was significant concern about the social and economic impact of the reserve, expressed in nearly 30% of all non-campaign submissions.

Table 5.3 – Coral Sea CMR Submissions

Feedback	Proportion (Including Campaign)	Proportion (Excluding Campaign)
No support for marine reserve	< 0.1%	6.4%
Support for reserve as proposed	< 0.1%	7.8%
Support for stronger protections than proposed	99.9%	77.2%
Concern with protection of marine environment	< 0.1%	2.7%
Concern with social and economic impact	N/A*	29.6%
Concern with management	2.7%	14.2%

*Note: erroneously recorded as 96% in official report. Correct figure unavailable.

Source: Marine Division (2012)

The consultation process was not limited to these submissions, but involved an ongoing dialogue with industry groups. ABARES produced a 155-page social and economic impact assessment report on the Coral Sea CMR that assessed displacement of economic activity, the impact on the commercial fishing sector, and the effects of the Coral Sea CMR on local ports and communities (ABARES 2012). The report included six detailed case studies of how the reserve would impact certain businesses, industries, and cities. Producing this report involved extensive consultation with industry through workshops, meetings, and surveys of fishers (Marine Division 2012). Tony Burke met personally with many stakeholder groups, often quipping about how organizing meetings with the fishing industry equated to “herding cats” (much to the industry’s chagrin) because of the diversity of groups and interests within it.¹²⁹

¹²⁸ Interview with Program Director, Pew Charitable Trusts, phone, Perth, WA, 4 April 2016.

¹²⁹ Interview with Executive, Australian National Sportfishing Association, 10 May 2016.

The end result of this process was a 10-year management plan that the Gillard government intended to put into effect in 2014. The plan created a mixed-use MPA in the Coral Sea with a no-take area of 502,654 km². The management plan would have displaced an estimated A\$377,000 (51.7%) of the Coral Sea Fishery, and A\$3.8 million (9.7%) of the ETBF (ABARES 2012). As noted above, it included a A\$100 million funding commitment to buy-out the select few businesses that would be unable to continue their operations under the management arrangements. At least some commercial fishing businesses were reportedly pleased with the buy-out, seeing it as an opportunity to get out of an industry with increasingly small profit margins.¹³⁰ This plan incorporated extensive consultations with industry, and largely allowed for business-as-usual activity to continue on the water. The plan would have forced some businesses to target new fishing grounds, while the government would pay off others to shut down, but it ultimately reflected a concerted effort to compromise with the commercial fishing industry to minimize the economic impact of the reserve—a far cry from Pew’s fully no-take proposal.

The 2013 election that saw Tony Abbott’s Liberal coalition replace the Gillard Labor government further politicized the Coral Sea. Abbott ran a scathing campaign that criticized every aspect of the Labor government’s environmental initiatives, including the Coral Sea. Abbott’s stance was that the Gillard government failed to engage in an adequate stakeholder consultation process, despite the extensive consultations. The NRSMPA system had a lot of bipartisan support and most Australians favored new sanctuary zones, so repealing the Coral Sea CMR outright was a politically unattractive option (despite having the legislative authority to).¹³¹ Abbott faced a problem in that the Gillard management plan was already approved by the previous Environment Minister, and had been in the process of sitting with Parliament for the required 15 days before the election was called. Even with a shift in the balance of power in Parliament, the plan would soon be in full effect since it became official legislation with ministerial approval, and just needed to sit in Parliament rather than requiring Parliamentary approval. Abbott found a legal loophole to get around this legislative problem. In what one campaigner called a “brilliant strategic move,” Abbott re-proclaimed the Coral Sea CMR, effectively resetting the clock on the management plan and creating a new legal precedent. This move meant that the Gillard management plan never actually came into effect.

¹³⁰ Interview with Former Campaigner, Cairns and Far North Environment Centre, 31 May 2016.

¹³¹ Interview with Program Director, Pew Charitable Trusts, 4 April 2016.

Instead, Abbott started anew the consultations for the Coral Sea CMR (and the rest of the network), which were completed by the Turnbull government in 2016. This round of consultations was much like the last, with the government engaged directly with industry stakeholders to determine zoning for the Coral Sea. The overarching goal this time, however, skewed even further in industry's favor, with the government insisting that the zoning not lead to business closures. The A\$100 million that was on the table under Gillard was swiftly removed. The driving question that the government asked industry representatives was "how do we keep you in business?"¹³²

The seemingly never-ending consultations had managed to irritate stakeholders from virtually every major stakeholder group. Representatives from the commercial fishing and ecotourism sectors alike were increasingly frustrated with constantly renegotiating zoning maps.¹³³ Many disparagingly refer to the consultations as being all about determining "lines on a map," implying a disconnect between the government process and local businesses' need for a more decisive process. One commercial fishing business owner claimed that he "became numb" to the consultation process, and the uncertainty of not knowing if he would be bought out or expected to continue operations.¹³⁴ By the end of the Abbott-Turnbull review, not one representative from any of the major stakeholder groups claimed that the consultations were not extensive.

The government released the report for the Abbott-Turnbull review in September 2016, after nine years of consultations. The review kept the majority of the Gillard management plan intact across the CMR network, but with some notable changes in the Coral Sea (see Table 5.4). The review recommended reducing the no-take area of the Coral Sea by nearly 100,000 km², a concession that would allow Great Barrier Reef Tuna to stay in business (Buxton and Cochrane 2016). It also adjusted the zoning around reefs in the Coral Sea to allow greater access for fishers, reducing the impact of the reserve on the Coral Sea Fishery. These two changes were the most notable. ENGOS were naturally disappointed with the outcome of the review for scaling back protections. Fiona Maxwell, AMCS's lead campaigner for the Coral Sea, was quoted in *ABC News* as saying that the Coral Sea was now "well and truly sliced and diced" (Smail 2016). The review is not a formal

¹³² Interview with Owner, commercial fishing business, 30 May 2016.

¹³³ Interview with Owner, commercial fishing business, 30 May 2016; Interview with Manager, dive tourism business, 30 May 2016.

¹³⁴ Interview with Owner, commercial fishing business, 30 May 2016.

management plan, but Environment Minister Josh Frydenberg is likely to accept the report's recommendations.

Table 5.4 – Proclaimed and Review Coral Sea CMR Recommendations Comparison

Zone ¹³⁵	Proclaimed		Recommended		Difference	
	Area (km ²)	Percentage	Area (km ²)	Percentage	Area (km ²)	Percentage
SZ (IUCN Ia)	0	0	5,212	0.53%	+5,212	+0.53%
MNPZ (IUCN II)	502,654	50.78%	405,258	40.94%	-97,396	-9.84%
HPZ (Coral Sea) (IUCN IV)	182,578	18.45%	0	0	-182,578	-18.45%
HPZ (Seamounts) (IUCN IV)	85,507	8.64%	0	0	-85,507	-8.64%
HPZ (IUCN IV)	0	0	518,833	52.42%	+518,833	+52.42%
MUZ (IUCN IV)	194,232	19.62%	0	0	-194,232	-19.62%
Other (IUCN IV)	24,870	2.51%	60,540	6.12%	+35,670	+3.61%

Source: Buxton and Cochrane (2016)

This rezoning was a qualified failure for the ecotourism sector. The review did recommend partly protecting reefs in the Coral Sea, including the area's major dive sites at Bougainville and Osprey reefs. But the review weakened the protections, recommending permitting collection of aquarium species at Bougainville, and splitting Osprey in half, with one half fully protected and the other allowing fishing activity. The government consulted dive operators about reef zoning throughout both consultations, but was generally only interested in protecting specific dive sites.¹³⁶ The ecotourism sector favored strong protections throughout the Coral Sea, but as one industry representative put it, "it's a political trade-off for how invested [we] want to get."¹³⁷ Although the sector is important to the regional economy, its limited activity in the Coral Sea prevented it from influencing the process more broadly.

¹³⁵ Sanctuary Zones (SZ) prohibit all human access; Marine National Park Zones (MNPZ) prohibit all extractive industry activity; Habitat Protection Zones (HPZ) and Multiple Use Zones (MUZ) permit mixed use, with pelagic longline, purse seine, and mid-water trawl commercial fishing permitted in non-reef areas.

¹³⁶ Interview with Manager, dive tourism business, 30 May 2016.

¹³⁷ Interview with Manager, dive tourism business, 30 May 2016.

The recreational fishing lobby in Canberra, despite its hostility to no-take zones, ultimately accomplished very little. Its principled opposition to what it considered “unscientific lock-outs” did not make a compelling case given the sector’s minimal activity in the Coral Sea. The changes that the government made during the review were to keep commercial fishers in business, not to placate the recreational fishing lobby. Recreational fishing will nonetheless continue around the remote Bougainville, Osprey, and Shark reefs, where particularly adventurous game fishers do frequent in small numbers.¹³⁸ But the review maintained over 400,000 km² of no-take zoning, meaning that even the particularly industry-friendly review rejected the stance that no-take zones were unprincipled. The direct experience for recreational fishers throughout Australia is that they can and do fish in marine parks, yet campaigns such as the one opposing the Coral Sea create the perception that these parks are an attack on fishing rights (Meder 2016). Recreational fishers tend to overwhelmingly support MPAs after polarizing community debates about them subside with time, including 73% support for the 2004 Great Barrier Reef rezoning just three years later (Sutton and Li 2008; Meder 2016). There seems to be a disconnect between the hardliner lobbyists in Canberra and the lived experience of Australian recreational fishers; a divide that the Australian government seems acutely aware of.

The management plan review was highly favorable to the commercial fishing industry, but representatives insist that the mere fact that the government created the Coral Sea CMR signifies the pervasive influence of transnational ENGOs in Australian resource management. They refer to this influence as a “disgrace,” and question why “environmental groups do not focus on areas that are not sustainably managed.”¹³⁹ Two fishing industry representatives expressed incredulity that the Australian government wanted to limit tuna catch further in Australia, only to have these migratory species caught in Papua New Guinea instead.¹⁴⁰ These criticisms are understandable, and reflect the philosophical divide between a management and conservation approach to governing oceans.

The two greatest threats to the Great Barrier Reef are climate change and water quality due to land-based run-off. Fishing, commercial or otherwise, is not responsible for these two threats, yet protective measures tend to target the fishing industry. Australia’s predominantly sustainably-

¹³⁸ Interview with Marine Campaigner, Australian Marine Conservation Society, 3 June 2016.

¹³⁹ Interview with Executive, Queensland Seafood Industry Association, Hendra, QLD, 30 May 2016; Interview with Owner, commercial fishing business, 30 May 2016.

¹⁴⁰ Interview with Executive, Australian National Sportfishing Association, 10 May 2016; Interview with Owner, commercial fishing business, 30 May 2016.

managed fisheries tend to bear the brunt of the regulatory burden for protecting marine biodiversity. The immense challenge of global climate change and the failures of the Australian government to effectively regulate land-based run-off to protect water quality have made fishers an easier target. There is a disconnect between the major threats to ocean ecosystems in Australia and the government's protection measures; a disconnect that fishers are acutely aware of. Despite this disconnect and fishers' genuine grievance with it, the Coral Sea CMR process was still heavily influenced by the commercial fishing industry, perhaps more so than any other large MPA to date.

To summarize, the Coral Sea process reflects a commercial fishing-state coalition for two reasons. First, the government consulted the commercial fishing sector extensively in designing both the 2013 management plan and the 2016 review report. It also consulted ENGOs and the ecotourism sector, but commercial fishers having such extensive input into an MPA process predisposes it toward more lenient regulations, even considering the influence of these other groups. Second, the objective of both consultation processes was to minimize social and economic impact. While this goal is typical to all MPAs, in the Coral Sea case it meant constantly zoning and rezoning the area to do so. Put simply, this was a deliberate process of zoning the Coral Sea to minimize the impact of the regulations on the commercial fishing sector. This objective was especially pronounced in the Abbott-Turnbull review, which adopted a business-as-usual philosophy to zoning, insisting that not one company would go out of business.

The flexibility afforded to the sitting Environment Minister under the EPBA means that the Coral Sea management plan could be under constant scrutiny. It seems likely that Frydenberg will adopt the proposed arrangements of the 2016 review, with a new management plan potentially coming into effect sometime in 2017. With Turnbull's 2016 election victory, the government has time to implement this management plan, meaning it will be the first new set of regulations for the Coral Sea since the large MPA campaign began a decade earlier. The stakeholder fatigue that has increasingly characterized the Coral Sea process is palpable, so it will likely be some time before this or a subsequent government decides to re-evaluate the area. But the only barriers to doing so are political. The government can at any time decide to reinstate a process that could strengthen or weaken Coral Sea protections. There is therefore a high degree of long-term uncertainty over how the Australian government will manage the Coral Sea.

Summary

The Coral Sea in Australia was one of the Pew Global Ocean Legacy's four inaugural projects, making it one of the earlier large MPA campaigns. Pew's initial fully no-take proposal introduced the norm of large, contiguous, pelagic, and ideally no-take MPAs into an ongoing Australian process to create a national network of MPAs. This proposal further polarized environmental and industry groups in Australia, and led to what is possibly the most contested large MPA campaigns to date. But the Coral Sea is also perhaps the least remote large MPA so far, with ongoing commercial activity within and especially adjacent to it. It has, in many ways, served as a learning experience for large MPA campaigners looking to promote new large MPAs globally. Despite the contested and lengthy process, the result of this campaign is still a 990,000 km² MPA, with the government expected to zone 410,470 km² as no-take. This no-take zoning is, however, residual, and will lead to minimal changes beyond business-as-usual on the water. This outcome is rooted in the political economy of the Coral Sea in Australia.

The Coral Sea provides clear evidence for why the configuration of industry interests in a given marine space is predictive of large MPA outcomes. Most notably, it demonstrates that when extractive and non-extractive industries have similar interest salience in a region, governments tend to privilege extractive industry interests, in this case forming a Commercial Fishing-State coalition:

C1(b) – An Extractive-State coalition is likely to form when salience of extractive industry interests is moderate, but the salience of non-extractive industry interests is moderate or low.

The major concessions that the Australian government made to the commercial fishing industry demonstrates the influence that even moderate extractive industry interests can have on a large MPA process. Even dive operators who would prefer a fully protected Coral Sea were not willing to expend political capital to counteract the commercial fishing sector's interests in the region. Despite continued ENGO lobbying throughout the process, the explicit goal of consultations (especially under Abbott and Turnbull) was to minimize the impact on commercial fisheries in the region.

The EPBA affords the sitting government a high degree of flexibility over designations and management arrangements. This meant that Garrett and Burke were able to declare a conservation zone and marine reserve, respectively, with impunity:

I1 – When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.

Of course, the EPBA also afforded this flexibility to Abbott's Environment Minister, Greg Hunt, to re-proclaim the reserve and review the management plan. This ability to review management arrangements at the whim of the Environment Minister coupled with the maximum 10-year duration of any management plan means that regulations on the water could be subject to frequent changes:

I2 – When an existing protected area's legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.

To date, this low permanence has further facilitated the interests of the commercial fishing sector, but it could also mean strengthened regulations in the future in response to environmental and economic change in the region.

The location of the Coral Sea CMR is not remote by large MPA standards, but is nonetheless the most remote area of Australia's vast EEZ:

L1 – When Extractive-State coalitions form, states tend to relocate proposed MPAs to more remote regions, or not establish them at all.

The Coral Sea's no-take zone is located in the most remote region of the Coral Sea CMR, where commercial activity is virtually non-existent. Both the location of the reserve and the no-take zoning within it reflect the government's effort to locate the reserve where it would minimize the impact on the commercial fishing sector. Finally, the Coral Sea management plan has little impact on commercial activity:

M1 – When Extractive-State coalitions form, MPAs tend to be 'paper parks' that lack comprehensive management or meaningful enforcement.

The management arrangements for the Coral Sea will have minimal impact on industry activity in the region, making it what many detractors would consider a 'paper park.' That said, they do prohibit all oil and gas activity, and the no-take zoning does prevent expansion of future commercial activity. Protecting the residual areas of the Coral Sea therefore has a similar justification to the US government's justification for protecting the Pacific Remote Islands. The Coral Sea CMR nonetheless demonstrates the influence that even moderate extractive industry interest salience in a region can have on how governments make decisions about the location and management of a large MPA.

Chapter 6: Palau National Marine Sanctuary: Ecotourism-Executive Coalition

The Palau National Marine Sanctuary (PNMS) was championed by Palauan President Tommy Remengesau Jr. and unanimously approved by the *Olbiil Era Kelulua*, the Palau National Congress, on 22 October 2015. The Palau National Marine Sanctuary Act is an ambitious piece of legislation; it not only establishes this large no-take zone, but bans most foreign fishing and fish exports, sets aside the remaining 20% of Palau's EEZ for the development of a small-scale domestic commercial fishing industry, and substantially increases the penalties for illegal fishing in Palau. It phases these regulations in over time, fully coming into effect on 1 January 2020. The legislation was designed to conserve marine biodiversity and protect Palau's ecotourism industry, but is also an effort to restructure commercial fishing in Palau from a primarily foreign-dominated enterprise to one in which the proceeds from it stay in Palau. Planning for its implementation is still ongoing, with many remaining unanswered questions about the feasibility of the commercial fishing restructuring, and about Palau's ability to enforce the regulations on the water.

The overarching economic goal of the PNMS legislation is to strengthen the Palauan economy by bolstering its critical tourism sector, while ensuring that Palau is the main benefactor of commercial fishing in its EEZ. Palau is a world-class dive destination, and tourism accounted for 54% of the Pacific Island nation's GDP in 2015 (Asian Development Bank 2016a). Palau's major dive sites are not actually located in the PNMS, and are already protected under other measures. But the government hopes that the PNMS will help to advance Palau's brand as a pristine haven for marine life, while simultaneously protecting Palau's pelagic ecosystems, including the sharks and tuna that inhabit them. The idea to close Palau's EEZ emerged out of the ecotourism industry¹⁴¹, which in Palau has a lot of overlap with the local ENGO community. Of the current large MPAs, the PNMS is the clearest case of an Ecotourism-Executive coalition. Both ecotourism and ENGO stakeholders wanted to conserve Palau's marine ecosystems, but in this ecotourism-driven process advocates frequently relied on making an economic case in their arguments in favor of the reserve, making it distinct from ENGO-State coalitions in other cases. As with the previous case studies, this chapter foremost looks to support the claims that the large MPA norm was influential and that the political economy of the reserve was paramount in the political process leading to its designation. It will

¹⁴¹ Interview with Consultant, Pew Charitable Trusts, Koror, 17 June 2016.

demonstrate the influence of Palau's ecotourism sector on the government's decision-making for the sanctuary.

One challenge that Palau faces is that it is not the primary benefactor of the marine resources that industry extracts in its EEZ. Palau only receives minor revenue from commercial fishing through modest license fees and a 35 cent/kg tax (on tuna) from fleets based primarily out of Japan and Taiwan. Palau's two domestic fishing companies—the Kuniyoshi Fishing Company (KFC) and Palau International Traders Inc. (PITI)—use predominantly foreign boats and workers. They immediately export their high grade tuna on chartered flights to sashimi markets in Japan and Taiwan, where it receives a premium price.¹⁴² Only 2.2% (USD 5.5 million) of Palau's GDP in 2014 came from the fishing industry (Bureau of Budget and Planning 2014), a small amount given the availability of high grade tuna in Palau's waters. The government hopes that the PNMS legislation can change this by keeping fishing revenue in Palau.

Palau's high dependence on tourism and the poor performance of its commercial fishing sector (from a Palauan perspective) are the impetus for the PNMS. Palau is a small nation of only 21,000 people that has traditionally relied on marine resources for livelihoods. Unlike the Pacific Remote Islands and Coral Sea, however, the PNMS was predominantly a state-driven initiative. The Palauan government itself initiated the process and was the primary advocate for the reserve, with ENGOs providing support. The secondary argument contained within this chapter is that the PNMS process was state-driven for two reasons. First, the large MPA norm was more deeply engrained in the international system by 2015, and the theoretical literature on norms predicts a shift toward state-driven mechanisms of norm adoption. Second, a state-driven process is also more likely under an Ecotourism-Executive coalition in which the state may have a clearly defined economic interest in establishing a large MPA. This case study demonstrates how economic conditions that favor the ecotourism industry can lead a state to quickly create a rather ambitious large MPA. This chapter will make these arguments by first providing an overview of Palau's rich marine conservation history, which has always been a central feature of Palauan society. It will then follow the format of the preceding chapters by providing an overview of the PNMS before turning to an analysis of the political economy of the sanctuary, and the process leading to its designation.

¹⁴² Interview with Owner, commercial fishing business, Koror, 28 June 2016.

Marine Conservation in Palau

The PNMS was by no means Palau's first ambitious marine conservation initiative, nor even its first attempt at large-scale marine conservation. Marine conservation is deeply embedded in traditional Palauan cultural practice, primarily through the concept of '*bul*.' A *bul* is a temporary fishing closure traditionally enacted by local chiefs in response to noticeable declines in reef fish stocks. When fish in a specific reef became sparse, a local chief would impose a *bul* to give fish stocks time to recuperate. Fishers would then move their efforts to another reef until the local chief formally ended the *bul*. These *buls* would rotate regularly in an effort to ensure that no one area was overfished. A chief could also enact a *bul* to reserve a particular fishing grounds for special expeditions, usually surrounding an important cultural event (Johannes 1978).

This practice was the primary method of marine conservation in Palau before colonization (which began in 1885), with the country shifting toward increasingly centralized methods of conservation in the time since (Gruby and Basurto 2013). Initially these took the form of colonial arrangements imposed by Spain, Germany, Japan, and the US at various stages of Palau's colonial history, and led to a de facto open access policy (Ueki and Clayton 1999; Gruby and Basurto 2013). Despite the declining use and significance of *bul* in Palauan marine conservation as more modern institutions replace it¹⁴³, *bul* still resonates strongly in Palau as an important part of the local culture.¹⁴⁴ The Palauan government and ENGOs would capitalize on this resonance by leveraging the concept in their campaign for the PNMS, discussed below.

In 1994, Palau became independent from US administration after 47 years of being a UN Trust Territory. Palau remains in free association with the US, with the US providing security and the US dollar as Palau's official currency. Since its independence Palau has consistently enacted new legislation intended to protect its marine resources. Two high profile conservation initiatives in particular stand out: the 2003 Protected Areas Network (PAN) Act, and the 2009 Shark Haven Act.

The PAN Act created the institutional platform for a national system of protected areas. Prospective member sites go through a nomination process, and if the government accepts them they receive benefits in the form of access to technical assistance, participation in a national

¹⁴³ Interview with Executive, Palau International Coral Reef Center, Koror, 6 July 2016.

¹⁴⁴ Interview with Consultant, Pew Charitable Trusts, 17 June 2016; Interview with Manager, dive tourism business, Malakal, 30 June 2016; Interview with Program Director, Office of the President, Koror, 29 June 2016.

monitoring system, and eligibility for national funds (Palau National Congress 2003). But perhaps the most significant consequence of the PAN Act was to make marine conservation an issue that fell under national jurisdiction (Gruby and Basurto 2013). The act provided national oversight and authority over marine conservation that was previously done at the state or local level. The PAN Act reflects a shift toward a more centralized Western-style institutional structure, but the motivations for it mainly came from traditional cultural understanding of the importance of marine conservation, embodied in *bul* (van Kerkhoff and Pilbeam 2015). In other words, the PAN Act was a shift toward a more centralized form of marine conservation that was still grounded in traditional Palauan practice. As one interviewee put it, the “PAN is *bul*.”¹⁴⁵ MPAs and initiatives such as the PAN Act, some observers claim, are easy to create in Palau because marine areas have always been managed through area closures.¹⁴⁶ The PAN Act has also already yielded conservation benefits, with a scientific study of Palau’s PAN MPA sites showing that no-take MPAs in the network now contain twice the biomass of nearby unprotected areas, with larger MPAs seeing even stronger results (Friedlander et al. 2017).

The second major initiative, the Shark Haven Act, created what was the world’s first ever shark sanctuary. It prohibited shark fishing, banned having sharks or shark parts on board vessels at any time, and imposed penalties for violations (*Shark Haven Act* 2009). But the sanctuary was not the first effort to protect sharks in Palau. In 2001, President Remengesau Jr. (then in his first term) passed laws to prohibit shark finning, but they were watered down, unenforceable, and with miniscule fines.¹⁴⁷ On 6 May 2003, Remengesau and his Minister of Justice, angry with the ineffectiveness of the laws, ordered officials to burn a large illegal catch of shark fins found aboard a Taiwanese boat.¹⁴⁸ The government followed this high-profile burning with a strengthening of the laws later in 2003, increasing the fines and banning foreign vessels from transporting sharks or rays. Despite these efforts, Palau lacked the capacity to enforce the regulations in its roughly 600,000 km² EEZ. These laws sent a strong message, but they were largely symbolic given Palau’s lack of credible enforcement, and likely did little to slow down the rate of finning in Palau’s waters.

The Shark Haven Act was similarly a symbolic statement due to limited enforcement capacity, but it was a high-profile one. Johnson Toribiong took over as president of Palau for a single term

¹⁴⁵ Interview with Coordinator, Global Climate Change Alliance+, Koror, 24 June 2016.

¹⁴⁶ Interview with Coordinator, Global Climate Change Alliance+, 24 June 2016.

¹⁴⁷ Interview with Manager, dive tourism business, 30 June 2016.

¹⁴⁸ Interview with Manager, dive tourism business, 30 June 2016.

from 2009-2013, and environmental groups in Palau were concerned that he would overturn the shark regulations. Toribiong was reportedly supportive of Bill 8-44, which was a proposal to repeal shark protection laws and to allow the sale of shark bycatch, and one of the first bills tabled after he took office (Ueki 2009).¹⁴⁹ A local environmental group called Shark Sanctuary—founded in 2001 by Dermot Keane, who also manages one of Palau’s leading dive shops—immediately began aggressively lobbying against the bill.¹⁵⁰ Matt Rand from Pew (director of the Global Ocean Legacy program and then head of Pew’s shark conservation program), and Ambassador Stuart Beck, Palau’s representative to the UN, were also actively lobbying Toribiong on the bill. They convinced him that he had much more to gain from protecting sharks. Pew’s political and international influence were important in convincing Toribiong that the international significance of creating the world’s first ever shark sanctuary far outweighed any potential minor revenues from shark finning.¹⁵¹ Johnson was reportedly convinced that declaring the sanctuary was the statesmanlike thing to do, and that doing so would benefit him politically.¹⁵² He made the announcement of the shark sanctuary at the UN on 25 September 2009, making international headlines as the founder of the world’s first ever shark sanctuary at a time when conservationists were despairing at the lack of international progress to protect rapidly declining shark species.¹⁵³

The ENGO campaign for the shark sanctuary also led to the first attempt to put a dollar value on Palau’s pelagic marine resources as a contributor to the nation’s ecotourism sector. A 2010 study by the Australian Institute of Marine Science (AIMS) estimated the lifetime value of a reef shark in Palau to the ecotourism industry as \$1.9 million (Vianna et al. 2010). A fishery targeting these same sharks would only realize 0.00006% of this lifetime value if fishers extract them instead. The study emphasized the importance of live sharks to Palau, noting that sharks alone account for about 8% of Palau’s GDP, 14% of its business tax revenue, and that the tax revenue collected from shark diving is roughly 24 times higher than from the fishing industry. The economic case for protecting sharks instead of harvesting them was an exceedingly strong one. The \$1.9 million figure was generated to convince Johnson of the merits of a shark sanctuary, and has been reused since in the campaign for

¹⁴⁹ Interview with Manager, dive tourism business, 30 June 2016; Interview with Owner, dive tourism business, Koror, 23 June 2016.

¹⁵⁰ Interview with Manager, dive tourism business, 30 June 2016.

¹⁵¹ Interview with Manager, dive tourism business, 30 June 2016.

¹⁵² Interview with Executive, Coral Reef Research Foundation, 17 June 2016.

¹⁵³ Interview with Manager, dive tourism business, 30 June 2016.

the PNMS.¹⁵⁴ The international recognition and this economic case were critical in Toribiong's reversal from considering a resumption of shark finning to declaring a shark sanctuary instead.

For all of the fanfare surrounding the shark sanctuary, some observers note that it did not actually do much to slow down shark finning.¹⁵⁵ Data on both legal and illegal fishing in Palau's EEZ is limited, so it is difficult to measure the effectiveness of policies such as the shark sanctuary. Research institutes like the Palau International Coral Reef Center (PICRC) and Coral Reef Research Foundation (CRRF) monitor and assess Palau's coral reefs, but there is no research body currently devoted to pelagic waters. The Shark Haven Act was also an executive order rather than legislation, so it could be overturned by a subsequent president. The conservation-friendly Remengesau was not likely to overturn it when he resumed office in 2013, but the shark sanctuary lacked the legislative permanence that the PNMS would eventually provide. This Shark Haven Act nonetheless provided much of the early foundation for the PNMS: it was a high-profile initiative with both transnational and domestic ENGO involvement; it focused on protecting species in Palau's pelagic ecosystems; and it explicitly connected Palau's pelagic resources to its integral ecotourism industry.

In sum, there were three main developments in Palau's marine conservation history that set the stage for the PNMS. The first was the continued cultural relevance of *bul*, which despite becoming less prominent than in pre-colonial times remains an important concept in Palauan culture. The second is the shift toward marine conservation as a more centralized, national priority, most notably through the 2003 PAN Act. And third, the 2009 Shark Haven Act reemphasized the non-extractive value of Palau's pelagic marine resources. Given these developments combined with its heavy reliance on its ecotourism industry, it is not surprising that Palau adopted the large MPA norm of its own accord, with minimal ENGO pressure to do so.

Palau National Marine Sanctuary Overview

The PNMS was a government-led initiative, spearheaded by Remengesau Jr. with the assistance of transnational and domestic ENGOs. It encompasses all of Palau's EEZ with the exception of a 20% domestic commercial fishing zone, depicted below in Figure 6.1. Only after he had decided to pursue a national marine sanctuary, Remengesau Jr. wrote letters to a number of transnational ENGOs requesting their support. The Pew Charitable Trusts, National Geographic Society (NGS), and The Nature Conservancy (TNC), among others, have all contributed to various aspects of the sanctuary.

¹⁵⁴ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁵⁵ Interview with Owner, kayak tour business, 6 July 2016.

Pew once again played a lead role in campaigning for the sanctuary prior to its passing into law, providing critical resources to the campaign. The PNMS is so far the only Global Ocean Legacy project that was not initiated by Pew, but instead came at the request of a national government. The project team had to request additional funding from its backers to be able to pursue the project, which it received, and the PNMS has proven to be one of Pew's most cost-effective projects to date. Pew has only spent \$2/km² protected in Palau; much lower than the Global Ocean Legacy average of \$5/km².¹⁵⁶ For its part, National Geographic conducted an expedition, producing a documentary to display the marine biodiversity in Palau's waters. TNC has a long history in Palau, was influential in the sanctuary process, and has one member sitting on the PNMS's executive committee. It is now involved in an assessment of Palau's tuna fishery in an effort to improve fisheries management, where data are sorely lacking.¹⁵⁷ These organizations have all been influential in both the creation of the reserve and remain important to the many implementation challenges it faces, which I discuss below.

But the motivation for the PNMS largely came from Palau's ecotourism industry rather than the ENGO community. The imperative of protecting Palau's ecotourism industry overshadowed most concerns about modest commercial fishing revenue, and this imperative was an explicit part of the rationale for the PNMS from the beginning. This imperative is part of the reason that the government led the PNMS process, whereas in most other cases ENGOS initiate the initial dialogue for a new large MPA. Government officials, ecotourism and fishing industry representatives, and the ENGO community all view Remengesau Jr. as the visionary behind the PNMS.¹⁵⁸ His political opponents additionally view the PNMS as his landmark initiative.¹⁵⁹ The importance of ecotourism to Palau provided the president with the economic justification he needed to pursue such ambitious legislation that had major implications for Palau's commercial fishing industry.

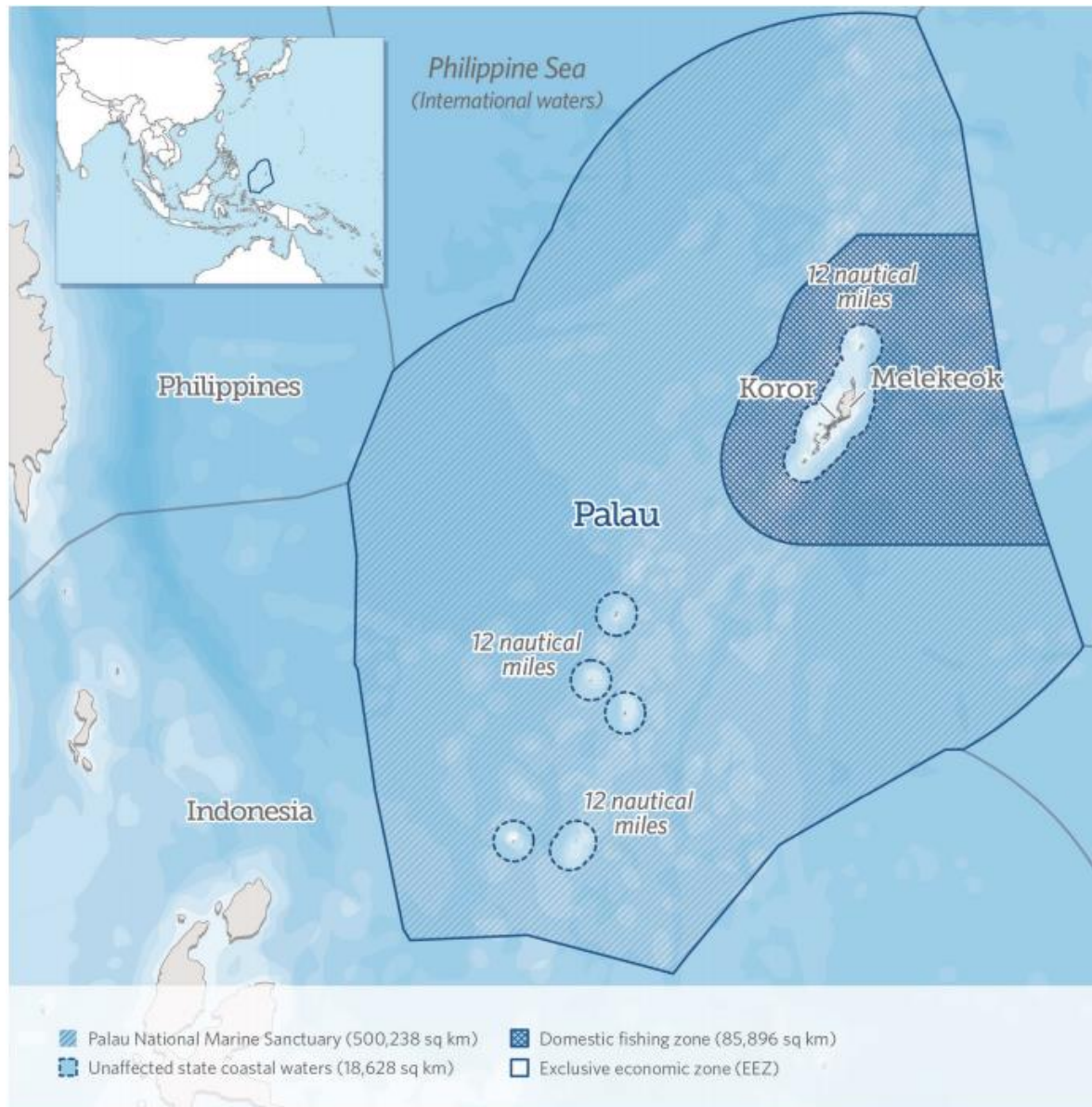
¹⁵⁶ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁵⁷ Interview with Program Director, The Nature Conservancy, Koror, 29 June 2016.

¹⁵⁸ Multiple interview sources.

¹⁵⁹ Interview with Program Director, Office of the President, 29 June 2016.

Figure 6.1 – Palau National Marine Sanctuary Map



Source: The Pew Charitable Trusts (2015)

This ecotourism imperative is not the only reason that the PNMS was among the first large MPAs to be initiated by a national government rather than ENGOs. The PNMS campaign began in 2013, seven years after the designations of the Papahānaumokuākea Marine National Monument and the Phoenix Islands Protected Area. As a new norm continues to spread, the mechanisms for its adoption also change, as noted in chapter 2. Over time we should expect to see states motivated by a need for legitimacy, conformity, and esteem, rather than persuasion. In this case, the Palauan government did not need to be convinced of the merits of a large MPA. It gravitated toward a large

MPA solution to its conservation and economic goals, identifying the international recognition that a large MPA would yield without any ENGO prompting. The Palauan government's request for ENGO support for a large MPA could signify the early stages of a shift in how states adopt the large MPA norm. This chapter will now turn to explaining the configuration of industry interests that led to this Executive-Ecotourism coalition, and to how that coalition influenced the designation of, and continues to influence the ongoing management planning for, the PNMS.

Coalition Formation

Industry Interests

The ecotourism and commercial fishing industries are the two main industry stakeholders in the PNMS, with some vested interest from a small but growing recreational fishing industry. Unlike the Pacific Remote Islands and the Coral Sea, in Palau the industry stakes do not refer to a subset of a national industry, but rather the entirety of the industry. These discussions took place at the national level, and were concerned with how the government would manage Palau's entire EEZ. They therefore involved several competing interests, but with the ecotourism industry's interests being paramount throughout. Understanding those interests and the main benefactors of these industries is important to understanding why such a strong Ecotourism-Executive coalition emerged in Palau.

Ecotourism

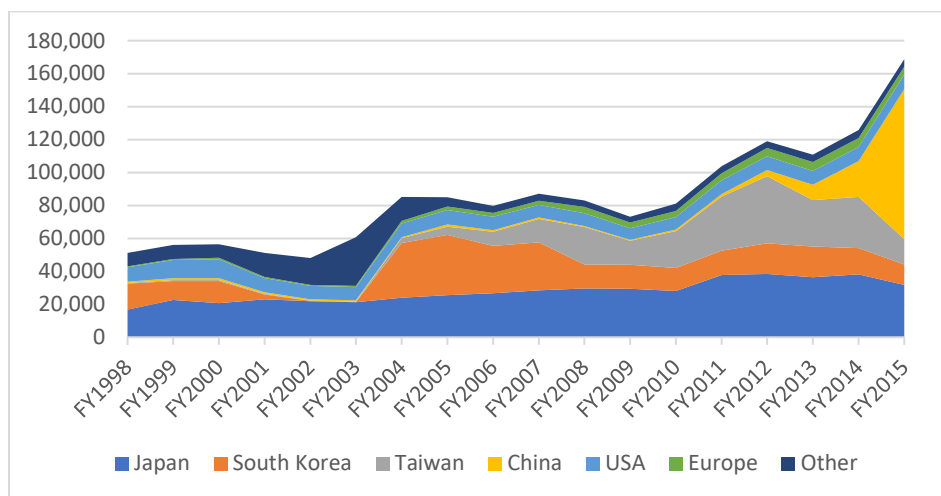
The connection between the PNMS and Palau's ecotourism sector is about branding and protecting pelagic species rather than directly protecting Palau's tourist hot spots. Palau is a world class dive destination, so much so that CEDAM International—an ENGO of divers devoted to marine conservation—lists Palau's reefs as one of the seven wonders of the underwater world. But Palau's iconic dive sites are all located within state waters, which extend 12 nautical miles out from shore, and not in the PNMS itself. These dive sites are already protected. The PNMS therefore does not actually directly protect the sites that attract tourists to Palau in droves year upon year. Some observers have been critical of the campaigning for the PNMS because the images used are frequently of reefs and reef species (especially turtles and reef fish) that the sanctuary does not directly protect, rather than the pelagic species it does (such as tuna and sharks).¹⁶⁰ The PNMS nonetheless serves a broader purpose for Palau's ecotourism industry, which is why the industry has

¹⁶⁰ Interview with Executive, Coral Reef Research Foundation, 17 June 2016.

been categorically supportive of the initiative. This purpose is to attract a certain type of high-value tourist to Palau, and is closely related to recent trends in Palau’s tourism sector in recent years.

Palau has historically had a steady number of tourist visitors from Japan, South Korea, and Taiwan, with a fewer but steady number from the US and Europe as well. But a rapid rise in the last five years is putting a strain on Palau’s infrastructure and on its ability to sustainably host such a large number of visitors. Palau’s population is only 21,000 people, but in 2015 alone the country had nearly 170,000 visitors (PITI-VITI 2016). This is more than double the 81,000 visitors that Palau had in 2010. Much of this increase is due to a sudden and rapid influx of tourists from mainland China, where the 9,100 tourists in 2013 dramatically increased to 91,000 in 2015, a tenfold increase in just two years. Figure 6.2 depicts this rapid tourism growth broken down by nationality. Palau’s carrying capacity is limited, and it does not have the infrastructure to support these numbers.¹⁶¹ According to one prominent Palauan scientist, current tourism levels have already surpassed what Palau’s marine resources can provide at sustainable levels.¹⁶² Palau is in the midst of trying to find the right balance between growing its critical tourism sector without overstressing its marine environment.

Figure 6.2 – Visitors to Palau by Nationality



Source: PITI-VITI (2016)

Palau’s tourism challenges are not only with the number of tourists, but with the type of tourism. The influx of mainland Chinese tourists has coincided with an increase in low-value tourism: tourists that primarily enter Palau on chartered flights with prepaid package tours paid at the point

¹⁶¹ Interview with Executive, The Environment Inc., Koror, 23 June 2016.

¹⁶² Interview with Executive, Palau International Coral Reef Center, Koror, 6 July 2016.

of origin. This model reduces the revenue that the Palauan government and businesses receive from visitors. In 2015, the total revenue earned from each visitor to Palau dropped by 12.7% from the previous year, and the revenue earned per visitor night dropped by 7.8% (PITI-VITI 2016). Visitors were spending much less on average. The sudden increase in package tours primarily out of mainland China has put undue strain on Palau's infrastructure while also yielding a lower marginal gain per new visitor.¹⁶³ It has also put some strain on Palau's reef resources, as mainland Chinese tourism tends to be seafood focused, with visits to Palau motivated in part to sample exotic marine life, such as giant clams.¹⁶⁴ Furthermore, President Remengesau Jr. has expressed concern that it is unhealthy to rely too much on tourists from one location because it would create a dependence (Remengesau Jr. 2016). Spending per tourist was only \$891 in 2015, so Palau does not currently qualify as a high-value tourist destination, and the current trend is in the wrong direction (Asian Development Bank 2016b). According to an Asian Development Bank private sector assessment of Palau, the costs imposed on "Palau's tourism resources in the form of over-crowding and degradation may not be offset by the benefits to the country as a whole" (Asian Development Bank 2016b).

Palau's efforts to attract high-value tourists has coalesced around the slogan, "Pristine Paradise Palau." The Palau Visitors Authority (PVA) markets Palau as an untouched island paradise, with a strong conservation record. The hope is that this branding will help it to differentiate Palau from other tropical island locations and premium dive destinations.¹⁶⁵ The PNMS is in part intended as an extension of the Pristine Paradise Palau branding, in the hope that such an ambitious conservation initiative will attract ecotourists.¹⁶⁶ But Palau faces many challenges in determining how to better encourage high-value tourism. Part of the problem is that defining what counts as high-value is difficult to do.¹⁶⁷ Palauan officials acknowledge the need for it, but there is currently no clear sense for exactly what counts as high-value, nor how to go about attracting it (Asian Development Bank 2016a). Another challenge is that Palau—despite being a small country—has no nationally integrated tourism plan. The 16 states each issue their own permits, with Koror, the largest state,

¹⁶³ Interview with Researcher, EconMAP, Malakal, 6 July 2016.

¹⁶⁴ Interview with Executive, The Environment Inc., 23 June 2016; Interview with Executive, Palau Aquaculture Cooperative Association, Koror, 5 July 2016; Interview with Owner, charter fishing business, Koror, 21 June 2016.

¹⁶⁵ Interview with Manager, dive tourism business, 30 June 2016.

¹⁶⁶ Interview with Manager, Ministry of Natural Resources, Environment & Tourism, Malakal, 29 June 2016.

¹⁶⁷ Interview with Executive, The Environment Inc., 23 June 2016.

benefitting more than even the national government.¹⁶⁸ Work on a national tourism strategy is currently underway in Palau, with the government hoping that the PNMS can be a critical component in attracting the kind of high-value visitors it hopes for.

Palau faces some substantial capacity issues in promoting high-value tourism while ensuring the benefits go to Palauans. The Palauan government recognizes the importance of attracting high-value tourists and officials routinely state the importance of doing so, but some in the tourism industry lament that these statements have often been made but with little real progress.¹⁶⁹ The value of receipts per night has actually remained relatively constant since 2008, suggesting Palau's efforts on this front have yielded few benefits to date (Asian Development Bank 2016b). The challenges are multiple: there is little data available on Palau's carrying capacity; there is a significant shortage of the skills required to operate high-end tourist operations; Palau's existing policies and regulations are insufficient; and finally, the regulations that are in place are poorly enforced (Asian Development Bank 2016b). The government hopes that the PNMS is part of the solution to transitioning Palau toward the elusive goal of becoming a high-value tourist destination. For its part, the ecotourism industry in Palau is fully supportive of this plan, and would like nothing more than to see an influx of high-spending tourists,¹⁷⁰ though some tourism operators remain deeply skeptical.¹⁷¹

There is still a lot of uncertainty around how exactly the government intends to leverage the PNMS to attract high-value tourists, but there are also two more certain impacts of the sanctuary. The first is that it does help tour operators sell their businesses in a globally competitive market.¹⁷² Tour operators have already been including the PNMS in their promotional material to attract customers to Palau. Such a high-profile conservation initiative will only help to attract divers, who tend to support conservation and will like the idea of choosing a responsible country to dive in (Whatmough, Van Putten, and Chin 2011).¹⁷³ The second is that it should lead to better diving, particularly through the protection of sharks.¹⁷⁴ Unlike the local inhabitants of Palau's coral reefs,

¹⁶⁸ Interview with Manager, dive tourism business, 30 June 2016.

¹⁶⁹ Interview with Owner, kayak tour business, 6 July 2016.

¹⁷⁰ Interview with Owner, dive tourism business, 23 June 2016; Interview with Manager, dive tourism business, 30 June 2016.

¹⁷¹ Interview with Owner, kayak tour business, 6 July 2016.

¹⁷² Interview with Manager, dive tourism business, 30 June 2016.

¹⁷³ Interview with Owner, dive tourism business, 23 June 2016.

¹⁷⁴ Interview with Owner, dive tourism business, 23 June 2016.

sharks also frequent Palau's pelagic waters, so the sanctuary does directly protect them. The illegal, unregulated, and unreported (IUU) fishing of sharks will undoubtedly continue in Palau's waters, but the PNMS legislation cements Palau's existing policy against the harvesting of sharks or shark parts. These sharks are for many divers the main attraction of diving in Palau, and the PNMS is further recognition that sharks species are more valuable alive than dead. These two impacts, combined with the potential for higher-value tourists, were sufficient to earn the ecotourism industry's full support for the sanctuary.

Commercial Fishing

Palau's commercial fishing industry is divided between foreign-based fleets operating primarily out of Japan and Taiwan, and two local companies (KFC and PITI) that are also primarily foreign-operated. The foreign-based fleets are entirely excluded from fishing in Palau's EEZ through the PNMS legislation's ban on both foreign fleets and exports. In an uncommon twist these relatively large-scale commercial operators found themselves with little political influence throughout the process because of their limited contribution to the Palauan economy. Aside from the modest tax revenue and licensing fees noted above, these foreign fleets contribute little to Palau's GDP or government revenues while extracting its valuable marine resources. Naturally these foreign-based fleets were strong opponents of a piece of legislation that would force them to relocate to more contested or more remote fishing grounds. The majority of the resistance to the PNMS came from these commercial fishing interests.¹⁷⁵

Although their political influence was nearly non-existent, Palauan politicians did use this foreign fleet ban as a political tool in the debate over the PNMS legislation in Congress. Palau has a handful of oligarchs whom tend to be politicians with close ties to certain businesses, and according to some interviewees, oligarchs looking for kickbacks were the main opposition in the Palau National Congress.¹⁷⁶ This form of resource grabbing is common within resource-rich developing countries, and Palau was no exception (Le Billon 2013). The oligarchs' main source of leverage was the reported \$5-6 million in government revenue from fishing licensing fees that would be lost, accounting for roughly 5% of its annual revenue (PITI-VITI 2016). The government did ultimately need to find a way to replace this lost revenue, discussed below, but foreign fishing stakeholders

¹⁷⁵ Interview with Program Director, Office of the President, 29 June 2016.

¹⁷⁶ Interview with Consultant, Pew Charitable Trusts, 17 June 2016; Interview with Executive, Ebiil Society, Koror, 7 July 2016.

were never able to exert any significant pressure to reverse or limit the ban. Some members of Congress made an issue of the lost revenue from licensing that the ban entailed, but these foreign fleets never really had a strong voice in Palau given that their major benefactors and constituents were located predominantly in Japan and Taiwan. They represented a small industry, with limited benefit to Palau, and were ultimately sacrificed.

The politics around the local KFC and PITI commercial fishing businesses is more complicated, not least because of the high degree of uncertainty around how the legislated domestic fishing zone will be regulated. These businesses—as with many tourist operators and hotels—are only partly Palauan-owned, and are operated almost entirely by foreign workers. Crews tend to consist of workers from China, Indonesia, and the Philippines, and typically only have one legally-required Palauan observer on board.¹⁷⁷ To call them local is in some ways a misnomer, but they are nonetheless operated out of Palau. PITI, for example, has close ties to a partner corporation in Hong Kong, and one of its local owners claims to have taken an increasingly diminished management role over the years.¹⁷⁸ One ENGO campaigner described the local ownership component of these companies as “amounting to a rounding error.”¹⁷⁹ Further, both companies export their high grade tuna directly to sashimi markets in Japan and Taiwan via chartered flights—an activity that the PNMS legislation bans. So despite being Palau’s only local commercial fishing businesses, they both face a lot of uncertainty about what the limits on their activities will be once the legislation is in full force in January 2020.

KFC’s partial owner, Quincy Kuniyoshi, actually gave a speech in Congress in support of the PNMS, despite the uncertainty it would mean for his business. The motivation behind this speech was reportedly that KFC’s tuna catch is currently less than one-fifth of what it was in the 1970s due to declining stocks.¹⁸⁰ This legislation banning KFC’s competition should allow tuna stocks to recover, and Kuniyoshi hopes this will ultimately be beneficial to KFC, even without the ability to export. The commercial fishing industry was therefore not categorically opposed to the PNMS legislation. KFC, for its part, seems willing to hedge its bets on the hope that it will benefit from Palau’s plans for a

¹⁷⁷ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁷⁸ Interview with Owner, commercial fishing business, 28 June 2016.

¹⁷⁹ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁸⁰ Interview with Executive, Ebiil Society, 7 July 2016.

small-scale domestic commercial fishery to service the local market. PITI has not taken this position, with its co-owners vocally opposed to the PNMS, and generally feeling excluded from the process.¹⁸¹

KFC's position is at this stage a gamble due to the uncertainty around the future of commercial fishing in Palau. The Palauan government currently lacks the data on its coastal and pelagic fisheries to develop a sophisticated fisheries management plan.¹⁸² The government sees the PNMS as an opportunity to improve its data collection, in large part through the help of various ENGOs. The Nature Conservancy's work to improve Palau's fisheries management information since 2014, prior to the PNMS, has not yet yielded any completed reports as of mid-2016.¹⁸³ Because this information is lacking it is still unclear how Palau intends to manage its domestic fishing zone. The prevailing hope is that the government or companies will deploy fish aggregating devices (FADs) closer to shore, which combined with replenished stocks will allow smaller scale fishers access to pelagic fish such as tuna.¹⁸⁴ The idea is that encouraging small-scale fishers to target pelagic fish closer to shore will relieve the pressure on Palau's overfished coastal fisheries, which have seen increased strain in recent years due to the rapid tourist influx discussed above.¹⁸⁵ There are many uncertainties around this plan, however: it is not clear if or how the government will include foreign fishers, how it will prevent local prices from being undercut, what kind of demand there is for high-grade tuna domestically, how long it will take fish stocks to rebound, nor how diffuse stressors like climate change might affect migration patterns or the health of Palau's coastal fisheries.¹⁸⁶ Palau's plans are largely hypothetical at this stage, albeit with efforts underway to develop a concrete action plan before 2020. For all of these reasons, Kuniyoshi was taking a chance by endorsing the PNMS.

To summarize, the majority of the commercial fishing industry was strongly opposed to the PNMS for the obvious reason that it bans them from fishing in Palau's EEZ. The only major exception to this was KFC owner Quincy Kuniyoshi. Kuniyoshi's support was based on the gamble that KFC will be better off under the new management arrangements than it currently is in a more competitive market that has seen tuna stocks decline over time. Despite a lot of the uncertainty around the future of commercial fishing in Palau, KFC is well positioned: it is a domestic company, it has existing capacity and assets, and the government is in ongoing discussions with it (and PITI) over how it

¹⁸¹ Interview with Owner, commercial fishing business, 28 June 2016.

¹⁸² Interview with Manager, Ministry of Natural Resources, Environment & Tourism, 29 June 2016.

¹⁸³ Interview with Program Director, The Nature Conservancy, 29 June 2016.

¹⁸⁴ Interview with Executive, The Environment Inc., 23 June 2016.

¹⁸⁵ Interview with Executive, Palau International Coral Reef Center, 6 July 2016.

¹⁸⁶ Interview with Executive, The Environment Inc., 23 June 2016.

should regulate the 20% domestic fishing zone. That the commercial fishing industry was ultimately partly divided on the PNMS turned out to be important in the congressional proceedings for the sanctuary, discussed below.

Finally, as noted above, part of the purpose of the marine sanctuary is to empower local fishers to develop a small-scale, locally-owned and operated commercial industry. This industry does not yet exist as a commercial presence, so it does not yet represent a coherent industry stakeholder group. That is not to say that local Palauan fishers do not have preferences around commercial fishing in their waters; many in fact voice their displeasure at how much further out they have to travel and how much smaller the fish they catch are due to decades of commercial exploitation.¹⁸⁷ Local Palauan fishers were strongly in favor of the reserve and involved in the lobbying efforts to Congress, but more as a way of protecting their current fishing practices and way of life rather than any desire to get involved in a small-scale domestic commercial industry.¹⁸⁸ As noted above, part of the purpose of the marine sanctuary is to empower these livelihood fishers and develop a small-scale, locally-owned and operated commercial industry. But according to multiple interviewees, Palauans have little desire to partake in commercial fishing, which usually involves multi-day trips in hard working conditions.¹⁸⁹ Palau has historically relied on foreign workers to meet some of its labor demands (Pierantozzi 2000). So despite the support of local Palauan fishers for the PNMS reserve, it remains unclear if or how this stakeholder group will transition into something resembling a more traditional industry group, or, perhaps more likely, if Palau will develop a plan that allows them to largely maintain their current practices. Nonetheless it is a possibility that as the government's plans for a domestic commercial industry progress that stakeholder groups could evolve or emerge anew.

The Political Economy of the PNMS

Palau's high dependence on ecotourism unsurprisingly yields salient ecotourism interests in the PNMS. This remains true despite the PNMS not actually covering Palau's dive sites because of the importance of protecting migratory sharks and for its branding significance. The health of Palau's oceans is critical to both Palau's ecotourism industry and the national economy – the two are intimately interconnected. The same cannot be said of commercial fishing in Palau, where domestic investment and interests is minimal. Because foreign fleets take the majority of the profits from

¹⁸⁷ Interview with Owner, charter fishing business, 21 June 2016.

¹⁸⁸ Interview with Executive, Ebiil Society, 7 July 2016.

¹⁸⁹ Multiple interview sources.

Palau’s tuna resources out of the country, they ultimately had little political sway over the process. These fleets were relatively small to begin with, and originated from countries much wealthier than Palau, so they could make little claim to being critically dependent on Palau’s resources. Table 6.1 presents the breakdown of the salience of industry interests for the ecotourism and commercial fishing industries in the PNMS.

Table 6.1 – Industry Interests in the PNMS

Industry	Intensity of Activity	Factor Specificity	Asset Specificity	Exogenous Stressors	Overall
Ecotourism	High	High	High	High	High
Commercial Fishing	Low	Low-Moderate	Low-Moderate	Low	Low

The salience of the ecotourism industry’s interests in the PNMS is high. Few other countries have such a high dependence on ecotourism activity for their GDP (54% in 2015, as noted). The critique that the PNMS does not actually encompass Palau’s tourist attractions is somewhat overstated given the fluidity of marine species. The lifetime value of a shark in Palau is high at \$1.9 million, and although dive operators have little to no physical presence in the PNMS, these sharks frequent it. The geographic disparity between the PNMS zoning and tourist operations therefore does not mean that we should consider the intensity of ecotourism activity to be low in the PNMS; instead it is just physically displaced. It is the value of the resources contained within the PNMS to Palau’s ecotourism industry that are a more meaningful indicator of the intensity of industry activity there, rather than strictly whether the industry has a physical presence in those waters.

As with the vast majority of tourism operations, both the factor and asset specificity of Palau’s ecotourism industry are high. Dive sites are fixed, typically determined by the location of coral reefs and ocean currents, which create hot spots for marine life. Dive operators therefore rely heavily on these dive sites, and do not have the ability to relocate. The dive shops, boats, and dive equipment that tourism operators use could not be efficiently redeployed elsewhere. Palau’s dive boats are small, typically around 30 feet, and are used for day trips. There are a handful of larger, live aboard vessels that operate in and around Palau with a larger range, but these vessels are the exception. Palau’s dive tourism industry predominantly uses assets suited to visiting Palau’s close range dive sites. In addition to dive operators, hotels of course have a high degree of factor and asset specificity, since they rely on geographically fixed ecological attractions and buildings.

Finally, Palau's tourism industry is under strain from exogenous stressors. The low-value tourism that I discussed above is a challenge to its sustainability. Palau's limited carrying capacity and the influx of tourists on package deals that are not lucrative to Palau are a long-term risk. Palau does not have regulations and policies in place that will ensure that it can grow and develop its tourism industry without a shift toward a foreign-dominated model more closely resembling its commercial fishing industry, where foreign interests managed to effectively keep the profits out of Palau. It also faces a challenge in ensuring growth is sustainable, and will not unduly burden Palau's ecological resources. Another of Palau's major tourist attractions—the iconic Jellyfish Lake—saw a massive die-off of jellyfish in 2016 due to a combination of climate change and the even warmer and drier conditions brought on by an El Niño year. When or if the jellyfish recover is uncertain. A rapid and ongoing increase in tourists will only increase the strain on already strained resources as tourist sites receive more visitors and more reef fish are extracted to feed them. Palau's challenge is to find a way to profit more from its tourism industry without relying on a growth in numbers that will strain its marine resources and its limited infrastructure.

Commercial fishing activity in Palau is actually rather modest given the country's large EEZ. Part of the reason for this is that Palau's waters are not actually highly productive for tuna.¹⁹⁰ The fleet of roughly 30 Japanese boats based out of Okinawa, for example, reported an extracted value of only \$15 million in 2014, although this number is almost undoubtedly underreported.¹⁹¹ This underreporting proved to be a problem for the Japanese government, which struggled to justify its opposition to the sanctuary given such a small reported catch value. In 2015, commercial fishing was only the eleventh largest contributor to Palau's GDP, amounting to \$4.7 million, or just 2.2% of GDP. As figure 6.3 shows, the importance of fishing to Palau's economy has been consistently modest for the past 15 years. Figure 6.4 shows a similarly minor contribution of the fishing industry to employment in Palau, with the sector only contributing 78 full and part-time jobs in 2015, or 0.7% of Palau's labor force. The commercial fishing industry has historically made a fairly minor contribution to Palau's economy, particularly relative to the dominant tourism industry.

¹⁹⁰ Interview with Executive, The Environment Inc., 23 June 2016.

¹⁹¹ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

Figure 6.3 – Commercial Fishing Contribution to GDP

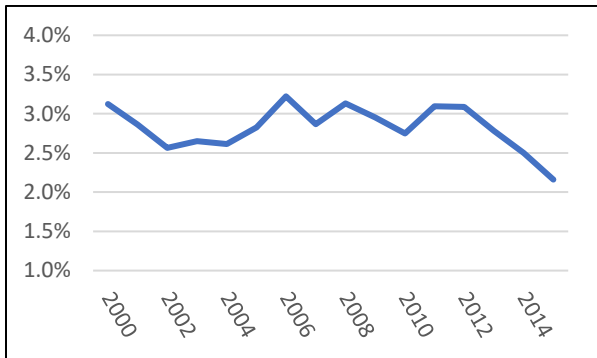
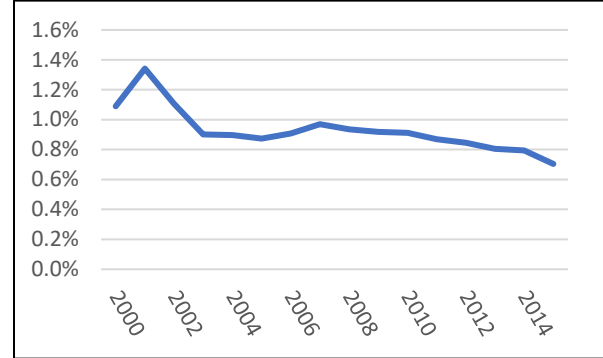


Figure 6.4 – Commercial Fishing Contribution to Employment



Source: PITI-VITI (2016)

The factor and asset specificity of the commercial fishing industry is different for the foreign-based fleets than it is for the two local operators. The foreign fleets that go to port in Japan and Taiwan have a long range, and have a multitude of other options for replacing their tuna catch. That said, the combination of declining tuna stocks, fishing restrictions throughout the Pacific, and a growing number of fishing closures is making the tuna industry a fiercely competitive one. There is nonetheless nothing specific to Palauan tuna nor the assets that these foreign-based fleets deploy that is not transferable, albeit perhaps less efficiently. KFC and PITI face different challenges given their local presence. To survive in Palau, they depend on a continued fishing presence in Palau’s EEZ, as Palau is too remote from major fish markets to act as a hub for long haul fishing expeditions. KFC and PITI’s facilities in Palau are not transferable, and similarly depend on continued fishing. The majority of KFC and PITI’s boats are actually foreign-owned boats operating through these companies with a domestic license, so they would fare better relocating to another market. The factor and asset specificity of foreign fleets in Palau is minimal, whereas KFC and PITI do rely on access to Palau’s waters for the two businesses to survive in their current form.

The only exogenous stressors that the commercial fishing industry in Palau faces are those facing tuna fisheries writ large. The ongoing global decline in tuna stocks and increasing competition for licenses can make it difficult for fishers to relocate. These stressors will undoubtedly be felt by the fleets based out of Japan and Taiwan that have found themselves excluded from Palau’s EEZ. That said, their licenses were not immediately terminated but are instead going to be allowed to expire in a gradual phase out, so these fleets potentially have until 2020 to strategize about how to relocate their efforts. The foreign fishing ban poses a challenge to these Japanese and Taiwanese fleets, but they do not face any particularly unique challenges that would make their transition to

new fishing grounds difficult. And if anything, the foreign fishing ban may even reduce the exogenous pressure on KFC and PITI by eliminating their competition.

Institutions

The Palauan political system is modelled after the US system, with distinct executive, legislative, and judiciary branches. Despite its small size it also mimics the US state system. Because the PNMS only covers federal waters states had no legislative authority over the sanctuary, though they did raise concerns about the lost fishing revenue that the federal government transfers to states by law. A Pew consultant working in Palau advised Pew and the Palauan government early on that trying to include state waters in the sanctuary would make the initiative politically infeasible.¹⁹² The Koror state government—by far the largest and most influential of Palau’s 16 states—was the only state government opposed to the PNMS, so its opposition could have stymied any attempts to include state waters.¹⁹³ The legislative battle for the PNMS was instead one between the executive branch and the Senate. The PNMS legislation was a contentious issue in Palauan politics for the two years that it was stuck in the Senate. Depending on whom you ask, the bill was held up in the Senate for so long for one of two reasons: either it was the political opportunism of a handful of senators seeking personal gain by withholding their support, or it was genuine concern about how to recover the \$5-6 million per annum in lost fishing licensing revenue. Both reasons undoubtedly have some truth to them.

There are two features of Palauan politics that led to the gridlock breaking. The first is that the Senate is small with only 13 senators. Proponents of the legislation only had to convince a few senators to change their vote, which they managed to do through emotional appeals described below. And second, Palauan politics derive from a culture that tends to value consensus over majoritarian decision-making (van Kerkhoff and Pilbeam 2015). Once it became clear that the legislation’s support was growing, Palauan politicians began switching their stance. When the Senate did eventually pass the legislation, it did so unanimously. Although the PNMS needed the support of both the executive and legislative branches of government, Palau’s smaller size (and therefore smaller array of vested interests and constituencies) and penchant for consensus decision-making eventually facilitated the passage of the PNMS legislation. Whereas in the US requiring

¹⁹² Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁹³ Interview with Executive, The Environment Inc., 23 June 2016.

congressional approval would likely be a death knell for large MPAs, in Palau it was a surmountable obstacle.

Ecotourism-Executive Coalition Summary

The Ecotourism-Executive coalition that emerged in Palau is unsurprising given how critically dependent the Palauan economy is on its tourism industry. That the commercial fishing industry contributes little and therefore had minimal political influence cemented this collaboration. The government's ability to appeal to locally-based commercial fishing operators also helped to mute political opposition in the Senate. The joint executive-legislative support that the PNMS needed proved a manageable problem due to the smaller and more personal nature of Palauan politics. This Ecotourism-Executive coalition led to a slightly different set of arguments than what we would expect to see in an ENGO-Executive coalition. Conservation was not the only, and perhaps not even the primary, motivation for the reserve. The PNMS legislation is an explicit attempt to protect and develop Palau's ecotourism industry. Conservation here is not just about protecting marine biodiversity, but about promoting healthier and more sustainable industry. The process leading to the passage of the PNMS legislation demonstrates that, in an Ecotourism-Executive coalition, conservation and industry goals align to produce a compelling rationale for a large MPA.

PNMS Process and Outcome

The ecotourism industry in Palau has always been a strong advocate for strengthening Palau's conservation measures. Palau's two premier dive shops—Sam's Tours and Fish 'n Fins—have owners or senior management who also run small ENGOs. Sam's Tours, located on Malakal, used to be located next to a port that docked 40-50 longline fishing boats that smelled of uric acid from their shark fin catch. The contrast between a dive shop that relied on live sharks and the shark finning next door inspired the creation of Shark Sanctuary, a small ENGO founded and operated by the manager of Sam's Tours, Dermot Keane. Shark Sanctuary was active in the push to strengthen Palau's poor shark finning regulations in the early 2000s, and was one of the most vocal proponents of the 2009 Shark Sanctuary legislation. One state over in Koror, Fish 'n Fins owner Tova Harel founded the Micronesia Shark Foundation, an ENGO devoted to protecting sharks. The foundation uses dive guides to collect data about shark abundance (particularly less common pelagic species of shark) and publishes the results. It is also producing a documentary highlighting the rich biodiversity

of Palau's waters. Palau's two largest dive shops have been actively engaged in promoting conservation in Palau, and gave their full support to the PNMS proposal.¹⁹⁴

To these businesses, the potential benefits of the PNMS were obvious, and with no apparent cost to them. The PNMS could lead to better diving by protecting marine species, and as one dive shop manager put it, is a "major marketing tool" that they can use to attract customers to Palau in a competitive international dive market.¹⁹⁵ Industry representatives emphasize that divers tend to be concerned about the health of the oceans and want to support conservation, particularly when choosing between prospective dive destinations (Uyarra, Watkinson, and Cote 2009). The PNMS gives Palau a competitive advantage over other premier dive destinations in the region such as Indonesia or the Philippines, which are home to some of the most at-risk coral reefs in the world (Jeffe-Bignoli et al. 2014). Sharks are the main attraction for Palau's dive tourism industry as there is better reef diving elsewhere, so shark conservation is of particular importance to these shops (hence their emphasis on sharks in their advocacy efforts). The PNMS is not only conservation for conservation's sake, but an initiative that would directly serve the interests of Palau's largest and most important industry.

But ecotourism businesses were not the preeminent campaigners for the PNMS, instead mainly supporting it from the sidelines. They did not need to be given the government's stake in supporting the industry that forms the backbone of Palau's economy. The exception to this was that the original idea to ban commercial fishing in Palau's EEZ came from Keane. This idea initially gained traction at a meeting preceding the March 2013 visit of Prince Albert of Monaco to Palau. Prince Albert is a renowned philanthropist, and President Remengesau Jr. hosted a small meeting prior to his arrival to brainstorm proposal ideas for the Prince's visit. One participant relayed Keane's proposal to ban commercial fishing in Palau's EEZ at the meeting, which was enthusiastically received by Remengesau Jr. After securing moral and financial support from Prince Albert at a meeting on the Prince's yacht, Remengesau Jr. began his broader efforts to secure the support of ENGOs discussed above. With international backers such as Pew officially on board, the government could begin promoting the proposed sanctuary domestically.

¹⁹⁴ Interview with Owner, dive tourism business, 23 June 2016; Interview with Manager, dive tourism business, 30 June 2016.

¹⁹⁵ Interview with Manager, dive tourism business, 30 June 2016.

Palau's long cultural tradition of conservation meant that the campaign did not need to convince constituents of the benefits of conservation—they were widely taken as a given.¹⁹⁶ The scientific studies that ENGOs compiled for other large MPA campaigns were not prominent in the PNMS campaign. Instead, the campaign reaffirmed the accepted local knowledge that closures work by adopting the *bul* concept for the PNMS. The idea was to translate this traditional practice into modern practice. Remengesau Jr. applied the concept of *bul* to Palau's EEZ by positioning himself as the "chief" of the waters under his jurisdiction as president.¹⁹⁷ Early in the campaign, Pew provided marketing materials ranging from t-shirts to bumper stickers for the PNMS that prominently displayed the word "*bul*." These marketing materials were still highly visible throughout Palau a year after the government established the reserve. The sanctuary's congruence with pre-existing local norms meant that the campaigners had less work to do convincing constituents of the merits of large no-take MPAs than has been the case in other large MPAs.

The sanctuary became contentious among a handful of senators due to the \$5-6 million of lost fishing revenue that would result from the foreign fishing ban. This revenue came from two sources. The first is direct licensing of vessels mainly out of Japan and Taiwan. With these vessels banned, this portion of the revenue would be lost in its entirety. The other source is through the Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest (Nauru Agreement, for short). The Nauru Agreement is an agreement between eight Pacific island states that imposes various restrictions, including vessel limits, effort limits (in terms of fishing days), and on certain types of gear. The Parties to the Nauru Agreement (PNA) have agreed upon effort limits that are based on a combination of historical catch (60%) and biomass (40%) within each country's EEZ. The PNA have also agreed to a cap-and-trade system by which a country can sell its allocated fishing days to other countries, for them to resell and distribute as they see fit. Palau's sale of its allocated fishing days makes up a portion of this \$5-6 million in government revenue. But when the PNMS comes into full effect, Palau's allocation will decline over time as its catch numbers drop. The sanctuary's proponents needed to find a way to assuage these concerns in order to pass the PNMS legislation.

The initial plan was for a donor-funded endowment to replace the revenue. According to one senator, a consultation with Pew revealed that the government would need a \$200 million

¹⁹⁶ Interview with Consultant, Pew Charitable Trusts, 17 June 2016.

¹⁹⁷ Interview with Program Director, Office of the President, 29 June 2016.

endowment with a 5% growth rate, an outcome Pew considered highly unlikely.¹⁹⁸ The government instead considered alternatives to replace the lost revenue. The PNMS legislation included a doubling of Palau's 'green fee' from \$50 to \$100 per visitor, and Congress also attached a rider bill that imposed a \$50 visa fee on most nationalities (Palau had no visa requirements as of mid-2016). The doubling of the green fee alone would amount to an extra \$7.5 million based on 2015 visitor numbers. But only \$12.50 of the \$50 increase to the green fee was earmarked for replacing lost fishing revenue, with the rest going to the pension program (\$25) and enforcement (\$12.50). Critics of the sanctuary argued that nearly \$4 million of the lost revenue was still unaccounted for. The visa was one way to further recover this lost revenue. It was not widely supported by PNMS advocates due to the impact it could have on discouraging tourists from going to Palau (especially when compounded with the increased green fee). The visa rider bill was nonetheless a victory for those senators concerned about lost revenue.

The PNMS's proponents frequently label this concern about the lost fishing revenue as "fake scare tactics" or "just politics."¹⁹⁹ They considered the concern to be disingenuous for a number of reasons. The first was that Palau would not lose all of its allocated fishing days under the Nauru Agreement. It would retain the 40% allocation based on biomass (which could increase if the sanctuary succeeds in replenishing tuna stocks), and some level of fishing will continue in the domestic fishing zone. Second, the plans to develop a small-scale domestic commercial fishing industry should replace some of the lost revenue, although there is still a lot of uncertainty over how. Third, since the announcement of the sanctuary the government has received financial commitments from various ENGOs to provide support for the sanctuary. This support is earmarked for conservation initiatives, but nonetheless raises overall government revenue despite redistributing it. And finally, as stated above (and perhaps most importantly), the figure only amounts to 5% of government revenue. Given that not all of the revenue would actually be lost, and the new sources of revenue from the PNMS to replace it, proponents felt the concern was overstated.

Despite some of the above reassurances, many congressional opponents were steadfast in not supporting the legislation. Some opposed it because they felt it prioritized marine life over the

¹⁹⁸ Interview with Senator, Palau National Congress, Koror, 6 July 2016.

¹⁹⁹ Multiple interview sources.

Palauan people, neglecting issues like Palau's infrastructure problem.²⁰⁰ During the 2016 election campaign, Remengesau Jr.'s opponents sarcastically called for a "human sanctuary" in Palau—a critique of the administration's conservation focus. Some senators also have ties to the commercial fishing sector, and were perhaps reluctant to support any changes that could threaten their status or wealth. In either case, proponents' reassurances about the lost fishing revenue were not enough on their own to convince congressional opponents to change their vote.

In response to the deadlock in Congress, Remengesau Jr. decided to change tact to focus on the importance of the PNMS for the Palauan people. Ann Singeo, the founder of the Ebiil Society, a local ENGO, convinced Remengesau Jr. that this shift was necessary to increase the pressure on congressional opponents to support the bill. Ebiil works closely with local fishers and already had a sustainable fishing campaign underway. Singeo began an aggressive promotional campaign involving frequent radio appearances, community events, and fishers' forums. Ebiil focused on the foreign exploitation of Palau's marine resources in its messaging. They argued that commercial fishing in Palau made foreign countries richer while having no economic benefit to Palauns, and instead only profited a select few elites, most notably some of the PNMS's congressional opponents.²⁰¹

The new messaging effectively motivated local fishers to actively advocate for the PNMS. A crucial turning point was at the September 2015 funeral of Francis Blelai, a prominent local fisherman who was a vocal proponent of the PNMS. Members of Congress attended the funeral, where fishers had posted banners supporting the PNMS in honor of Francis, and called out the senators delaying the passage of the bill. One fisherman even put the lead signatory of the bill, Senator Hokkens Baules, on the spot asking for a renewed commitment to getting it passed after nearly two years of stagnation. Fishers then began attending sessions of Congress in groups to further increase the pressure on detracting senators. KFC's owner, Quincey Kuniyoshi, made his speech in support of the PNMS in October 2015 in a Senate chamber filled with local fishers. According to one of the lead campaigners, the combined pressure from a representative of the domestic commercial fishing industry and local fishers shamed the senators with ties to foreign commercial fishing interests into silence.²⁰² With the plans to recover the lost fishing revenue in

²⁰⁰ Interview with Senator, Palau National Congress, 6 July 2016.

²⁰¹ Interview with Executive, Ebiil Society, 7 July 2016.

²⁰² Interview with Executive, Ebiil Society, 7 July 2016.

place, a concession in the form of the visa rider bill, and this public shaming of certain senators, the opposition to the bill had crumbled and it passed unanimously.

To summarize, campaigners did not need to emphasize the conservation and ecotourism benefits of the PNMS bill to domestic stakeholder groups. These groups generally accepted that a large closure would be good for conservation, and by extension ecotourism. No coherent opposition to the PNMS emerged challenging it on these grounds. The politics around the reserve leading up to the bill's passage revolved largely around recovering a small amount of revenue and subverting the parochial interests of a select few elites. Whether the PNMS yields economic benefits to Palau's ecotourism industry or not, the foundation of the PNMS campaign was that conservation was essential to the Palauan economy. This foundation aligned well with stakeholders interested in protecting biodiversity for its own sake, most notably transnational ENGOs. This Ecotourism-Executive coalition nonetheless precipitated an economic rationale for the establishment of a large MPA in a country that is economically dependent on healthy marine ecosystems to an extent that few others are.

The PNMS After Designation

For all of its promises, the PNMS is largely aspirational at this stage. The legislation is a commitment to protect biodiversity and revolutionize Palau's commercial fishing industry, but whether the government will be able to fully implement it is uncertain. Government representatives acknowledge that the legislation is aspirational, and that the government made the commitment knowing that there was a lot of uncertainty over implementation.²⁰³ The government and ENGOs are currently working on a host of studies about the logistics of implementing the reserve. The most pressing among them involve determining a tourism strategy for the sanctuary, assessing Palau's tuna stocks and the viability of a domestic market, and the critical issue of whether Palau can enforce the legislation on the water. These are the major strategic components of the PNMS legislation, and it is not currently clear how the government will deliver on them.

This uncertainty means that certain aspects of the PNMS are malleable at this stage. For example, many commentators are already arguing that a ban on fish exports is far too restrictive, and there are already discussions underway about a proposal to export surplus catch.²⁰⁴ Similarly the visa rider bill that was so important to the bill's initial passage has also come under threat, with

²⁰³ Interview with Program Director, Office of the President, 29 June 2016.

²⁰⁴ Interview with Former Program Director, Bureau of Marine Resources, Koror, 1 July 2016.

the Senate already having tabled a supplemental budget bill intended to remove the requirement.²⁰⁵ The relatively small size of Palau's Senate is partly what allowed the bill to pass, but it can also reduce the permanence of the legislation as fewer legislators need to be convinced of amendments. Given some uncertainty around the feasibility of certain parts of the PNMS legislation, it is reasonable to expect some amendments as plans evolve. While the main tenets of conservation, bolstering ecotourism, and domesticizing commercial fishing are unlikely to change, the details of implementation could end up being highly variable. The Phoenix Islands Protected Area (PIPA) in Kiribati was subject to criticism because of the nearly ten-year process of phasing in regulations. Given Palau's similar capacity challenges, it would not be surprising if the implementation process takes considerably longer than the current 2020 implementation goal. Early signs suggest that certain elements of the bill could yet change, and that the implementation process will be a lengthy one.

Finally, this chapter has so far largely neglected the monitoring and enforcement of the PNMS. One of the most salient critiques of large MPAs is that they cannot be credibly enforced in many places (De Santo, Jones, and Miller 2011; De Santo 2013). Monitoring and enforcement is certainly a major challenge for Palau given its limited capacity. The Division of Marine Law Enforcement currently only has one patrol boat, it relies on donations to provide fuel to make trips out to sea, and struggles to staff it regularly.²⁰⁶ As government officials acknowledge, it currently does little to deter illegal fishing.²⁰⁷ The government did produce a monitoring and enforcement plan for the PNMS in November 2015, but it lacked detailed cost information (Terrill et al. 2015). One commentator referred to this plan as a "laundry list of wants rather than a practical monitoring plan."²⁰⁸ The government is dependent on third-party contributions to monitor and enforce the PNMS, which it has already been receiving. Pew has committed the support of its satellite monitoring Eyes on the Sea project, for example. The Nippon Foundation has also pledged a patrol boat, a new wharf, and a ten-year commitment to provide fuel and a crew of 15 people. The Nippon contribution more than doubles Palau's current patrolling-days capacity. The Palauan government is therefore in the unenviable position of needing a comprehensive monitoring and enforcement plan, but is reliant on piecemeal contributions.

²⁰⁵ Interview with Program Director, Office of the President, 29 June 2016.

²⁰⁶ Interview with Program Director, Ministry of Justice, Malakal, 7 July 2016.

²⁰⁷ Interview with Program Director, Ministry of Justice, 7 July 2016.

²⁰⁸ Interview with Executive, Coral Reef Research Foundation, 17 June 2016.

It seems unlikely that third-party support would ever be on the scale required to yield a solution. This is not a strictly Palauan problem, but is common across many large MPAs throughout the Pacific. But these are also challenges that Palau faces irrespective of the PNMS. Illegal fishing is already a major concern in Palau's EEZ. The government has even conducted boat burnings to punish illegal fishers, and to send a message to other illegal fishers that the cost of getting caught will be high. The burnings even led to a high-profile piece in the *New York Times* highlighting Palau's challenge and its efforts to address it (Urbina 2016). Despite Palau's efforts, illegal fishing is commonplace in Palau's EEZ, and will undermine the PNMS's conservation goals. The PNMS nonetheless improves Palau's ability to combat illegal fishing in two ways. First, it attracts third party support that does expand Palau's monitoring and enforcement capacity. And second, the PNMS legislation dramatically increases the fines for illegal fishing and promotes a new seizure mentality of enforcement, meaning the penalties if caught for illegal fishing are more severe. The PNMS hardly solves Palau's illegal fishing problem, but it does aid in the effort.

Summary

By 2013, the large MPA norm was already growing in the international system, and the Palauan government identified a large MPA in its EEZ as a way to achieve its conservation and economic goals. It stands as one of the first examples of a primarily state-driven large MPA initiative, with ENGOs providing support. Palau's independent pursuit of a large MPA demonstrates the growing significance of the large MPA norm in global marine conservation. Palau was perhaps more likely than most to pursue a large MPA independently because of the imperative the government faces in protecting the country's dominant ecotourism industry. Its reliance on ecotourism predisposes it toward more aggressive marine conservation policies than we might expect to see in other countries. This ecotourism imperative provided the impetus for the Ecotourism-Executive coalition that formed, with the interests of the Palauan state and the ecotourism industry closely aligned throughout.

The political economy of the PNMS provides evidence for a number of the theoretical claims that I make in chapter 3. The combination of the high salience of ecotourism industry interests in the PNMS region combined with low salience from the commercial fishing industry led to the formation of an Ecotourism-Executive coalition:

C2 – A Non-Extractive-State coalition is likely to form when the salience of non-extractive industry interests is high, but the salience of extractive industry interests is moderate or low.

With 54% of Palau's GDP coming from tourism and the majority of commercial fishing revenues realized outside of Palau, Remengesau Jr. had a compelling rationale for pursuing a large MPA that would support Palau's ecotourism industry while sacrificing most of its commercial fishing sector. This clear disparity between the importance of the two industries to the Palauan economy was perhaps the critical feature of the PNMS process.

Palau did not benefit from any institutions that clearly put legislative authority in the hands of the executive, as in the US. But the small size of Palau's Congress and the importance placed on consensus decision-making proved enough to pass the PNMS legislation. This smaller size means that fewer veto points exist, and campaigners only needed to convince a handful of senators to support the bill:

I1 – When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.

However, this same institutional configuration could also lead to changes in the legislation, suggesting it may be of low permanence:

I2 – When an existing protected area's legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.

It is nonetheless too early to determine what the low permanence of the PNMS legislation will mean for changes to its management plan, or how it could potentially lead to a realignment of stakeholder interests.

An Ecotourism-Executive coalition is more likely to lead to an MPA that is located in an area with a high intensity of commercial activity:

L2 – When Non-Extractive-State coalitions form, states tend to establish MPAs in areas with a high intensity of commercial activity.

The value of the resources located in the PNMS for Palau's ecotourism industry is particularly high. The PNMS furthermore comprises 80% of Palau's EEZ, and thereby the majority of its tuna fishery. Although Palau's dive sites are not a part of the PNMS, it protects a number of high-value species critical to those sites. The PNMS also has strict regulations on extractive activity:

M2 – When Non-Extractive-State coalitions form, MPAs tend to have comprehensive management and enforcement plans that limit extractive activity.

The PNMS bill bans all extractive activity in the zone, making it a fully no-take MPA. The Palauan government is also doing all it can to pursue an enforcement plan, despite having severe capacity

limitations. This PNMS case study therefore provides support for a number of the theoretical claims that I derive from this political economy framework for understanding marine conservation. The next chapter will conduct a comparative analysis of the results of my three case studies, and discuss the explanatory power of this theory of large MPAs in depth.

Chapter 7: Comparative Analysis of the Diffusion of Large MPAs

The Pacific Remote Islands Marine National Monument (PRIMNM), Coral Sea Commonwealth Marine Reserve (CMR), and Palau National Marine Sanctuary (PNMS) all demonstrate the growing influence of a global norm towards large MPAs. In each case, the idea of large, contiguous, pelagic, no-take MPAs permeated advocacy efforts and government processes for marine conservation. The uptake of this large MPA norm is changing what state decision makers see as a feasible scale for MPAs quite dramatically. Moreover, this process was driven by a select few ENGOs that worked to strategically identify politically feasible large MPA sites in the absence of a cohesive global advocacy coalition. These ENGO norm entrepreneurs are still the most prominent promoters of the large MPA norm, but these case studies demonstrate that states are also increasingly seeking out opportunities to create new large MPAs on their own.

These case studies also demonstrate that the political economy of a targeted marine area determines how contested a large MPA campaign is, and the strength of protections that a government gives a new large MPA. The configuration of the salience of extractive and non-extractive industry interests is the most important determinant of where states locate large MPAs and how they manage them. This explanation is in contrast to the political science literature that emphasizes the efficacy of various NGO strategies, or the role of pre-existing local culture and norms. This is, in other words, an asymmetrical explanation for large MPA governance that gives primacy to industry interests in explaining large MPA outcomes. My case studies reveal the high level of influence that industry has on state MPA processes, and the limits of that influence.

The purpose of this concluding chapter is to synthesize the empirical evidence presented in my three case study chapters, and to demonstrate why that evidence supports a political economy explanation of large MPA creation and management. It is divided into two main sections that address the international and domestic stages of my environmental norm diffusion framework in turn. The first section will analyze the features of the emergence and current state of the global norm of large MPAs, drawing from evidence of its importance to the PRIMNM, Coral Sea CMR, and the PNMS. It will reveal the ways in which the large MPA norm is consistent with the predominant international relations theories of norm emergence, as well as how it is unique from other environmental norms. The second section will make the case that the coalitions-based political

economy framework and theory of large MPAs that I present in chapter 3 effectively explain large MPA outcomes in my three case studies. In doing so, it will tease out some of the major theoretical insights that this framework and theory can contribute to understanding the politics of marine conservation. A third and final section will close with concluding remarks about the significance of the large MPA norm to the future of global marine conservation, and possible directions for future research.

Norm Adoption (International)

The Norm Life Cycle

The way in which the large MPA norm emerged and began to spread is broadly consistent with the predominant pattern of international norm diffusion (Meyer 1979; Finnemore 1993; Finnemore and Sikkink 1998; Price 1998; Sunstein 1999; Kelley 2008). ENGOs acted as norm entrepreneurs in the emergence stage, promoting the large MPA norm by persuading states of its value (Finnemore and Sikkink 1998). This ENGO-driven process still characterizes most large MPA advocacy efforts in 2017, but is especially true of earlier large MPA efforts, as not only the Pacific Remote Islands (PRI) and Coral Sea cases demonstrate, but also Papahānaumokuākea and the Phoenix Islands Protected Area (PIPA) discussed in chapter 2. In all four of these large MPA campaigns, ENGOs conceived of the idea of a large MPA, presented it to high-level officials, and actively campaigned for its establishment through lobbying, public outreach, and research. In both the Pacific Remote Islands and Coral Sea, stakeholders from government, industry and civil society itself saw ENGOs as the primary drivers of large MPA advocacy efforts.

The ENGO framing of the large MPA norm highlighted the ideational and material appeal of new large MPAs to states (Snow et al. 1986; Finnemore and Sikkink 1998; Payne 2001). For example, throughout the Papahānaumokuākea campaign, ENGOs documented and presented the richness of biodiversity located in the region, but also conducted a thorough economic analysis of the likely impact on US commercial fisheries. The biodiversity report and documentary, *Voyage to Kure*, appealed to decision makers on an emotional level, instilling a sense of stewardship over these waters. On the other hand, the economic analysis was intended to reassure the administration that this would not be a costly decision, and that the political benefits of such a major conservation announcement far outweighed the minimal impact it would have on the commercial fishing industry. The campaign in Palau similarly adopted this dual approach, with ENGOs working to instill the same sense of stewardship over Palau's waters to rally public support while simultaneously

appealing to Palauans’ sense of ownership over the resources in their waters that were being exploited by foreign fishing fleets.

There are also signs that by 2017 the large MPA norm was beginning to advance to stage two of the norm life cycle, the norm cascade stage. At this stage, the primary actors, motives, and mechanisms in the spread of a global norm shift, reflecting the increased role for states in expanding the norm. Table 7.1, reproduced from Finnemore and Sikkink (1998), highlights the features of this shift. As one of the more recent large MPAs, the 2015 Palau National Marine Sanctuary (PNMS) provides a clear indication of this shift in global practice. The executive branch of the Palauan government was the primary driver of the PNMS. ENGOs played a pivotal role in helping to initiate and run a campaign for the sanctuary, but only once the Palauan government actively sought their assistance, having already committed to the idea of a large MPA. Although Palauan officials certainly view the sanctuary as the right thing to do for the environment, there was a pervading sense of what this sanctuary would mean for Palau’s standing as a global leader in marine conservation. Palauan President Tommy Remengesau Jr. has been invited to speak at countless international conferences and has been the recipient of several environmental awards, including the UN Environment Programme’s (UNEP) Champion of the Earth award. As the president’s political opponents will tell you, reputation and esteem—for Remengesau Jr. and for Palau—certainly motivated the decision to pursue the sanctuary.

Table 7.1 – Stages of Norms

	Stage 1 Norm Emergence	Stage 2 Norm Cascade	Stage 3 Norm Internalization
Actors	Norm entrepreneurs with organizational platforms	States, international organizations, networks	Law, professions, bureaucracy
Motives	Altruism, empathy, ideational, commitment	Legitimacy, reputation, esteem	Conformity
Dominant Mechanisms	Persuasion	Socialization, institutionalization, demonstration	Habit, institutionalization

Source: Finnemore and Sikkink (1998)

Every new large MPA that a state establishes builds momentum toward more firmly embedding the large MPA norm in global marine conservation practice. As this norm becomes more embedded, states will take a more active role in furthering it. For example, in 2016 the UK announced the Ascension Island Marine Reserve (445,000 km²), the St. Helena Marine Reserve (445,000 km²), and

the Tristan da Cunha Reserve (750,000 km²). Although domestic advocacy groups were prominent supporters of these reserves, the advocacy campaigns for them were not nearly as involved as the UK's 2015 Pitcairn Islands Marine Reserve campaign, which began in 2007 (Alger and Dauvergne 2017). This heightened state role is manifesting through a growing sense of competition between the UK and the US to demonstrate global leadership in marine conservation, as evidenced by UK Foreign Office Minister Alan Duncan's playful quip at the 2016 *Our Ocean* conference in Washington:

"Well this was going to have been my big moment, because until last week the Pitcairn MPA would have been the largest in the world. But President Obama sort of rather blew that out of the water by announcing an even bigger MPA in Hawaii – trust the Yanks to indulge in a bit of one-upmanship over us poor Brits." (Duncan 2016)

The recent large MPA initiatives in Palau, the UK, and the US all suggest a shift toward state-driven large MPA efforts that began in the early 2010s.

Targeted ENGO Advocacy

The previous section discusses the ways in which the large MPA norm fits the mold of the predominant international relations theories of global norms, but the evolution of the large MPA norm is distinct in two ways. The first is that, unlike with the majority of environmental norms, there is no cohesive international coalition of ENGOs advocating for it. Just two transnational ENGOs—the Pew Charitable Trusts and National Geographic Society (NGS)—are primarily responsible for the expansion of the large MPA norm to new jurisdictions, often in the face of the competing preferences of rival ENGOs. And second, as a result of Pew and NGS's strategy of targeting large MPA projects with a high likelihood of success, the large MPA norm has spread concurrently in the global North and South. Most environmental norms begin in the global North and eventually spread to the South, and in some cases the reverse is true, but rarely have we seen the concurrent emergence of a new norm in both (Clapp and Swanston 2009).

The norm diffusion literature in international relations emphasizes the influence that large coalitions of NGOs can have on international negotiations, usually through multilateral venues such as treaty negotiations or international conferences (Betsill and Corell 2001; Gulbrandsen and Andresen 2004; Humphreys 2004; Betsill and Corell 2008). Typically the better access that NGOs have to multilateral negotiations, the more influence they are able to have on outcomes (Böhmelt

and Betzold 2013; Tallberg et al. 2015). The evolution of the large MPA norm does not, however, fit this mold.

One of the more important reasons that large MPA advocacy efforts have not focused on multilateral venues is the lack of a cohesive multilateral coalition of ENGOs. Transnational ENGOs frequently have competing visions for marine conservation that do not align with Pew and NGS's preference for large, contiguous, no-take marine reserves. In Australia, the World Wide Fund for Nature (WWF) was opposed to Pew's proposal for a no-take Coral Sea, instead preferring mixed-use zoning more in line with that of the Great Barrier Reef Marine Park (GBRMP). The Nature Conservancy (TNC) initially opposed the Palau sanctuary, instead preferring to focus on improving fisheries management.²⁰⁹ Even Pew and NGS disagreed about whether to include state waters in the PNMS (where the majority of Palau's rich biodiversity is), with Pew opposed because of the political difficulty of doing so.²¹⁰ Greenpeace, for its part, prefers to focus on less remote marine areas where commercial activity is prevalent, as well as the high seas, despite its advocacy for an ambitious 30% global marine area protected goal.²¹¹ Although Greenpeace, TNC, WWF, and others tend to eventually endorse large MPA campaigns, their role is minimal, often limited to contributing their extensive networks for campaign outreach. These influential transnational ENGOs nonetheless often have competing visions for what the best way to combat ocean decline is.

Another reason that Pew and NGS have not focused their efforts in multilateral venues is that there is no need for a new legislative or institutional framework to support large MPAs. As discussed in chapter 2, this framework already exists through the Convention on Biological Diversity (CBD), most notably through the Aichi target of 10 percent marine area protected. The institutionalization of a new norm is usually necessary to increase its uptake beyond early adopters, but existing CBD commitments already provide the institutional basis for large MPAs. Large MPAs were simply a new way of meeting existing legal obligations, so ENGOs could direct their efforts toward domestic uptake of the norm instead.

Pew and NGS adopted a bottom-up approach to expanding the large MPA norm, building support for the norm through targeted campaigns, one domestic jurisdiction at a time (Alger and Dauvergne 2017). These campaigns were not an effort to convince individual states to agree to large

²⁰⁹ Interview with Volunteer, Office of the President, Koror, 21 June 2016.

²¹⁰ Interview with Consultant, Pew Charitable Trusts, Koror, 17 June 2016.

²¹¹ Interview with Program Director, Greenpeace USA, Washington, DC, 17 September 2015.

MPAs in principle, but rather for the creation of specific large MPAs. ENGOs worked hard to identify politically feasible large MPA sites, recognizing that these sites would set an important precedent for large scale marine conservation. These sites are politically feasible in part because they are relatively remote from commercial activity (but not completely remote, as the Coral Sea CMR and PNMS cases demonstrate). Pew and NGS instead worked to form ad hoc domestic coalitions for individual large MPA campaigns, relying on local knowledge and expertise to bolster their own knowledge base and resources. Both the PRI and Coral Sea campaigns adopted this approach, with Pew in both cases identifying each area as a prospective large MPA site and initiating a domestic campaign with the support of local ENGOs.

This bottom-up strategy of norm diffusion also explains the concurrent emergence of the large MPA norm in the global North and South. Countries in the global South—most notably Chile, Kiribati, and Palau—have been just as enthusiastic about large MPAs as Australia, the UK, and the US in the North. This is in part due to geography, with many countries in the global South (especially Pacific island nations) boasting disproportionately large exclusive economic zones (EEZs). Conservation International (CI) and Oceana, among others, have helped to facilitate the spread of the large MPA norm in the global South, with their efforts to date focused there. But importantly, large MPA sites in the global South have also proven to be low-risk and politically feasible for ENGOs. In more recent cases, as with Palau, the government even actively sought their involvement. By focusing their efforts on specific large MPA sites, ENGOs have been able to target their resources to where they can make an immediate short-term impact. The announcements of Papahānaumokuākea and the Phoenix Islands Protected Area in 2006 did not preordain a global uptake of large MPAs. Rather this bottom-up ENGO approach has gradually built momentum toward a new global norm, one domestic campaign at a time.

Norm Localization (Domestic)

The Pacific Remote Islands, Coral Sea, and Palau case studies that I present in the preceding chapters all demonstrate the explanatory power of a political economy-based explanation of MPA decision-making. They also demonstrate the reach and the limits of ENGO influence. ENGOs have been highly effective at identifying target sites and convincing government decision makers to establish large MPAs. Pew, for example, has been successful in thirteen of its fourteen large MPA campaigns as of early 2017. But that influence often wanes throughout the process as governments face the harsher reality of designing management plans that affect a broader array of stakeholders.

When and to what extent ENGO influence wanes is highly contingent on the configuration of extractive and non-extractive industry interests in a given ecological space. That ENGO influence wanes in the face of entrenched industry interests is not a new theoretical insight in global environmental politics, but the bigger questions revolve around when and under what conditions that influence wanes.

The framework and theoretical claims that I develop in chapter 3 explain why governments make the decisions that they do about where to set the boundaries of a large MPA, and how to manage it. In doing so it can answer these questions of when and under what conditions ENGO influence wanes. Government decision-making is constrained by the two dimensions of industry interests in a region central to this framework: extractive versus non-extractive; and interest salience, determined by the intensity of its activity, its factor specificity, asset specificity, and exogenous stressors. The Pacific Remote Islands, Coral Sea, and Palau each had a different configuration of industry interests that led to distinct processes and outcomes for three large MPAs. This diverse configuration of industry interests across my cases allowed me to examine a number of the theoretical claims that I propose in chapter 3, as summarized in Table 7.2.

Table 7.2 – Case Studies Overview

Theoretical Claim		PRIMNM	Coral Sea CMR	PNMS
Coalition Formation				
C1(a)	An Extractive-State coalition is likely to form when the salience of extractive industry interests is high.			
C1(b)	An Extractive-State coalition is likely to form when the salience of extractive industry interests is moderate, but the salience of non-extractive industry interests is moderate or low.		X	
C2	A Non-Extractive-State coalition is likely to form when the salience of non-extractive industry interests is high, but the salience of extractive industry interests is moderate or low.			X
C3	An ENGO-State coalition is likely to form when the salience of extractive and non-extractive industry interests is low.	X		
C4	A Community-State coalition is likely to form when salience of extractive and non-extractive industry interests is low, and ENGOs have not expressed interest in a region (i.e., too low profile).			
Institutional Factors				
I1	When policy makers in a state coalition have the authority to legislate a new protected area, that coalition is more likely to achieve its preferred policy outcome.	X	X	X
I2	When an existing protected area's legislation or management plan is alterable (low permanence), a newly formed coalition is more likely to achieve its preferred policy outcome.	X	X	X
MPA Outcomes - Location				
L1	When Extractive-State coalitions form, states tend to relocate proposed MPAs to more remote regions, or not establish them at all.		X	

Theoretical Claim		PRIMNM	Coral Sea CMR	PNMS
L2	When Non-Extractive-State coalitions form, states tend to establish MPAs in areas with a high intensity of commercial activity.			X
L3	When ENGO-State coalitions form, states tend to establish MPAs in areas remote from commercial activity.	X		
L4	When Community-State coalitions form, states tend to establish MPAs in an area that a local community depends on for subsistence and livelihoods.			
MPA Outcomes - Management				
M1	When Extractive-State coalitions form, MPAs tend to be 'paper parks' that lack comprehensive management or meaningful enforcement.		X	
M2	When Non-Extractive-State coalitions form, MPAs tend to have comprehensive management and enforcement plans that limit extractive activity.			X
M3	When ENGO-State coalitions form, MPAs tend to have comprehensive management and enforcement plans that limit extractive activity.	X		
M4	When Community-State coalitions form, MPAs tend to have management plans that prohibit commercial use but secure local rights to resources.			

The case study chapters examined these respective claims in depth. The remainder of this chapter is devoted to a comparative analysis of the political economy of these cases. It will highlight a number of insights that we can derive from the framework, theoretical claims, and case study analysis in the preceding chapters. This section will speak to the privileged position of extractive industry, the limitations of industry influence, and the residual nature of large MPAs to date. It will also address two components of my coalitions-based political economy explanation that these case studies did not cover: the dynamics of Community-State coalitions, and the potential long-term impact of environmental change on MPA decision-making. But first, I will turn to a discussion of why this political economy explanation better explains large MPA outcomes than some of the preeminent theories of environmental norm diffusion.

Alternative Explanations for Large MPA Outcomes

The introductory chapter introduced two alternative explanations for variation in how the large MPA norm has diffused derived from the global environmental politics and international relations literature. The first gives primacy to the role and effectiveness of civil society actors in being able to successfully campaign and achieve their goals. Rather than industry interests explaining how governments make decisions about large MPAs, this type of explanation would instead look to the ability of ENGOs to organize effectively in each domestic context. The second explanation gives primacy to local norms and culture. How a state adopts the large MPA norm in this type of explanation is contingent on pre-existing domestic norms around marine conservation and resource

use. This subsection will address these two alternatives in turn, demonstrating why they are not as useful for explaining large MPA outcomes as a coalitions-based political economy explanation.

Civil Society

The literature on civil society's role in norm diffusion explains the spread of the large MPA norm globally, and helps us to better understand the international context of the emergence and spread of the large MPA norm. It does not, however, explain domestic variation in norm adoption well. Part of the reason for this is that large MPA campaigns are remarkably similar across cases, often involving the same ENGOs employing the same tactics. In the Pacific Remote Islands, Coral Sea, and Palau, The Pew Charitable Trusts was the most prominent ENGO involved, directing campaign efforts and funds across respective domestic coalitions in each case. The National Geographic Society's involvement in the Pacific Remote Islands and Palau was similar, producing documentaries and lobbying political leaders. In all three cases, domestic ENGOs—most notably the Marine Conservation Institute (MCI) in the US, the Australian Marine Conservation Society (AMCS) in Australia, and the Ebiil Society in Palau—bolstered these efforts, providing logistical support and the critical local knowledge needed for these campaigns. All three of these campaigns saw similar ENGO reporting about the biodiversity richness of their respective target sites, as well as the potential socioeconomic impact of a large MPA. All three campaigns similarly attempted to rally public support through promotional campaigns. And for better or worse—with the Coral Sea demonstrating the perils of this—ENGOs pursued fully no-take large MPAs in all three cases (with the exception of Palau's domestic fishing zone).

These case studies demonstrate that the similarity in the approach of these campaigns was in some cases detrimental to them achieving their goals. As noted above, ENGO success is partly dependent on their ability to frame an issue in such a way that garners public support (Wapner 1995; Wapner 2002). Pew and NGS framed large MPAs in Australia, Palau, and the US as essential for conserving pristine marine environments, and with minimal socioeconomic downside (and frequently citing the economic benefits, particularly in the long-run). These two pillars proved ineffective in Australia, where a small but highly vocal minority vehemently opposed the Coral Sea CMR, dominating media coverage that already tends to privilege sources of conflict over cooperation on MPAs (Voyer et al. 2013). Local ENGOs such as the Cairns and Far North Environment Centre (CAFNEC) were wary of their involvement in the campaign from the very

beginning, recognizing that it would elicit a strong backlash.²¹² The framing strategy that had proved so effective in remote US waters did not translate well to Australia's Coral Sea.

At best, what a civil society-focused explanation tells us is that ENGOs failed to take into account some case-specific factors in their campaigns. Because of this their framing was more effective in certain domestic contexts, but not others. But this explanation still does not reveal much about why governments made the decisions that they did about large MPA boundaries and regulations; only that public resistance was higher in some cases than others. As the Coral Sea CMR case shows, the Australian government was more responsive to tangible commercial fishing industry interests than it was to the vocal rhetoric of a subset of recreational fishers opposed to the MPA whom had very little stake in it. The consistent lobbying and framing strategy of ENGOs has facilitated the rapid uptake of large MPAs globally, but does not provide a thorough explanation of domestic variation in adoption of the large MPA norm, which needs to incorporate domestic factors that vary between cases.

Local Culture and Norms

Another explanation for variation in large MPA boundaries and management is that pre-existing local norms shape how a state adopts the large MPA norm. Local stakeholders shape international norms so that they are consistent with local norms and identity (Acharya 2004). In this model, new norms are not accepted or rejected, but rather localized, with the norm often taking on different characteristics across jurisdictions. This approach does, in fact, do well to explain many of the features of large MPA norm diffusion in my three case studies.

Pre-existing local norms and identities certainly seemed influential in the localization process of the large MPA norm. This was most notable in the Coral Sea and Palau, where pre-existing practice around marine resource use and protection shaped the discourse around a large MPA. In Australia, MPAs have traditionally been mixed-use with often complex zoning, exemplified by the Great Barrier Reef Marine Park. When Pew and others began pushing for a fully no-take Coral Sea CMR, there was a swift and often vehement public backlash. Many, particularly recreational fishing lobbyists, saw the move as a major threat to their right to fish—an iconic Australian pastime. Many Australian stakeholders were particularly vehement towards Pew as a foreign entity that was working to promote a norm that was not universally accepted, even among Western ENGOs—a

²¹² Interview with Former Campaigner, Cairns and Far North Environment Centre, Skype, Italy, 31 May 2016.

challenge that NGOs have faced in other arenas (Sundstrom 2005). In Palau, such closures had been common practice for centuries through the practice of *bul*. When the government proposed to ban foreign commercial fishing, and designate the majority of Palau's EEZ as no-take, the public response was largely positive, including from local fishers. Neither the Coral Sea CMR nor the PNMS overlapped with the traditional fishing grounds of recreational or subsistence fishers, yet one was seen as a threat to fishing rights while the other as protecting them.

Despite the influence that local norms and identities undoubtedly had on shaping discourse, they were not as influential in shaping government decisions about large MPA boundaries and management. Governments were far more responsive to material rather than ideational factors. Although the recreational fishing lobby's position was prominent in the public discourse surrounding the Coral Sea CMR, its views ultimately received little consideration from subsequent Labor and Liberal governments. The Coral Sea CMR is not mixed-use because of recreational fishing lobbyists' protests, but rather because of an extensive process through which the government negotiated and renegotiated with the commercial fishing and ecotourism industries, and environmental groups. Much of what dominated the public discourse did not reflect the negotiations going on behind closed doors. In Palau, it was an easy decision for local fishers to support the PNMS, in part because foreign fishing fleets did not benefit them, and in fact contributed little to Palau more generally. *Bul* is an important part of Palauan culture, and although it featured prominently in the campaigning for the PNMS, the ongoing process of determining how to manage it is driven by analysis of its economic impact and potential. *Bul* in the context of the PNMS is not only about conservation, but also about protecting Palau's marine resource endowment for its critical ecotourism sector.

Pre-existing local norms and identities are influential in norm diffusion processes, and they can be critical to norm adoption. Australia, Palau, and the US each have their own rich conservation history that made them more likely to become early adopters of the large MPA norm. Local ideas about the government's role in managing marine resources and protecting marine ecosystems also certainly shaped discourse throughout each jurisdiction's respective large MPA campaign. But pre-existing local norms and identity do not have the same explanatory power as industry interest salience in explaining how governments decided MPA boundaries and management plans. Large MPAs are fixed geographic areas, and therefore have coherent, fixed, and tangible stakeholder interests embedded within them. Throughout the processes for the Coral Sea CMR and PNMS—and

even the extremely remote PRIMNM—governments repeatedly designed processes and made decisions that were responsive above all to the political economy of a given marine space.

Extractive Privilege

The commercial fishing sector tends to wield influence disproportionate to its economic importance in large MPA processes. My theoretical claims give primacy to extractive industry over its non-extractive counterpart, specifically through claim C1(b):

An Extractive-State coalition is likely to form when salience of extractive industry interests is moderate, but the salience of non-extractive industry interests is moderate or low.

Put simply, this claim states that even moderate extractive industry interest salience will yield an Extractive-State coalition, even when non-extractive industry interest salience is similar. The power and influence of extractive industries in developed and developing countries alike is well documented (Salant 1976; Vernon 1980; Freudenburg 1992; Ferguson 2005; Bebbington et al. 2008; Haufler 2010; Gamu, Le Billon, and Spiegel 2015). These industries are able to generate substantial profits over short periods of time, often contributing substantial revenue to government coffers through tax revenue and licensing. Continued overcapitalization and subsidization of the fishing industry points to this trend, as governments facilitate the sector's growth despite sustainability concerns (DeSombre and Barkin 2011; Barkin and DeSombre 2013).

The high factor and asset specificity of extractive industries is also critically important to explaining their high influence. Even in areas where the intensity of extractive industry activity is low, the high factor and asset specificity of even just a few businesses can greatly increase the bargaining power of extractive industry. A related issue is that once an industry is invested in a particular geographic region, sunk costs begin to accumulate, which tend to make businesses more rigid in their decision-making and reduce their resource mobility (Barham and Coomes 2005). This was the case in the Coral Sea CMR, where a Commercial Fishing-State coalition formed despite minimal commercial activity. The low intensity of industry activity was not as important to subsequent Australian governments as the handful of businesses that exclusively depended on and invested in the Coral Sea, including the entirety of the modest Coral Sea Fishery. The commercial fishing sector in the US Western Pacific fishery managed to limit the size of the PRIMNM by 600,000 km² on the basis of a claim that it was reliant on those waters. When extractive industries say that

they rely on a region, governments listen. No government wants to be seen as undermining local industry, nor the profits, jobs, and livelihoods attached to it.

Extractive industry is privileged relative to non-extractive industry in large MPA processes because protected areas tend to place restrictions only on extractive industries. These restrictions are often incompatible with economic priorities, so governments tend to seek compromise (Bernstein 2001). Governments can easily design a large MPA that is consistent with ecotourism, for example, but integrating commercial fishing interests is more challenging because the objectives of conservation and commercial fishing are usually incompatible. Most large MPAs in fact specifically target commercial fishing (and oil and gas development), and ENGO campaigns rally support by evoking images of pristine, no-take marine ecosystems. Because extractive industries are the target of marine conservation, governments tend to work closely with them to ensure that their interests are protected in some form. In the Coral Sea this meant a combination of mixed zoning and buyouts (under the Labor government), and in the US has so far meant modest buyouts (as was the case with Papahānaumokuākea). In Palau, it has meant setting aside a domestic commercial fishing zone despite the overwhelming influence of the ecotourism sector. In short, governments privilege extractive industries because integrating non-extractive industry interests into an MPA design is easy.

The Limits to Industry Influence

Industry interests are not, however, omnipotent, despite their prominent influence on governments in making large MPA decisions. Part of the purpose of the framework and theory of large MPAs that I have presented is to better understand the reach and the limitations of industry influence on conservation decisions. Despite a largely industry-driven explanation for large MPA outcomes, my case studies also point to a number of industry failures to achieve their objectives. These failures are important because they reveal when and how industry can overplay its hand in the face of declining ocean health and environmental campaigns to combat it.

One major failure was the commercial fishing industry's inability to convince governments that no-take zones were a threat to their future profitability. Generally, government decision makers were unresponsive to industry concern that they could be more reliant on certain zones as species migrated, either as a part of their natural migration patterns or in response to warmer oceans. The Western Pacific Regional Fishery Management Council (Wespac) tried to make this argument about the Pacific Remote Islands, providing historical catch data to suggest higher take in the region in

certain years. The Obama administration was unpersuaded. The concession that the Obama administration did make—to not expand the reserve in two of the five zones—was in part because their surrounding seamounts had higher catch rates. That is, the administration showed a willingness to respond to immediate extractive industry interests, but was less responsive to attempts to hedge against migratory patterns years and even decades into the future. The story was similar in the Coral Sea where some industry advocates expressed concern about its no-take zone limiting prospecting. Consecutive Australian governments were unresponsive to these concerns, instead focusing their consultations on immediate industry interests.

Industry opposition to no-take zoning on principle also fell flat. Many industry stakeholders—and many experts as well—argue that strict no-take zoning is counterproductive in working towards sustainable fisheries. The source of the divide is the preference for a fisheries management versus a conservation approach to biodiversity protection, which I discuss in chapter 2. But governments were unresponsive to this as well, which was especially notable in the Coral Sea. The recreational fishing lobby had no real stake anywhere in the Coral Sea, instead using it as a high-profile case for voicing their opposition to no-take zones on principle. Government decision makers routinely met with recreational fishing lobbyists, but there is little evidence to suggest that these lobbyists influenced the zoning of the MPA. The reduction in no-take zoning that came out of the review of the management plan was explicitly intended to keep commercial fishers in business.

These failures suggest that even privileged extractive industries need to demonstrate an immediate and tangible economic stake in a region to influence the management design of a large MPA. Claims about the future (but undemonstrated) commercial potential of a region or opposition to no-take zoning on principle proved to be ineffective. The one major caveat here is that all these case studies can speak to are these industry limitations in the context of an ongoing large MPA bargaining process. In instances when the government is not already committed to establishing an MPA, these industry concerns may have greater influence. These limitations also highlight the value of a political economy-based framework for understanding environmental outcomes that identifies specific measures of industry interest. An industry's influence is determined by the salience of its immediate interests, which are determined by a combination of its intensity of activity, factor specificity, asset specificity, and, to a lesser extent (see chapter 2), exogenous stressors. To be effective in an ongoing large MPA bargaining process, industry arguments need to be based on one or more of these factors.

Residual Protections

One of the main criticisms of large MPAs is that they are largely residual, protecting areas that are too remote from commercial interests to meaningfully contribute to marine conservation (Toonen et al. 2013). This work provides a more nuanced theoretical explanation for this otherwise largely empirical claim. It is certainly accurate that large MPAs tend to be remote, but many nonetheless overlap with commercial activity, and some much more so than others. Palau's marine sanctuary is in fact intended to facilitate certain types of commercial activity, both extractive and non-extractive. Palau's waters were also at risk of overfishing from foreign fleets, and remain at risk to illegal, unreported, and unregulated (IUU) fishing. In this case, the importance of ecotourism to the Palauan economy was one of the main motivators for the MPA. The Coral Sea CMR encompasses the entirety of a small, but locally important, fishery. It is also critically important to one commercial tuna business that is similarly integrated into the local economy. This is in stark contrast to the Pacific Remote Islands, where the US Western Pacific fleet is unlikely to be affected by closures there. Large MPAs are residual relative to areas of high commercial (extractive) activity, but the underlying political economy of large MPA sites varies, and that variance has important implications for how governments make decisions about their boundaries and management.

An area being residual is also not just a function of where its boundaries are set, but also its zoning. UK and US large MPAs are so far all located around their highly remote overseas territories rather than around their respective continental shelves. Australia's Coral Sea, being relatively closer to the Australian coastline, is of course much less remote by comparison. The zoning of the Coral Sea, however, reflects a similar tendency towards residuality. No-take zoning in the Coral Sea was reserved only for areas where there was virtually no extractive commercial activity. There are important distinctions between the two types of residuality. Remotely located large MPAs are precautionary in that they can provide protection against potential future commercial interests, but they do fail to directly mitigate immediate threats to ocean decline. Large MPAs with residual zoning, on the other hand, directly address areas of more immediate concern, but run the risk of being 'paper parks' that fail to effectively protect species and ecosystems. That said, residually-zoned MPAs such as the Coral Sea do also protect against future industry interests in their no-take areas (assuming zoning continuity), which is not insignificant given their adjacency to commercial fishing zones.

Local Community Coalitions

Local communities are largely absent from my three case studies because their interests were in large part aggregated and represented by larger industry or ENGO groups. This aggregation accurately characterizes the politics of the Pacific Remote Islands, Coral Sea, and Palau because of the size and relative remoteness of their three MPAs. In the context of many large MPAs, ‘local’ would need to refer to a broader collective that in many cases transcends the boundaries of sub-states and territories. It is therefore often difficult to identify any kind of cohesive local community stakeholder group. Rather than representing a distinct local interest, communities affected by my three large MPA case studies instead tended to be divided along industry-environmental group lines. That is, the interests of community members and groups tended to align with those of either industry or ENGOs. These case studies, at least, were not characterized by coercive or fortress conservation in the way that many other protected areas are, including some large MPAs, as discussed in chapter 2 (Peluso 1993; De Santo, Jones, and Miller 2011).

That said, my only substantive claim here is that cohesive community groups—representing a distinct local interest—tended to be less prevalent in the politics of these three large MPAs. But these cases do raise equity concerns, particularly about the power and authority of a central government to impose usage restrictions on local and indigenous groups that have long relied on local resources. For example, CAFNEC devoted considerable effort towards ensuring that the Coral Sea CMR did not erode the rights of local indigenous groups, with one of the major challenges being the lack of documented information about indigenous customary rights and interests in the Coral Sea.²¹³ US enthusiasm for large MPAs in the Pacific is partly facilitated by reserves being located nearest to politically weak and disenfranchised US territories. The UK’s Chagos Marine Protected Area led to a challenge at the European Court of Human Rights for undermining the right of displaced Chagossians to return to their homeland (De Santo, Jones, and Miller 2011). These equity concerns are an important part of the research agenda on large MPAs that is largely neglected here (Gruby et al. 2015).

The PNMS process in Palau did see the emergence of a local stakeholder group that was somewhat distinct and cohesive. Local fishers were influential in convincing the Palauan Congress to finally pass the PNMS legislation. These fishers viewed the PNMS as protecting small-scale subsistence and livelihood fishing practices from commercial fishers operating further out in Palau’s

²¹³ Interview with Former Campaigner, Cairns and Far North Environment Centre, 31 May 2016.

EEZ. But even in this case, Palauan fishers' arguments in favor of the PNMS reflected those being made by ENGOs, and their mobilization was facilitated by the Ebiil Society, whose mandate was in part to do exactly that. As chapter 6 discusses in depth, it was ultimately Palau's considerable ecotourism interest that was driving Remengesau Jr.'s advocacy for the PNMS. Local communities can and do emerge as distinct stakeholder groups in large MPA processes, but only in certain sociopolitical contexts. Palau's small size and ubiquitous cultural fishing practices predisposed it toward a cohesive local community stakeholder group, albeit one with considerable overlap with the ENGO campaign. These conditions are likely to be rare when aggregating community interests across such large and remote spaces, where it is more common that community interests are more diverse and represented through larger political industry and civil society bodies.

The framework that I outline in chapter 3 nonetheless includes local communities as one of the major stakeholder groups in the norm localization process. This framework is not specific to large MPAs, and local community stakeholder groups are more cohesive and prominent in other large MPA cases. They are also undoubtedly more cohesive and more prominent political forces in smaller, less remote, and often contested protected areas.

Environmental Change

Environmental change is already influencing large MPA decisions, despite the large MPA-norm only having emerged in the mid-2000s. Marine scientists' growing understanding of the extent of ocean degradation was part of the impetus for the emergence of the large MPA norm (documented in chapter 2), so the emergence of the norm itself was in part a response to environmental change. Local Palaun fishers were concerned about the declining abundance and size of pelagic fish in coastal waters, which motivated their support for the PNMS. The decimation of Flinders Reef to coral bleaching in 2002 encouraged dive operators to advocate for better protection for other reefs in the Coral Sea.²¹⁴ Environmental change—so far in the vise of ongoing ocean degradation—determines how stakeholder groups formulate their interests. This interest formulation is an important part of this strategic actor framework of environmental norm diffusion.

But my three case studies do not discuss environmental change in depth. The reason for this is simply that large MPAs tend to be too new for changes in ecosystem and marine species' health to have influenced the decision-making process. The one notable exception to this is the Great Barrier

²¹⁴ Interview with Manager, dive tourism business, Cairns, QLD, 30 May 2016.

Reef Marine Park, where environmental change does seem to have influenced government policy making. The 2004 rezoning of the Great Barrier Reef—discussed in chapter 5—was an effort to scale up the level of protection for the reef, the ongoing decline of which is well documented (De’ath et al. 2012). And although not an MPA, the Canadian government has enforced a decades-long moratorium on Atlantic cod fishing because of the early 1990s collapse of the Atlantic northwest cod fishery due to overfishing. Ecosystem degradation tends to lead governments to enact stricter protections in the long-run. The Australian and Canadian governments’ interest in greater protections for the Great Barrier Reef and Atlantic northwest respectively is indicative of this shift. Industry groups may also favor stronger protections, environmental groups may target certain areas for stricter regulation, and local community groups may demand better protections as well.

Environmental change has featured into the initial interest formulation of stakeholder groups in the Pacific Remote Islands, Coral Sea, and Palau. These groups will reformulate their interests over time in response to the changing health of ecosystems and marine species, and the changing productivity of fisheries. Environmental change will undoubtedly become an increasingly influential factor in government decision-making about large MPA management with time, as governments adjust regulations in response to shifting stakeholder interests.

Conclusion

Concluding Remarks

The Pacific Remote Islands, Coral Sea, and Palau large MPA case studies reveal the value of a two-stage strategic actor framework of environmental norm diffusion. The large MPA norm emerged and is proliferating largely in accordance with prevailing international relations theories of global norms. Civil society advocacy was instrumental to a select few early adopter states embracing the norm, most notably the US. But this advocacy took on a different form. Rather than a cohesive transnational coalition of NGOs advocating in multilateral venues, a select few promoted the large MPA norm by building momentum one domestic jurisdiction at a time. The large MPA norm is now showing early signs of transitioning toward a more state-driven process, whereby states take on a more prominent role in expanding it. The norm adoption stage of my norm diffusion framework captures this norm emergence process.

These case studies also demonstrate the benefits of using a stakeholder coalition approach to explaining norm localization, the second stage of my framework. The extractive versus non-extractive composition of industry in a region, and the salience of various industry interests, explains

the type of coalition that formed in each case, and by extension why and how governments made the decisions that they did about locating and managing a large MPA. These case studies also lend support to the insight that industry stakeholders are privileged actors because of their importance to the economy, but also that there are limits to that industry influence. This framework explains the power and influence of industry as dependent on specific features of those interests; namely intensity of activity, factor specificity, asset specificity, and exogenous stressors. Breaking down industry interests into these component parts provides insight into why otherwise similar large MPA campaign efforts succeed or fail, and by extension why governments sometimes enact strict protection and sometimes do not.

The two-stage norm diffusion framework that I propose is novel, and helps to better theorize the related but distinct international and domestic dimensions of norm diffusion. By proposing norm diffusion as a kind of two-stage process, this framework facilitates theory-building that can, under a single framework, generate and synthesize theoretical insights that are relevant to both norm adoption at the international level, and norm localization at the domestic level. Global environmental politics scholars frequently point to the power and influence of corporations in determining environmental outcomes. This framework provides the microfoundations for some of these claims. That is, it proposes a set of indicators that help to tangibly measure the salience of industry interests in a given ecological space. Doing so can provide a clearer sense for when and under what conditions industry influences specific government decisions about environmental protection. This framework provides the basis for developing a clearer sense for when typically-prominent extractive industry influence falters, and when ENGOs have greater opportunity to achieve their preferred environmental outcomes.

Looking Forward

The large MPA norm will continue to shape global marine conservation efforts (Alger and Dauvergne 2017). It has already helped to give prominence to ocean decline as a significant environmental challenge. Governments are taking action, not only through the national large MPAs documented throughout this work, but internationally as well. There were two major developments in global marine conservation efforts in 2016 that the large MPA norm helped to make possible. The first was the formal discussion that began in April 2016 on the first ever UN negotiations to regulate high seas fishing. Momentum at the UN toward formal discussions on areas beyond national jurisdiction coincided with the emergence of large MPAs in the mid-2000s (Sumaila et al. 2007). The

lack of governance and the free-for-all mentality that has historically characterized the high seas is poised to end through these talks. Not to say that the regime that emerges is likely to be robust, or have consensus among states, but it is a step towards better governing one of the world's least regulated jurisdictions.

The second development is that the Commission on the Conservation of Antarctic Marine Living Resources (CCAMLR), after years of failed negotiations, established a 1.57 million km² MPA in the Ross Sea in Antarctica. This MPA is the world's first multilateral large MPA, and when announced in October 2016 was the largest MPA on the planet. The Ross Sea MPA is the culmination of years of protracted negotiations. China and Russia held out the longest, fearing that their geopolitical influence in the region would diminish if their commercial fishing fleets no longer had access. Proponents of the MPA worked to convince the Russian government in particular that monitoring, enforcement, and research of a this large MPA would ensure a continued presence. CCAMLR decisions are by consensus, so the creation of the Ross Sea large MPA is an important multilateral accomplishment—one that paves the way for future multilateral collaboration on marine protection. The large MPA norm makes developments such as the Ross Sea MPA much more likely by legitimizing and giving prominence to large-scale marine conservation initiatives.

States are also likely to continue pursuing large MPAs within national jurisdiction as well. Although the sheer size of these MPAs means that there are a finite number of geographical locations for them, there remains a wealth of untapped potential. There are 77 countries with EEZs larger than 200,000 km², totaling a combined 132 million km² of ocean. Of course, not all of this space is feasible nor even desirable for a large MPA. But the possibility of more countries following suit and protecting their pelagic ecosystems remains. This is true despite the loss of US leadership that followed the end of the Bush and Obama presidencies. The US was important in the emergence and spread of large MPAs. The *Our Ocean* conference that has served as the platform for many large MPA announcements to date was a US creation. Two of the first three conferences were in Washington, and Secretary of State John Kerry was an enthusiastic host. But other states are ready to assume the mantle, and the conference's future looks positive with hosting commitments from the EU in 2017, Indonesia in 2018, and Norway in 2019.

These ongoing developments mean that the future of research into large MPAs, and the scaling up of global marine conservation efforts generally, also looks positive. Other scholars have already noted the broad potential for cross-disciplinary research into large MPAs (Gruby et al. 2015). Within

political science, the emergence of the large MPA norm raises a number of intriguing analytical questions. As I note above the large MPA norm seems to have already influenced global ocean governance, but precisely how that influence continues to shape decisions made at the UN and other multilateral bodies is less clear. The (at least temporary) loss of US leadership, while not a death knell for the norm, also raises interesting questions about the strength and endurance of global norms when powerful early adopters renege. The geopolitics of the large MPA norm is also intriguing, with many smaller countries, such as Kiribati or Palau, taking action that is in some ways more ambitious than that of larger states. As I noted in the first chapter, the political economy of large MPAs also suggests that this norm is consistent with the current global environmental paradigm of liberal environmentalism, one that other scholars have also noted characterizes ocean governance as well (Bernstein 2001; Lobo and Jacques 2017). This dissertation reveals why and how the large MPA norm fits into this regime, but there is also an inherent tension here in that large MPAs by definition are intended to shut out (at least some) industry interests over large swaths of ocean. Whether large MPAs as both a norm and a policy tool have the potential to erode the tenets of liberal environmentalism is an interesting avenue for future research.

The overarching theoretical contribution of this research is to develop a framework that explains precisely how and under what conditions various industries are able to influence government environmental decisions. This framework has application beyond large MPAs, and a future research program for this work would be to explore the versatility of this framework for other environmental phenomena. It would be especially interesting to apply this framework to smaller, hotly contested MPAs, in which industry, environmental groups, and communities clash more vehemently and directly than they do in most large MPA cases. In these other cases, ENGO campaigns are unlikely to be as homogenous as they have been so far for large MPAs. There is potential to endogenize ENGO strategies and effectiveness within this framework, expanding its explanatory power in more contentious arenas. There is also nothing inherently marine-centric within this framework, and exploring its applicability to terrestrial area management presents another intriguing prospect for ongoing research. Unlike pelagic fish, fossil fuels and minerals are stationary, so the factor and asset specificity of the oil and gas or mining industries tends to be higher than it is for commercial fishing. This framework would predict an even greater level of industry influence on land where industry already has ties to particular deposits.

Industry interests and influence are ubiquitous in global environmental politics. The normative commitment of this research is to better understand why, how, and under what conditions businesses influence various environmental outcomes, so that we can work toward better environmental solutions. The scaling up of marine conservation efforts in the mid-2000s to address ocean decline suggests that states can be motivated to take action, albeit within a paradigm of environmentalism with limited potential to reverse or even slow the ongoing global ecological crisis. This work highlights the ubiquity of industry interests and influence, but also its limitations as states protect millions of square kilometers of ocean space from current and future commercial exploitation.

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Appendix: List of Interviewees

Civil Society

Campaign Manager, Australian Marine Conservation Society, phone, Brisbane, QLD, 17 May 2016.

Campaigner, Greenpeace Australia, Sydney, NSW, 29 March 2016.

Consultant, Pew Charitable Trusts, Koror, 17 June 2016.

Coordinator, Global Climate Change Alliance+, Koror, 24 June 2016.

Executive, Blue Frontier, Koror, 15 June 2016.

Executive, Conservation International, Arlington, VA, 17 September 2015.

Executive, Ebil Society, Koror, 7 July 2016.

Executive, Environmental Defense Fund, phone, Raleigh, NC, 23 September 2015.

Executive, Marine Conservation Institute, phone, Glen Ellen, CA, 24 September 2015.

Executive, Palau Conservation Society, Malakal, 6 July 2016.

Executive, The Environment Inc., Koror, 23 June 2016.

Former Campaigner, Cairns and Far North Environment Centre, Skype, Italy, 31 May 2016.

Former Executive, Cairns and Far North Environment Centre, Cairns, QLD, 2 June 2016.

Former Executive, Pew Charitable Trusts, phone, Juneau, AK, 7 October 2015.

Former Marine Campaigner, Australian Conservation Foundation, phone, Melbourne, VIC, 27 May 2016.

Former Program Director, Pew Charitable Trusts, phone, Brisbane, QLD, 15 May 2016.

Manager, Pew Charitable Trusts, phone, Washington, DC, 11 August 2015.

Manager, Rare, Koror, 5 July 2016.

Marine Campaigner, Australian Marine Conservation Society, phone, WA, 3 June 2016.

Program Director, Greenpeace USA, Washington, DC, 17 September 2015.

Program Director, Marine Conservation Institute, Washington, DC, 24 September 2015.

Program Director, National Geographic Society, Washington, DC, 17 September 2015.

Program Director, Pew Charitable Trusts, Canberra, ACT, 6 May 2016.

Program Director, Pew Charitable Trusts, phone, Perth, WA, 4 April 2016.

Program Director, Pew Charitable Trusts, Washington, DC, 16 September 2015.

Program Director, The Nature Conservancy, Koror, 29 June 2016.

Ecotourism Industry

Manager, dive tourism business, Cairns, QLD, 30 May 2016.

Manager, dive tourism business, Malakal, 30 June 2016.

Owner, dive tourism business, Koror, 23 June 2016.

Owner, dive tourism business, phone, Port Douglass, QLD, 1 June 2016.

Owner, kayak tour business, Malakal, 6 July 2016.

Fishing Industry (Commercial and Recreational)

Board Member, Palau Aquaculture Cooperative Association, Koror, 5 July 2016.

Executive, Australian National Sportfishing Association, Sydney, NSW, 10 May 2016.

Executive, Palau Aquaculture Cooperative Association, Koror, 5 July 2016.

Executive, Queensland Seafood Industry Association, Hendra, QLD, 30 May 2016.

Executive, Saving Seafood, phone, Washington, DC, 15 October 2015.

Executive, Sunfish Queensland, phone, Margate, QLD, 3 June 2016.

Executive, Western Pacific Regional Fishery Management Council, phone, Honolulu, HI, 1 October 2015.

Manager, commercial fishing business, Cairns, QLD, 30 May 2016.

Manager, Saving Seafood, phone, Washington, DC, 15 October 2015.

Manager, Western Pacific Regional Fishery Management Council, phone, Honolulu, HI, 1 October 2015.

Owner, charter fishing business, Koror, 21 June 2016.

Owner, commercial fishing business, Koror, 28 June 2016.

Owner, commercial fishing business, phone, Cairns, QLD, 30 May 2016.

Program Director, US commercial fishing business, phone, 22 January 2016.

Government

Advisor, Australian Navy, Malakal, 7 July 2016.

Branch Manager, US Fish and Wildlife Service, Arlington, VA, 22 September 2015.

Campaigner, Zoological Society of London, phone, London, 28 August 2015.

Chief of Staff, Member of US Congress, Republican Party, phone, Washington, DC, 22 September 2015.

Coordinator, Ministry of Finance, Koror, 21 June 2016.

Former Program Director, Bureau of Marine Resources, Koror, 1 July 2016.

Former Researcher, Australian Department of Environment, phone, Hobart, TAS, 6 May 2016.

Manager, Ministry of Natural Resources, Environment & Tourism, Malakal, 29 June 2016.

Member of Parliament, Conservative Party, House of Commons of the United Kingdom, email, London, 20 July 2015.

Member of Parliament, Labour Party, House of Commons of the United Kingdom, phone, London, 27 July 2015.

Policy Officer, Fisheries Queensland, phone, Brisbane, QLD, 13 May 2016.

Program Coordinator, US Fish and Wildlife Service, Arlington, VA, 22 September 2015.

Program Director, Ministry of Justice, Malakal, 7 July 2016.

Program Director, National Oceanic and Atmospheric Administration, Silver Spring, MD, 24 September 2015

Program Director, Office of the President, Koror, 29 June 2016.

Program Director, Parks Australia, phone, Hobart, TAS, 16 May 2016.

Program Director, US Department of State, phone, Washington, DC, 15 September 2015.

Senator, Green Party, Australian Parliament, Canberra, ACT, 3 May 2016.

Senator, Palau National Congress, Koror, 6 July 2016.

Senior Policy Analyst, UK Foreign and Commonwealth Office, phone, London, 30 October 2015.

Volunteer, Office of the President, Koror, 21 June 2016.

Volunteer, Office of the President, Koror, 30 June 2016.

Research Organizations

Consultant, Sea-Scope, phone, England, 7 August 2015.

Executive, Coral Reef Research Foundation, Malakal, 17 June 2016.

Executive, Palau International Coral Reef Center, Koror, 6 July 2016.

Fisheries Scientist, University of British Columbia, Vancouver, BC, 29 October 2015.

Officer, Palau International Coral Reef Center, Koror, 28 June 2016.

Program Director, Sea Around Us, University of British Columbia, Vancouver, BC, 17 August 2015.

Researcher, EconMAP, Malakal, 6 July 2016.

Researcher, geospatial research organization, Koror, 24 June 2016.

Senior Scientist, Sea Around Us, University of British Columbia, Vancouver, BC, 17 August 2015.