

THESIS

BEYOND CHALLENGER DEEP: AN IN-DEPTH STUDY OF THE HUMAN DIMENSIONS AND SOCIAL
OUTCOMES OF THE MARIANAS TRENCH MARINE NATIONAL MONUMENT

Submitted by

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ABSTRACT

BEYOND CHALLENGER DEEP: AN IN-DEPTH STUDY OF THE HUMAN DIMENSIONS AND SOCIAL OUTCOMES OF THE MARIANAS TRENCH MARINE NATIONAL MONUMENT

This thesis contains in-depth documentation of the human dimensions and social outcomes of the Marianas Trench Marine National Monument (MTMNM, est. 2009), a large marine protected area (LMPA) in the United States insular areas of the Commonwealth of the Northern Mariana Islands (CNMI) and Territory of Guam. LMPAs (marine protected areas in excess of 100,000km²) are a nascent trend in marine conservation, with 80% of existing LMPAs being established as of 2010 or later. Currently, there is a paucity of empirical research on their human dimensions. This thesis presents a qualitative case study of the MTMNM – a relatively longer established LMPA – with a primary focus on the perceptions of key stakeholders engaged in designation, planning, and implementation processes. Results document the human dimensions of the MTMNM by outlining its key stakeholders, designation process, design, politics of support and opposition, and social outcomes. I focus in particular on social outcomes of the MTMNM, which I describe in thick, nuanced detail within 5 major themes: unfulfilled promises, mistrust and social division, territorial sovereignty, conservation legacy effects, benefits and hopes for the future. I argue that the delivery of social benefits and respect for territorial sovereignty are of paramount importance moving forward. As a whole, the contribution of this thesis is in demonstrating empirically how the ‘people-centered’ aspects of LMPAs are essential to ensuring the model’s social-ecological success.

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DEDICATION

For my mother, whose resolute belief in me has been an anchor in tempestuous storms.

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Chapter 1. Introduction

1.1 Overview

World oceans are of central importance to the biological health of our planet, and it is widely accepted that they are in an increasing state of peril due to climate change, extractive human uses, and terrestrially-based pressures, among other factors (Halpern et al., 2015; Hoegh-Guldberg & Bruno, 2010). It is estimated that at least 66% of global oceans show signs of increasing human pressures (Halpern et al., 2015), putting them at risk for irreversible ecological damage. Moreover, 2013 estimates characterize 89.5% of marine fish stocks as fully exploited (58.1%) or overexploited (31.4%) (FAO, 2016). There is growing evidence that these risks, including decreased biological productivity, loss of marine habitat, biodiversity, and species distribution, as well incidents of rampant disease and new pathogens, will overwhelmingly affect the populations of developing countries (Hoegh-Guldberg & Bruno, 2010). Marine protected areas (MPAs) have been increasingly promoted and accepted as an effective strategy to mitigate these pressures (Gray, 2010), with various multi-national entities adopting increasingly larger area-based targets for marine conservation. In 2002, the World Summit on Sustainability Development called for a network of global marine protected areas to be established by 2012 (Laffoley et al., 2008). In 2003, the IUCN World Parks Congress confirmed this goal, as did the 7th Convention on Biological Diversity (CBD) Conference of Parties (COP) in 2004 (Devillers et al., 2015) while also setting a target of 10% global MPA coverage by 2012 (Marine Conservation Institute, 2018). In 2010, after failing to achieve this target, the CBD COP 10 amended the deadline to 2020 as part of Aichi Target 11 which calls for “at least [...] 10% of coastal and marine areas [...] [to be] conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas” (Convention on Biological Diversity, 2010). Most recently, the 2016 IUCN World Conservation Congress amended targets to 30% global MPA coverage by 2030 (O’Leary et al., 2016).

Amid the growing body of scientific data showing the decline of ocean health and increasing attention to area-based protection of marine space, large marine protected areas (LMPAs, also known ‘large scale MPAs’ or ‘very large MPAs’) – those in excess of 100,000km²¹ – have becoming an increasingly high profile marine conservation solution. 2016 estimates of global MPA coverage show an increase to 4.12% (UNEP-WCMC and IUCN, 2016), while the World Database on Protected Areas puts 2018 estimates at 7.26%. As of late 2017, there are a total of 33 LMPA sites, 11 of which have been designated, but are not yet fully implemented, which cover 4.5% of total ocean areas (Marine Conservation Institute, 2017). Though the Great Barrier Reef Marine Park, designated in 1975, was the first of such sites, there has been a rapid proliferation of the model in recent years. Over 80% of current² LMPA sites have been designated as of 2010 or later (Marine Conservation Institute, 2017; see Table 1.1). It is widely hypothesized that percent-area conservation targets have likely contributed to this rise in LMPA designations (De Santo, 2013; Devillers et al., 2015; Leenhardt et al., 2013; Toonen et al., 2013; Wilhelm et al., 2014), with some arguing that the atmosphere of ‘peer pressure’ between international governments has led to a ‘race’ to establish ever larger sites (De Santo, 2013; Jones & De Santo, 2016). The vast and growing sizes of LMPAs ensures that each new site will make a significant spatial contribution to global conservation targets (Toonen et al., 2013; Wood et al., 2008), which is reflected in popular media coverage of new designations. National Geographic, as part of their *Pristine Seas* campaign, characterized three new LMPAs within the Pacific as having a combined area “more than twice the size of Germany” (Howard, 2017), for example. In a succinct demonstration of the relationship between conservation targets and LMPA designations, in response to Mexico’s 2017 designation of the 147,629km² Revillagigedo Marine Reserve, IUCN WCPA Marine Vice Chair Dan Laffoley was quoted as stating, “This brings us one significant step closer to reaching Aichi Target 11” (IUCN, 2017).

¹ LMPAs have been defined with dimensions ranging from 30,000km² (Elizabeth M. De Santo, 2013), to 100,000km² (Gruby et al., 2017; Gruby et al., 2016; Spalding et al., 2013), to 250,000km² (Gray et al., 2017; Toonen et al., 2013).

² Through December 31, 2017 as reported by MPAtlas.org.

Table 1.1 LMPA sites through 2017

This table shows LMPA designations which have either been implemented (no shading) or are awaiting full implementation (grey shading) as of December, 2017 (adapted from Marine Conservation Institute, 2017).

Date	LMPA name, Designating authority	Size (km ²)	Date	LMPA name, Designating authority	Size (km ²)
2017	Terres Australes Francaises, <i>France</i>	673,000	2012	Marae Moana Marine Park, <i>Cook Islands</i>	324,000
2017	Micronesia Marine Protected Area, <i>Federated States of Micronesia</i>	184,948	2012	South-west Corner Commonwealth Reserve, <i>Australia</i>	271,898
2017	Niue Marine Protected Area, <i>Niue</i>	126,909	2012	Norfolk Commonwealth Reserve, <i>Australia</i>	188,433
2017	Revillagigedo National Park, <i>Mexico</i>	147,629	2012	Argo-Rowley Terrace Commonwealth Reserve, <i>Australia</i>	146,099
2016	Ross Sea Protected Area, <i>CCAMLR*</i>	1,549,000	2012	Lord Howe Commonwealth Reserve, <i>Australia</i>	110,149
2016 [†]	Papahānaumokuākea MNM**, <i>United States</i>	1,508,870	2010	South Georgia & Sandwich Islands MPA, <i>United Kingdom</i>	1,000,700
2016	Pacifico Mexicano Profundo, <i>Mexico</i>	577,800	2010	Chagos MPA ^(?) , <i>United Kingdom</i>	545,000
2016	St. Helena Marine Protection Zone, <i>United Kingdom</i>	445,000	2010	Charlie Gibbs North High Seas Area, <i>OSPAR***</i>	178,651
2016	Ascension Ocean Sanctuary, <i>United Kingdom</i>	234,261	2010	Charlie Gibbs South High Seas Area, <i>OSPAR***</i>	145,420
2015	Pitcairn Islands Marine Reserve, <i>United Kingdom</i>	834,334	2010	Motu Motiro Hiva Marine Park, <i>Chile</i>	150,000
2015	Rapa Nui Rahui MPA <i>Chile</i>	631,638	2009	Marianas Trench MMNM**, <i>United States</i>	250,487
2015	Kermadec Ocean Sanctuary, <i>New Zealand</i>	620,000	2009	Prince Edward Islands MPA, <i>South Africa</i>	180,000
2015	Palau National Marine Sanctuary, <i>Palau</i>	500,000	2006	Phoenix Islands Protected Area, <i>Kiribati</i>	408,250
2015	Nazca-Desventuradas Marine Park, <i>Chile</i>	297,518	1999	Macquarie Island Reserves, <i>Australia</i>	162,000
2014	Natural Park of the Coral Sea, <i>France</i>	1,368,806	1998	Galapagos Marine Reserve, <i>Ecuador</i>	133,000
2014 [†]	Pacific Remote Islands MNM** <i>United States</i>	1,270,000	1975	Great Barrier Reef Marine Park, <i>Australia</i>	345,4000
2012	Coral Sea Commonwealth Reserve, <i>Australia</i>	989,842	*Commission for the Conservation of Antarctic Marine Living Resources		
[†] Represents date of last boundary expansion			**Marine National Monument		
			***Commission from the Oslo and Paris Convention		
			^(?) Status uncertain		

Yet, there are criticisms of the effects of percent-area conservation targets within terrestrial protected areas (PAs) which may apply to LMPAs (De Santo, 2013), including: the likelihood that states will prioritize designations in areas known to have low extractive uses and/or economic value (Locke & Dearden, 2005); focus on increasing PA percentages may divert resources from the management of existing sites (Wells et al., 2007); and, if PAs fail to deliver anticipated benefits, it may weaken the political resolve for other conservation interventions (Wood et al., 2008). Moreover, both the rapid increase in

LMPA numbers, in addition to the inherent challenges in effectively managing such vast ocean areas, have given rise to concern that LMPAs may be little more than ‘paper parks’ and/or tools for political, rather than ecological, gain (De Santo, 2013; Devillers et al., 2015; Jones & De Santo, 2016; Leenhardt et al., 2013). In addition, scientists have raised questions about conservation outcomes, as LMPAs tend to be designated in remote, ‘pristine’ areas with few direct human uses and/or zoned to avoid valuable mining and fishing grounds (Singleton & Roberts, 2014); some have shown dubious fisheries ‘spillover’ benefits within select sites (Dunne et al., 2014; Fletcher et al., 2015). Others have argued that LMPAs are ineffective at protecting against many of the greatest sources of marine degradation, such as nonpoint source pollution, climate change, tourism, and overfishing (Devillers et al., 2015; Leenhardt et al., 2013; Spalding et al., 2013). As the body of empirical data on LMPAs grows, some actively debate and reject such criticisms (O’Leary et al., 2018), while others argue that, owing to both advantages and drawbacks, LMPAs should not be considered as *the* solution to issues of global ocean health, but rather should be evaluated for fit among other conservation strategies (Wilhelm et al., 2014).

Despite criticisms of percentage-area targets, it has been shown that they can mobilize political will and policies toward conservation (Gray, 2010; Wood et al., 2008), and LMPAs remain an attractive solution to problems of ocean health, as they have the potential for conservation benefits unattainable in smaller, coastal (hereafter, ‘conventional’) MPAs. LMPAs can cover vast, remote spaces such as open ocean areas, pelagic and benthic ecosystems, and geological features such as island systems, atolls, trenches, and seamounts (Toonen et al., 2013; Wilhelm et al., 2014). They are thought to protect tuna and marine mammals, as well as other highly migratory species (Graham & McClanahan, 2013; Wilhelm et al., 2014) because they may include entire habitats and bio-regions (Singleton & Roberts, 2014; Wilhelm et al., 2014), and are argued to safeguard against ecologically devastating point source pollution events such as oil spills (Singleton & Roberts, 2014). The promise of such conservation outcomes has led some proponents, including high-profile conservationists (e.g. Silvia Earle), popular campaigns (e.g. National

Geographic's *Pristine Seas*, discussed above), and celebrities (e.g. Leonardo DiCaprio), among others, to market LMPAs as a 'final hope' for protecting global oceans (Gruby et al., 2016; Leenhardt et al., 2013).

Though there are numerous claims, counter-claims, and rebuttals about the value of LMPAs as a marine conservation solution, one fact remains clear: many of the relative advantages which LMPAs are argued to have over conventional MPAs are contingent on assumptions that the spaces they encompass are 'unpeopled' and/or devoid of human use or value (Gruby et al., 2016). It has been assumed that because LMPAs often include uninhabited ocean spaces, they will involve fewer stakeholders (Singleton & Roberts, 2014) and present less of a financial (McCrea-Strub et al., 2011), administrative, and political (Balmford et al., 2004) burden, relative to conventional MPAs. Here, it is key to underscore that robust social data and community engagement integrated from the initial stages of design and implementation through management planning and adaptation has proven essential to the success of conventional MPAs (Charles & Wilson, 2009; Mascia, 2003; Pomeroy et al., 2004); and, though the human dimensions of LMPAs have remained largely understudied, there is a growing call for empirical understanding and integration of them (Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016).

1.2 Scholarly debates about the human dimensions of LMPAs

Now, more than ever, it is widely accepted that "conservation is about people as much as it is about species or ecosystems" (Mascia et al., 2003, p. 649); and though there is a long history of studying environmental issues within the social sciences (per Bennett et al., (2017): sociology, anthropology, political science, geography, economics, history, and psychology, among others), there is no one concise yet holistic definition of the 'human dimensions' of conservation. Instead, studies of the evolution of conservation social science point to six general principles that exist across disciplines, positing that human dimensions approaches to conservation are: (1) participatory and inclusive of various stakeholder perspectives; (2) pluralistic and equitable in integrating knowledge sources; (3) reflexive, ultimately

allowing for questioning and feedback from different levels of social organization; (4) adaptive in a way that prioritizes deliberate learning and integration of lessons within institutions and practices; (5) systems-oriented across perspectives of scale while valuing social-ecological dynamics; and (6) oriented toward substantive, positive contributions to sustain social-ecological systems (Clark, 2015, p. 59). The lens of human dimensions, or ‘people-centered’, approaches can then be applied to examine various topics within conservation, including: social phenomena (e.g. politics and power, governance, culture, ideas and narratives, norms, socio-economics); social processes (e.g. management, development, decision making, social organization, education); and/or individual attributes (e.g. perceptions, behaviors, values and beliefs, ethics) (Bennett et al., 2017). Therefore, generating robust understanding of the human dimensions of global conservation issues is, by definition, a collaborative and iterative process of engaging diverse sources of knowledge across and within ‘people-centered’ disciplines.

In terms of marine conservation, such bodies of knowledge have led to characterizations of global oceans as ‘peopled seascapes’ (Shackeroff et al., 2008) and influenced calls for further empirical research on the human dimensions of conventional MPAs (Christie et al., 2003), which are now relatively well defined and understood. Charles and Wilson (2009) explain conventional MPAs in terms of three broad suites of human dimensions – social, economic, and institutional – which they outline more specifically as encompassing: (1) objectives (e.g. policy, community participation) and attitudes (e.g. toward conservation, MPAs, marine resources); (2) drivers and/or barriers for MPA creation and implementation which may (or may not) have associated outcomes; (3) socio-cultural contexts of place attachment and meanings (Pomeroy et al., 2007); (4) participation as a factor in MPA success (Christie, 2004; Pollnac et al., 2001); (5) local and traditional knowledge (Bunce et al., 2000); (6) the intersection(s) of management authorities and relationships between these authorities (Pomeroy et al., 2007); (7) management jurisdictions and extractive use rights; (8) associated costs and benefits and their distribution among stakeholder groups; (9) potential displacement of human activities and mitigation strategies; and (10) the

additional, site specific contexts in which MPAs are embedded (pp. 7-12). In terms of conventional MPAs, such dimensions are not only well researched, but also widely accepted by the academic and conservation practitioner communities alike (Bunce et al., 2000; Charles & Wilson, 2009; Mascia et al., 2003; Pomeroy et al., 2004).

With consideration for global oceans as peopled spaces, lessons from people-centered research on conventional MPAs, and the rapid increases in the number and size of LMPA designations, there are growing calls for interdisciplinary research on the human dimensions of LMPAs. Gruby et al. (2016) identify areas for additional human dimensions research on LMPAs, which include: scoping the social, cultural, political, economic, and institutional dimensions relevant to LMPAs within specific contexts; describing and analyzing the concepts of human/nature relationships within LMPA systems; identifying LMPA stakeholder groups and how they are in/excluded in decision-making; broadening knowledge on how LMPAs are designed, monitored, and enforced; how LMPAs may interact with existing policies across political scales; what political motivations underpin LMPA designations and how they are/not shared throughout stakeholder groups; how LMPAs may shift and/or reinforce power relations among diverse groups of actors; and the full range of social, political, economic, and cultural outcomes associated with LMPAs with attention to experienced and anticipated costs and benefits (p. 7). Given the rapid proliferation of LMPAs, this body of work is beginning to emerge, and, moreover, it is increasingly recognized that such research is essential to the model's success (Ban et al., 2017; Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016). The proceeding sections summarize this emergent body of work.

1.2.1 Economic dimensions

Theoretical modeling indicates that MPAs can increase catch rates in adjacent fisheries through 'spillover', or migration of fish across boundaries, as well as export of eggs and larvae (Rodwell et al.,

2002), ultimately offsetting negative economic impacts of fisheries closures, and/or creating economic benefit for fishers through increased catch rates. And, while acknowledging that area-based fisheries management is controversial in comparison to other strategies (e.g. species catch limits, gear restrictions, seasonal closures), it is argued that increasing the size and scale of MPAs “could reverse global fishery declines” (Gell & Roberts, 2003, p. 448), ensuring the economic viability of commercial fishing. The anticipated economic benefits of MPA expansion extend beyond the immediate effects of fisheries spillover. As part of an effort to quantify global spending on MPAs, Balmford et al. (2004) predict that as global MPA coverage nears 30%, increasing the amount of marine space within the same management arrangement can cut operating costs to one-third of the projected total for unaffiliated conventional MPAs; and are careful to note that these projections do not include revenue from tourism, which they expect will increase with MPA expansion. They conclude that “an ambitious program of MPA expansion could probably be instituted for less than the amount already spent by developed world governments on harmful subsidies to industrial fisheries” (p. 9697). Similarly, McCrea-Strub et al. (2011) show that LMPAs are, per unit area, less costly to establish than conventional MPAs. Such arguments create ‘win-win-win’ narratives regarding the economic dimensions of LMPAs – they hold the potential to increase global marine biomass and fisheries productivity, effectively eliminating the need to subsidize the fishing industry, and present relatively lower start-up and operation costs than other marine conservation strategies.

Yet, the limited empirical research on their economic dimensions indicates that such projections and analyses are, at best, incomplete, and at worst, dangerously optimistic. For example, the effects of fisheries spillover have, in the case of the Great Barrier Reef Marine Park (GBRMP), been overestimated. In 2004, the GBRMP implemented a program which increased the percentage of no-take zones from 4.6% to 33%. Management authorities expected that initial decreases to catch rates would be small (10%) and that effects of fisheries spillover would mitigate any reductions within the first three years. But, in

comparing catch rates before and nearly a decade after the no-take expansion, Fletcher et al. (2015) found no evidence of long-term benefits to adjacent fish stocks. Dunne et al. (2014) argue similar, limited fisheries benefits from the Chagos Marine Protected Area, a no-take LMPA in the Indian Ocean, est. 2010. Through analysis of tuna and by-catch data as well as the distribution of purse seine and longline fleets, they conclude that because tuna catch data did not increase at any point after LMPA designation there have been few, if any, spillover benefits. Moreover, they conclude that the spatial arrangement of the Chagos only covers a portion of tuna migration patterns, thereby offering relief from fishing fleets for only 2 months of their yearly migration. The study did not report adverse economic impacts to the purse seine or longline fleets as a result of the Chagos designation. Evidence from the Chagos MPA and the GBRMP suggest that the economic dimensions of LMPAs are likely more nuanced and variable than resource and economic models anticipated, a lesson echoed by an economic impact assessment of the Marianas Trench Marine National Monument (MTMNM). In 2008, the Pew Charitable Trusts' Ocean Legacy Program commissioned an assessment of projected economic impacts of the MTMNM prior to designation which specified revenue increases in the multimillions from an influx of tourism and research (Iverson, 2010). In the subsequent publication of the assessment findings, economist and assessment author Iverson: asserts that many of the costs and benefits of such a designation cannot be quantified with dollar amounts; discusses the inherently complex, often problematic nature of attempting *a priori* economic projections without the ability to collect primary data; and argues that such economic analyses are best used within decision making processes, but not as the sole or primary rationale for decision making (2010).

1.2.2 Geopolitical dimensions

LMPAs are known to engage a diverse group of advocates and proponents, which, in addition to public figures as popular environmental campaigns (see 1.1 Overview), includes state-level actors at the highest orders of political organization (e.g. nations' presidents, elected officials, civil servants),

international groups and organizations (e.g. high-profile international NGOs, think tanks), as well as individuals (e.g. academics, journalists, members of civil society); this has led some to theorize that LMPAs have the potential to elevate new political actors to levels of visibility previously unattainable (Gruby et al., 2016; Leenhardt et al., 2013). Gruby et al. (2016) assert as LMPAs create a larger mapped area for small island states (SIS), they may also serve to make them more visible as global political actors, then becoming “large ocean states with globally valued resources” (p. 5). Similarly, Leenhardt et al. (2013) argue that LMPAs may be prove to be a valuable political opportunity for coastal states to further legitimize their sovereignty within the 200nm exclusive economic zone (EEZ). They argue that this may be of particular benefit to SIS with high indigenous populations (e.g. within the Pacific) and, in other contexts, may elevate the relative power of peoples with traditional knowledge, use, and cultural connections to space and resources within a proposed LMPA.

However, emerging research on geopolitical dimensions shows that LMPAs intersect with numerous varied, complex political themes, actors, and processes, in addition to those outlined above. In 2010, the United Kingdom established the Chagos MPA, an LMPA within the Chagos Archipelago, a region within the British Indian Ocean Territory (BIOT) – a colonial administration entity – which rekindled ongoing struggles for regional sovereignty. Prior to the formation of the BIOT in 1965, the Chagos Islands had been under control of Mauritius, a neighboring UK colony. However, Mauritius gained independence from the UK in 1968, though it did not gain sovereignty over the Chagos Islands. Prior to Mauritius gaining independence, the UK granted the United States the authority to develop a military base on the Chagossian island of Diego Garcia. As part of this process, 1,360 Chagossian inhabitants were evicted from Diego Garcia and relocated to Mauritius or the Seychelles through the mid-1960s and early 1970s (Appleby, 2015; Harris, 2014a, 2014c). The legal arrangements for the BIOT, and between the UK and US, resulted in fewer legal barriers to US military activity on Diego Garcia, and the relative flexibility made it among the most valuable of US military assets (Harris, 2014a; Sand, 2009a, 2009b). Yet, the Chagossians

tirelessly petitioned for the right to repatriate Diego Garcia through legal appeals to the UK High Court as well as the European Court of Human Rights, which, despite a few key victories, were unsuccessful. During the petitions for the right of Chagossians to repatriate, which were ongoing from 2000—2012, scientists became increasingly interested in marine spaces within the BIOT, and through advocacy work alongside environmental organizations, convinced the UK Foreign and Commonwealth Office to declare an entirely no-take LMPA in the waters surrounding Diego Garcia in 2010. The arrangements of the Chagos MPA, while prohibiting fishing, permit continued military activity by the US (Harris, 2014a). However, in 2013, Mauritius petitioned the UK's authority, which a Tribunal of the Permanent Court of Arbitration in The Hague agreed to consider. The government of Mauritius not only questioned the UK's jurisdictional ability to shift the rationale for the BIOT from military to conservation purposes, but also contested the LMPA's 'no-take' policies, as they covered traditional Chagossian fishing grounds. In 2015, the Tribunal of the Permanent Court of Arbitration found that the designation of the Chagos MPA was in violation of the United Nations Convention on the Law of the Sea (UNCLOS) Article 192. Interestingly, the ruling hinged on the on the fishing rights of citizens of Mauritius and does not mandate repatriation of Chagossians to Diego Garcia (Appleby, 2015). The arbitration clearly demonstrates how LMPAs can intersect with existing geopolitical contexts and engage political processes at the highest levels of social organization.

The literature shows that several Pacific LMPAs under US jurisdiction also have multilevel geopolitical dimensions. Rieser (2011) argues that the Papahānaumokuākea Marine National Monument (PMNM), est. 2006 through authority under the US Antiquities Act as the Northwest Hawaiian Islands Marine National Monument, has set several legal precedents. First, former President Bush took precautions to ensure that the designating proclamation (Proc. 8031) did not contain language which could be used as a precedent for non-US coastal states to draft legislation impeding US military vessel travel. Next, though Rieser argues against US 'territorialization' of the Pacific as primary motive for and/or outcome of the PMNM, she does highlight that the legal rationale for the US's claim to waters around the

Northwest Hawaiian Islands (NWHI) as part of its EEZ was not entirely clear. The US's 1976 Fishery Conservation and Management Act (16 U.S.C. §§ 1801-1802, 1811) establishes a 200nm fishery protection zone around all US territories and insular areas, which permits Coast Guard surveillance for unlawful fishing. Since 1983, the US has drafted maps that include the waters surrounding the NWHI as part of the federal EEZ, based on former President Regan's Proc. 5030, which claimed a 200nm EEZ extending from all territorial baselines. Yet, this inclusion has a questionable rationale under the United Nations Convention on the Law of the Sea (UNCLOS). Importantly, though the United States is not a signatory to UNCLOS (UN, 2018), it does often rely on UNCLOS in policy formation (for example, see, Buck, 2011). As Rieser (2011) explains, under UNCLOS, the US does not hold title to 'archipelagic waters' within the State of Hawai'i, as the US is a predominantly a continental nation-state. Moreover, because the NWHI are uninhabited, and the majority have no known archeological record, they may qualify as 'rocks' under UNCLOS, and therefore do not include an EEZ. The US has not clarified the rationale for claiming an EEZ around the NWHI. However, in Proc. 8031, the US did not claim authority to the NWHI as part of the EEZ; rather, Proc. 8301 specifies that the Secretaries of Interior and Commerce to manage the PMNM in a manner that is consistent with EEZ authority. Additionally, Rieser (2011) notes that the Bush Administration was careful to seek acceptance of the PMNM from wider international authorities, seeking a 'Particularly Sensitive Sea Area' (PSSA) designation from the International Maritime Organization (IMO) shortly after the PMNM was established. The PMNM has also been inscribed as a UNESCO World Heritage Site. Yet, argues Rieser, these actions should not be viewed as precedential in terms of the US's EEZ claim in the NWHI, but instead demonstrate how the PMNM may help to clarify some of the complexities in global oceans governance. For example, the IMO and UNESCO, through dis/approval of PSSAs and World Heritage designations, may serve as a future check on when states take liberties with authority in LMPA designation (Rieser, 2011). In other words, the interactions between the PMNM and international law, policy, and practice further demonstrate that LMPAs hold the power to engage political processes at the

highest levels of social organization and contribute to evolving interpretations of international marine governance agreements.

Another US LMPA in the Pacific, and the subject of this thesis, the Marianas Trench Marine National Monument (MTMNM), is shown to have complex political dimensions at the national and local levels. The MTMNM, est. 2009, is located in the US insular areas of Guam and the Commonwealth of the Northern Mariana Islands (CNMI), and it has led some to question the ‘benefit’ of expedience (Brax, 2002; Craig, 2006) in using the US Antiquities Act to designate LMPAs (Briggett, 2009; Laemmle, 2010). Laemmle (2010) argues that the MTMNM designation process allowed the Bush Administration to easily ignore local-scale public opposition within the CNMI and Guam, a move that would have been much more difficult under the US National Marine Sanctuaries process, which requires a public comment period for all designations. Yet, Gruby et al. (2017) show the designation intersected with ongoing struggles for regional sovereignty, with mixed results. Since entering into commonwealth status with the US in the 1970s, the CNMI had attempted to assert its sovereign authority over submerged coastal lands through various legal appeals and Acts of the Commonwealth Government, which were unsuccessful. However, through the designation process of the MTMNM, high-ranking government officials within the CNMI were able to negotiate directly with the Bush Administration, exchanging support for the LMPA for several conditions, including control of the contested lands. Though we lack data to definitely establish the linkages between the LMPA designation was and the US Congress’ willingness to convey these lands, the LMPA designation process did open a window of opportunity for the CNMI to assert this condition to the highest US political authorities. However, this potential ‘victory’ for the CNMI was tempered by the inclusion of a conservation easement on the portion of the lands within the MTMNM boundaries (Gruby et al., 2017). LMPAs have shown complex political dimensions in other territorial regions as well. Gruby et al. (2017) also demonstrate how an LMPA designation in Rapa Nui, a special territory of Chile, included

political processes which allowed the indigenous Rapanui community to meaningfully engage in broader oceans governance decision making.

Yet, there is still much to know about the various geopolitical dimensions of LMPAs. Recent scholarship has argued that LMPAs, as an international norm in conservation, have spread primarily due to ‘bottom-up’ diffusion at the community and national levels, rather than through ‘top-down’ multilateral processes (Alger & Dauvergne, 2017). While this argument does contribute to our overall understanding of the geopolitical dimensions of LMPAs, Alger & Dauvergne (2017) fail in connecting their analysis of LMPAs’ geopolitics to all scales of political social order, especially in the case of US Marine National Monuments. They present the US Antiquities Act as a “creative alternative” (p. 38) to other LMPA designation processes and characterize the MTMNM as a “win-win” LMPA (in terms of conservation benefit with little contestation from industry), “even for [...] conservative [...] Bush” (p. 40). Yet, they base these conclusions primarily on interviews conducted with high-ranking members of the ‘advocacy coalition’ referred to by Leenhardt et al. (2013) – namely, executives and senior officials of international NGOs engaged in advocating and mobilizing LMPA designations (Alger & Dauvergne, 2017). Others, (see O’Leary et al., 2018), have argued that the geopolitical dimensions of LMPAs are nearly identical to those of conventional MPAs while rebutting criticisms of the model to assert LMPAs’ marine conservation value. However, as the body of empirical data on the geopolitical dimensions of LMPAs grows, so too will the discourse on LMPAs – beyond narratives of ‘win-win’ or back and forth debates about conservation outcomes – to a practical understanding of how to best leverage the model toward success.

1.2.3 Rights and equity

Social science on LMPAs has identified opportunities for marginalized groups to have increased presence in and authority over marine spaces (Leenhardt et al., 2013), as well as raising concerns for how human uses and values of marine spaces are conceptualized within LMPAs (De Santo, 2013; Gruby et al.,

2016) and social justice (De Santo, 2013; Richmond & Kotowicz, 2015). Even so, there has been an early (Balmford et al., 2004) assumption that, relative to conventional MPAs, LMPAs will engage fewer of the complex dimensions of human rights, equity, and well-being, which is perpetuated in newer literature (Alger & Dauvergne, 2017; O’Leary et al., 2018). Yet, there is a growing body of social science research demonstrating that LMPAs present both costs and opportunities in these areas.

The Chagos MPA, arguably one of the most publicized and contested LMPAs in terms of rights and equity (De Santo, 2013), is a telling example. As previously discussed, UK authorities evicted Chagossians from the island to Diego Garcia to make way for a strategic US military base; and, as some have argued, the Chagos MPA was a strategic move to ensure further military control of the island (De Santo et al., 2011; Harris, 2014a, 2014b; Sand, 2009a, 2009b, 2012). As described by De Santo et al. (2011), from the perspective of human rights, the Chagos MPA, in effect, “sustain[s] the injustice that the previous removal of these people represent[s]” (p. 258). Yet, though the Chagos MPA designation and subsequent legal appeals for repatriation by Chagossians (Appleby, 2015; Harris, 2014a) have served to perpetuate a situation described as, “one of the worst violations of fundamental human rights perpetrated by Britain in the 20th century” (Snoxell, 2011, p. 5), the rights-based dimensions of the Chagos MPA are also nuanced. In a 2015 ruling, the Tribunal of the Permanent Court of Arbitration found the Chagos MPA in violation of UNCLOS Article 192, ultimately ruling to advance the rights of Mauritians to historical fishing grounds. The ruling ultimately resulted in mixed outcomes; on the one hand, while it did give legal footing to the fisheries use rights of the BIOT among residents of Mauritius, it did not advance Mauritian or Chagossian claims to sovereignty over Diego Garcia (Appleby, 2015). The literature reflects similar mixed outcomes for equity and access within the MTMNM. As demonstrated by Richmond and Kotowicz (2015), cultural connections and a desire to maintain historical uses were a primary concern for regional stakeholders within the MTMNM designation process. Owing to the remoteness of the MTMNM relative to the populated islands within the Marianas chain, there was an assumption of limited (if any) direct human

uses of the waters included in the LMPA. However, these assumptions underestimated both the frequency and importance of cruises to the remote northernmost islands, which sparked controversy both during the LMPA designation and fisheries rulemaking processes. Ultimately, this led to perceptions of restricted access within the MTMNM, with implications for equity and justice for people within the Mariana Islands, despite allowances for recreational, sustenance, and traditional indigenous fishing within the LMPA boundaries (Richmond & Kotowicz, 2015).

Even so, there is emergent scholarship on LMPAs' potential ability to elevate the rights of marginalized groups. According to Gruby et al. (2017), in 2015, when Chilean President Michelle Bachelet made the an intended LMPA around the island of Rapa Nui public, she also made clear that Chile would only move forward with the support of the Rapanui people. The LMPA proposal ended up intersecting with a separate negotiation regarding the Rapanui community's rights in both terrestrial and marine environments. The latter was transformed by its interaction with the LMPA process as previous territorial negotiations did not include the administration of the sea. Following the LMPA proposal, Rapanui claims to territory expanded to the entire 200 mile marine EEZ surrounding Rapa Nui. Although Rapanui rights to the sea have not yet been legally established, "discussions regarding the possibility for large-scale marine conservation have expanded Rapanui claims to marine space and the right to manage it" (p. 424).

1.2.4 Social outcomes in LMPAs

LMPAs have shown social outcomes, some of which have already been addressed, and there is overlapping information regarding some offered in this section. Gruby et al. (2017) conceptualize social outcomes of LMPAs as being comprised of perceptual and material outcomes, which may include both social change processes and impacts. Many of the above sections address change processes and/or contextual features contributing to social outcomes within LMPAs. While some have argued that many of the social features of LMPAs (O'Leary et al., 2018) and their associated social outcomes are similar to

those of conventional MPAs, others have identified unique outcomes (Gruby et al., 2017). Specific LMPA sites have intersected with high-level political processes, which have resulted in both gains and losses for territorial sovereignty (Gruby et al., 2017), offered mechanisms for clarification and interpretation of practices in international law (Rieser, 2011), and opened opportunities for traditional and indigenous claims to marine resources (Appleby, 2015; Gray et al., 2017). Gruby et al. (2017) demonstrate additional social outcomes from the a proposed LMPA, the Bermuda Blue Halo Initiative, a longer-standing LMPA, the Phoenix Islands Protected Area (PIPA), and a newer LMPA, the Palau National Marine Sanctuary (PNMS). Negotiations within the Bermuda Blue Halo Initiative, an effort to mobilize an LMPA in the UK territory of Bermuda, increased community tensions and concern for the Bermudian EEZ's inclusion in other marine conservation initiatives. Ultimately, this influenced the decision to withdraw the EEZ from conservation efforts within the Sargasso Sea. PIPA, est. 2008, has increased both national pride within Kiribati and the I-Kiribati people's cultural connections to the islands included in the LMPA, which are approximately 800 miles from the most populous areas of the island nation. These social outcomes were closely tied to an influx of interest in Kiribati due to the LMPA designation. Within the Palau, the PNMS has resulted in an opportunity to reorganize management of the EEZ for the benefit of Palauan people, with the potential for several economic and geographic impacts (Gruby et al., 2017). Kotowicz et al. (2017) have demonstrated that the general public in the Mariana Islands have low awareness of the MTMNM, yet are generally supportive. Moreover, they show that most Marianas residents do not feel that the MTMNM has had a large effect on the individual or community level, and that the level of knowledge about the MTMNM varied between fishers and non-fishers. These findings add depth of understanding to social outcomes of the MTMNM, as much of the literature on the LMPA has characterized aspects of the designation process as contentious (Gruby et al., 2017; Richmond & Kotowicz, 2015), or argued that the LMPA designation ignored public opinion (Laemmle, 2010). LMPAs may hold the potential to impart social outcomes at levels of organization higher than is typical with conventional LMPAs. Moreover, the social

outcomes of LMPAs have been identified as an area warranting further research (Christie et al., 2017; Gray et al., 2017).

1.2.5 Governance of LMPAs

Additionally, there is emergent study of LMPA management. Social scientists have raised questions about the conservation effectiveness of LMPAs due to the inherent difficulties in monitoring activities and enforcing regulations in remote ocean spaces (De Santo et al., 2011; Leenhardt et al., 2013). These challenges have led some to argue that LMPAs are an appropriate tool for certain conditions, and should not be viewed as a marine conservation panacea (Wilhelm et al., 2014). Others have argued that strong management and research networks can be essential in overcoming these challenges (Friedlander et al., 2016). Still others argue that these challenges are not unique to LMPAs, and, with the advancement of monitoring and surveillance technologies, such challenges are diminished (O’Leary et al., 2018).

In sum, it is evident that a full understanding of the human dimensions of LMPAs is still emerging. Moreover, there is a relative paucity of research on the range of social outcomes within LMPAs, though examples have been addressed above. The need for further research is recognized within the literature, and there is a growing call to expand knowledge of the ‘people-centered’ aspects of LMPAs in order to assure the model’s success (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016).

1.3 Research objectives

My thesis contributes emergent scholarship on the human dimensions and social outcomes of LMPAs through an in-depth case study of the MTMNM, an LMPA in the US insular areas of the Commonwealth of the Northern Mariana Islands (CNMI) and Guam. The length of establishment of the MTMNM, est. 2009, has opened a window to understanding a larger suite of both human dimensions and

social outcomes than newly designated LMPA sites. Additionally, the CNMI and Guam exhibit characteristics common to many LMPAs that will broaden the relevance of my findings. It is common for LMPAs to be established in and around small islands with colonial histories and various territorial arrangements with more powerful states (Gruby et al., 2016). Therefore, the MTMNM case will be broadly relevant by giving a richer understanding of how the common conditions of colonial histories and territoriality contribute to social outcomes of LMPAs. Moreover, the MTMNM management plan was finalized in September, 2016, but is still awaiting broad-scale implementation, which does not allow for study of the effects of active management. However, this fact not only offers additional insights into how delays in management planning can affect both the human dimensions and social outcomes of LMPAs, but also indicates that my findings may inform the ongoing processes of management planning and implementation. I have two primary research objectives which are addressed within my thesis:

1. Document and describe the human dimensions in a longer-standing, controversial LMPA.
2. Document and thoroughly describe the social outcomes of the MTMNM.

1.4 Thesis structure and methodological approach

My thesis includes two empirical chapters, as well as a conclusion chapter. The first empirical chapter (chapter 2) is an applied report written for the conservation practitioner community working on the MTMNM and large marine protected areas more generally. The applied report will contribute to a broader project on the Human Dimensions of Large Marine Protected Areas (Dr. Rebecca Gruby, PI) which empirically scopes the human dimensions of five LMPAs around the world. The second empirical chapter (chapter 3) is a manuscript which I will submit for publication in a peer reviewed journal. The manuscript presents a qualitative case study focusing on social outcomes of the MTMNM. The conclusions chapter (chapter 4) draws out lessons which can be taken from the MTMNM case and how these lessons can be interpreted within LMPAs more broadly.

There are a few important notations about my research and the content of the first two empirical chapters (chapters 2 and 3). First, I entered the Human Dimensions of LMPAs project in the spring of 2016, shortly after accepting an offer of admission to Colorado State University. At this point, data collection for MTMNM case as part of the Human Dimensions of LMPAs project was complete. Both the report and the manuscript are informed by interrelated research questions and theoretical foci derived from the Human Dimensions of LMPAs project and informed by my analysis of the project data. While chapters 2 and 3 fulfill separate research objectives and engage different foci, which are outlined below, there is some overlapping content in the methods, background, and findings within these two chapters. While I provide a brief overview of methods below, I go into depth in Chapter 3. I also provide in-depth background on the case study context within each of these chapters.

1.4.1 Objective 1: Human dimensions of the MTMNM (Chapter 2)

Though some proponents of LMPAs have characterized them as lacking human dimensions and/or assumed that these dimensions lack importance, a subset of human dimensions themes have been identified as important areas for research. These include “scoping of human dimensions, governance, politics, and social and economic outcomes” (Gruby et al., 2016, p. 4). These themes have emerged in the literature in various ways (see 1.2 Scholarly narratives on the human dimensions of LMPAs). The case study of the MTMNM is part of a larger project which investigates the human dimensions of LMPA proposals or designations in five diverse sites – the Marianas Trench Marine National Monument (CNMI and Guam), the Phoenix Islands Protected Area (Kiribati), the Palau National Marine Sanctuary (Palau), the Rapa Nui Multiple Use Marine Protected Area, and a stalled attempt to establish an LMPA in Bermuda. This broader project produced a descriptive report of the human dimensions issues for each site that is aimed at an applied audience including: conservation practitioners and protected area managers; local, national, and international NGOs; government agency representatives and divisions; and community

members and interest groups. The report distills research findings in the human dimensions themes that have been identified as important areas for research (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016). Specifically, the report focuses on the following:

- Stakeholders: Here, the report focuses on scoping the most engaged, affected, and silent stakeholders in the designation process of the MTMNM. This section pays close attention to the uses, interests, and values of ocean space that are reported. Stakeholders may be groups, organizations, and individuals. Within this section, I give a roadmap of the human seascape, rather than focusing on stakeholder positions.
- Initiation: This section focuses on the process of the LMPA designation, including stakeholder participation and consultation. The initiation section also identifies divergent narratives in the LMPA designation process, which are potential indicators of conflict across various stakeholder groups.
- Design: This section of the report addresses how the LMPA boundaries were formed, as well as the rules for use/access, the structure of decision-making bodies, plans for monitoring and enforcement, financing, and changes to these over time.
- Politics: This section describes the range of positions in support of or opposition to the site, and why these opinions are held. It also addresses ambivalence expressed by some interviewees. Efforts to build support or resistance are included, as well as important context that was referenced by interviewees (e.g., the CNMI's colonial history, perceived increase in federalization, etc.).
- Outcomes: Here, the report focuses on outcomes in terms of those that were expected or promised within the designation process (e.g. increase in tourism revenue), outcomes that have been experienced or perceived as a result of the designation (e.g. unfulfilled promises associated

with the designation process), and ways in which interviewees define ‘success’ and ‘failure’ for the LMPA.

1.4.2 Objective 2: Social outcomes of the MTMNM (Chapter 3)

I draw from and build upon the report to produce a manuscript focusing on the social outcomes of the MTMNM. Literature on the social outcomes of conservation suggests that methods of conceptualization, empirical study, and analysis vary greatly (de Lange et al., 2016). Moreover, the social outcomes of protected areas remain significantly under-researched (de Lange et al., 2016; Jones et al., 2017, West et al., 2006). While empirical research on the social outcomes of LMPAs is beginning to develop (see 1.2.4 Social outcomes in LMPAs), there are still many unknowns regarding the social outcomes of LMPAs. These include: economic and fisheries resource benefits and costs across stakeholder groups; changes to socio-political relationships, territorial arrangements, and sovereignty; increases or decreases to social cohesion among local communities; implications for culture; and conflict, among others. My analysis of the social outcomes of the MTMNM contributes to the nascent body of literature on the outcomes of LMPAs and offers insight on how the social outcomes of LMPAs are shaped by contextual features of a given site. While the applied report will present a fairly high-level overview of the MTMNM outcomes, in this chapter I give a much more thorough, in-depth analysis of the outcomes of the MTMNM. Therefore, this manuscript will focus on one primary question: *What are the social outcomes of the MTMNM?*

Literature on conservation outcomes suggests there are various ways of conceptualizing social outcomes. These can be broadly categorized as material outcomes, e.g. changes to economy or food security (de Lange et al., 2016) and perceptual/symbolic outcomes, e.g. loss of cultural connections (West et al., 2006). Through a systematic review of literature on conservation outcomes, de Lange et al. (2016) demonstrate that empirical research on material outcomes of conservation interventions focuses on five

primary aspects of human wellbeing. These include outcomes related to: “material assets, health, social relations, security, and freedom of choice and action” (p. 328). Drawing from anthropological study of protected areas, West et al. (2006) offer additional ways to conceptualize social outcomes by introducing “conflict, power relations, and governmentality as they are connected to the process of protection” (p. 251) and attending to cultural and social connections to the natural world.

Within this case study, I will conceptualize social outcomes broadly, drawing from Gruby et al. (2017), who utilize a framework for understanding social outcomes established in the discipline of social impact assessment (SIA). As noted by Vanclay (2012a), though SIA frameworks are typically used to assess the social impacts of resource extractive development projects as required by NEPA, they can also be useful in understanding social outcomes resulting from conservation interventions. Importantly, social outcomes can comprise both perceptual/symbolic and material outcomes (Gruby et al., 2017; Vanclay, 2002). While the majority of studies of conservation outcomes have focused primarily on material outcomes (de Lange et al., 2016), I am focusing on both perceptual and material outcomes of the MTMNM case. As Vanclay (2002, 2012a) demonstrates, perceptions shape the reality of the individuals within the jurisdiction of a conservation intervention in ways that can affect their lives and how they engage with conservation (Vanclay, 2012a). Perceptions also take many forms including (but not limited to): perceived harms to health and safety, concerns over potential relocation, trust/mistrust in political and social institutions, attitudes toward a policy or project, and concerns for social wellbeing (Vanclay, 2002). Moreover, emergent research on the social outcomes of LMPAs has focused on relevant perceptions (Gruby et al., 2017; Kotowicz et al., 2017).

The SIA framework is helpful in understanding the social outcomes of conservation because it recognizes both perceptual and material aspects of social outcomes. However, the framework doesn't explicitly situate the intervention and resulting outcomes within the context specific to the setting, including: colonial history, territorial and power struggles, and culture. As West et al. (2006) demonstrate,

considering such context is essential because mechanisms for measuring the social outcomes of conservation and protected areas too often make “the social [...] seem less complex so it can fit into the new spatial productions of conservation” (p. 264). Instead, they argue, it is important to view protected natural spaces as “the historical sedimentation of symbolic and material processes,” (p. 264).

1.4.3 Methods

The primary sources of data for this study are 48 semi-structured interviews and documents that Dr. Gruby and a research assistant (Robbie Greene) gathered through 3.5 months of fieldwork in the CNMI, Guam, and Hawai’i as part of the Human Dimensions of LMPAs project. Interviewees were selected through purposive snowball sampling (Yin, 2016), a sampling technique in which key interviewees are identified and their knowledge of additional actors guides the sample. They targeted interviewees who were either closely connected to the LMPA process and/or part of a key stakeholder group. They also selected interviewees based on background document research and the researchers’ pre-existing relationships and knowledge of key actors in marine conservation and coastal management in the CNMI, Guam, and Hawai’i. Interviewees included representatives from: local government, NGOs, resource management agencies, conservation organizations, and businesses, as well as local scientists and cultural elders; federal agency managers and scientists from the USFWS, NOAA, and the US Coast Guard; and regional level managers in the Department of Defense, USFWS, and NOAA. Many of the federal agency employees are stationed in Honolulu, therefore Hawai’i was included as a field site. Data collection took place in the summer of 2015 and spring of 2016, before I matriculated at CSU. Gruby and Greene developed an interview guide to structure data collection across four themes which had previously been identified as important to the LMPA movement by LMPA managers, advocates, scientists, and donors. These themes were identified through a combination of literature review and collaborative event ethnography at the 2014 World Parks Congress. They included: scoping human dimensions, governance,

politics, and outcomes (Gruby et al., 2016). The interview guide was continuously adapted to collect data on additional issues that emerged through the fieldwork (Yin, 2016). In 2015-2016, before I joined the project, the Human Dimensions of LMPAs research team collaboratively developed an NVivo codebook for cross-site analysis of data to inform the site reports. Multiple rounds of inter-coder reliability trainings and discussions were held prior to coding to ensure that there was consistent interpretation of the codes' meanings among coders (MacPhail et al., 2016). I was brought on to the project in late spring of 2016, as codes were being finalized, and participated in the inter-coder reliability testing and refining of the coding framework. Data analysis for chapter 2 of this thesis was finalized in July, 2017. Therefore, chapter 2 primarily reflects details of the MTMNM as they were represented at the time of data collection. However, data analysis for chapter 3 continued through February, 2018. As such, chapter 3 also reflects on ongoing and developing processes within MTMNM case, as represented in secondary documents gathered between July, 2017 and February, 2018. These details on my role in the Human Dimensions of LMPAs project, in addition to the timeline for data analysis, offer a primer and starting point for the methods described further in chapters 2 and 3.

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Marianas Trench Marine National Monument

The Commonwealth of the Northern Mariana Islands & Territory of Guam

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Executive Summary: This publication summarizes results from one of five case studies conducted as part of a 3-year research collaboration among social scientists at the Colorado State University, Duke University, and the University of Guelph. The overall goal of the project is to contribute new understanding of the human dimensions of LMPAs, particularly in terms of stakeholder perceptions and interests, governance, politics, and social outcomes. Our five case studies include: a stalled attempt to designate an LMPA in Bermuda (Bermuda Blue Halo Initiative); an recently approved LMPA in Rapa Nui (Easter Island, Chile); a recently declared LMPA in Palau (Palau National Marine Sanctuary, est. 2015); and two longer established LMPAs in Kiribati (the Phoenix Islands Protected Area, est. 2008) and in the CNMI and Guam (the Marianas Trench Marine National Monument, est. 2009). As our selection of cases illustrates, we believe there is much to learn about LMPAs not only when they are implemented, but also through efforts to establish them. A core commitment of the project is to generate and share knowledge to inform decision-making and debates within case study sites and globally. Toward this end, we have prepared reports like this one for each our case study sites. These reports are intended to summarize key findings for communities of practice working in marine conservation. All reports will be shared on our project website, <https://humansandlargempas.com/>, along with other publications and outputs that will discuss these issues and others in further detail.

As one of the longer-standing cases in our collaborative study, the Marianas Trench Marine National Monument (MTMNM) offers a window to explore the broad suite of human dimensions and social outcomes that can arise in an LMPA site over time. In-depth understanding of the key stakeholders and positions; the designation and design processes; relevant politics; resulting perceptions and outcomes; and the influence local contextual factors such as colonial histories and current territorial arrangements within the MTMNM case is timely. Findings from this case study can aid in the ongoing development of a Final Management Plan for the MTMNM and can be utilized in planning for future LMPA sites. In the proceeding sections, we give a brief overview of the history of the Mariana Islands, with emphasis on key interactions with the U.S. federal government. We outline the methods of data collection and give details on the roles of stakeholders engaged in monument use, designation, and management. We go on to discuss the MTMNM's initiation, support, and opposition as they were characterized by study interviewees. Next, we give detailed information on the monument's design. We close with a discussion of the major outcomes from the MTMNM and recommendations for future LMPA planning.

Introduction: The MTMNM is located in the Mariana Archipelago which is currently comprised of two U.S. insular areas: the Commonwealth of the Northern Mariana Islands (the CNMI) and the territory of Guam (Fig. 2.1, adapted from Allen & Amesbury, 2012). Declared by Presidential Proclamation 8335 in January 2009, the MTMNM is one of two longer-established sites included in our study. The MTMNM encompasses roughly 250,487km² of submerged lands and waters

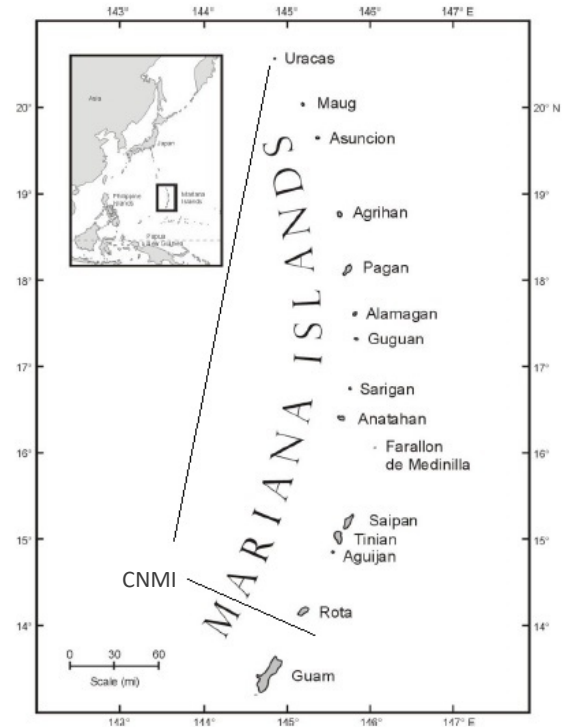


Figure 2.1 Mariana Islands

which are divided into three distinct management ‘units’ (see Fig. 2.2, adapted from NOAA Fisheries PIRO, 2013): the Trench Unit, which includes the submerged bottom features of a portion of the Mariana Trench; the Volcanic Unit, which includes submerged lands within 1 nautical mile of 21 designated undersea volcanoes and thermal vents (starred in Fig. 2.2); and the Islands Unit, which includes the waters and submerged lands extending 50 nautical miles from the shoreline of the three northernmost islands in the CNMI – Farallon de Pajaros (also known as Uracas), Maug, and Asuncion, which are currently uninhabited (U.S. Fish and Wildlife Service,

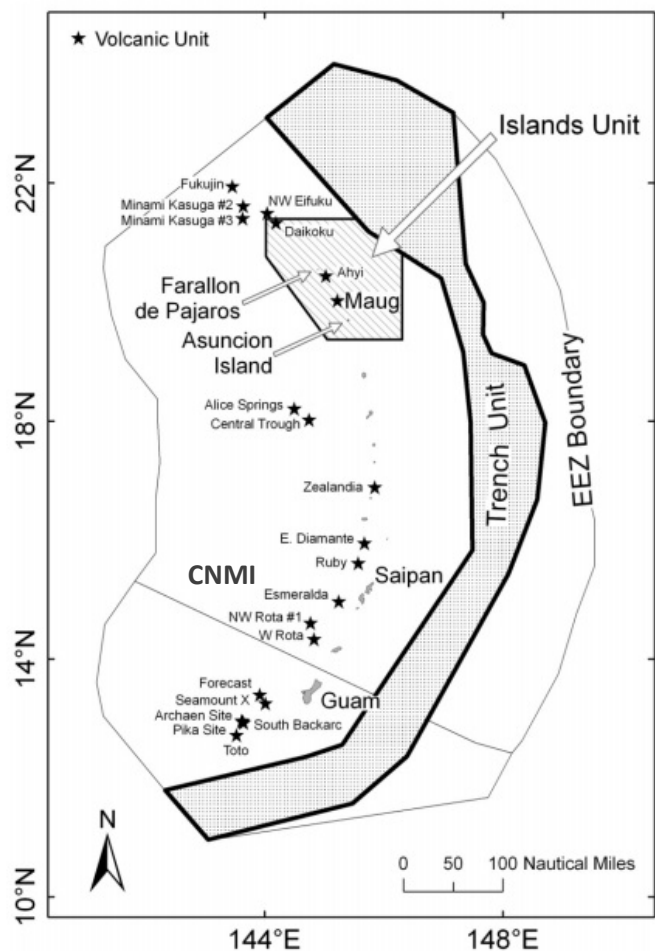


Figure 2.2 Marianas Trench Marine National Monument

2017). Small portions of the Trench and Volcanic Units extend into Guam’s EEZ, however the majority of the monument is within the EEZ of the CNMI. Two U.S. federal agencies – the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) – have primary management responsibilities for the MTMNM. The Marianas Trench Monument Advisory Council (MTMAC) serves as an advisory body to monument management and planning.

In order to understand the human dimensions of the MTMNM, it is necessary to situate it within historical context. Indigenous peoples known today as the Chamorro have inhabited the archipelago since roughly 2000 B.C. The archeological record indicates that the cultural and linguistic similarities throughout the Mariana Islands were made possible by ocean-going canoes, and that the Chamorro fished for reef

and pelagic species, among others (Allen & Amesbury, 2012). Caroline Islanders (Carolinians) had historical contact with the Chamorro through travel and trade, and established the first Carolinian settlement in the Marianas in the mid-1800s (Allen & Amesbury, 2012). The groups experienced first contact with Europeans through the Spaniard Magellan's stop in Guam in 1521 (Allen & Bartram, 2008). The archipelago has a complex colonial history dating from the 1500s, including periods of control by Spain, Germany, Japan, and the United States (Allen & Amesbury, 2012; Allen & Bartram, 2008). In 1898, the U.S. "quietly seized Guam" from Spain (Owen, 2010, p. 308), but did not do so with the other Mariana Islands. During WWII, the U.S. targeted the region as battleground to fight the Japanese and, once the U.S. had secured the archipelago, as a strategic outpost due to its proximity to East Asia (Hanlon, 1998). Following the war, a UN trusteeship gave the U.S. administrative control of the region under the Trust Territory of the Pacific Islands (TTPI). In 1969, Micronesian congressmen within the TTPI began negotiating political status with the U.S. government. Representatives from the Northern Mariana Islands saw entering into commonwealth status with the United States as a pathway to development while maintaining a higher degree of autonomy relative to territory status (Hezel, 2003). The Covenant to Establish the Commonwealth of the Northern Mariana Islands with the United States was signed in 1975, ensuring that the CNMI's "right of self-government will not be unilaterally withdrawn by Congress" (7 FAM 1120). Until relatively recently, the CNMI was the only U.S. territory without sovereign control over submerged lands, and engaged in lengthy legal battles with the United States to gain this control (for further detail, see Gruby et al., 2017).

Guam has had a distinct political history. Prior to the TTPI negotiations, Guam's Congress had petitioned for local governance in status negotiations with the United States (Owen, 2010). Guam was designated a territory of the United States through the Organic Act of Guam in 1950 (H.R. 7273). The act granted U.S. citizenship to residents of Guam, but ensured that the United States was sovereign on the island. Under these territorial arrangements, citizens of the CNMI (Hezel, 2003) and Guam (Owen, 2010)

are not permitted to vote in national elections and, though they have congressional delegates, the delegates do not have full voting rights.

The territorial statuses of the CNMI and Guam limit their power to influence U.S. federal decisions. Several controversial federal actions took place around the time the monument was proposed, including a regional military buildup, shifts in immigration controls, and enforcement of the federal minimum wage. Tensions regarding these and other federal actions, in addition to the longstanding conflict regarding control over submerged lands, had implications for the way in which local stakeholders and government officials perceived and interacted with the federal proposal for a new marine national monument.

2.1 Methods

Data for this study were gathered through 3.5 cumulative months of fieldwork in the CNMI, Guam (summer 2015), and Hawai'i (early 2016). Primary and secondary documents were collected through early July, 2017. As is true of research on any policy initiative, results are current to the end of the study period, which in our case was early July, 2017. Details on methods are provided in Table 2.1.

Table 2.1 Data Collection for MTMNM Case Study

Date	Researchers	Location	Data Collected	Number of Interviewees
May - Aug 2015	Robbie Greene, Rebecca Gruby	CNMI	Interviews, Documents	35
May - Aug 2015	Robbie Greene, Rebecca Gruby	Guam	Interviews, Documents	6
Jan - Feb 2016	Robbie Greene	Hawai'i	Interviews, Documents	9
Aug 2016 - July 2017	Katie Wilson	Colorado	Documents, follow-up communication	N/A

Overall, the team conducted 48 semi-structured interviews regarding the MTMNM with 50 interviewees³ (Table 2.2). Interviewees included individuals from a variety of sectors who have been closely involved with the MTMNM during the initiation and/or implementation phases. Though small portions of the Trench and Volcanic Units extend into Guam’s EEZ, the MTMNM was a more salient issue within the CNMI; therefore, research was focused in the CNMI. The team conducted additional interviews with federal agency managers based in Honolulu. The majority of interviewees (72%) were officials from the governments of the CNMI and Guam (local government) or US (federal government). Local government interviewees included elected officials at various levels of organization and agency staff. Federal government interviewees included agency staff. Interviews focused on perceptions and experiences related to the MTMNM, including political and conservation issues, initiation and design processes, management planning, monitoring and enforcement activities, coordinated management efforts, and social outcomes. We did not interview key high-level political actors involved with the initiation and designation of the MTMNM, including former President George W. Bush; Jim Connaughton, Chair of the White House Council on Environmental Quality during the George W. Bush administration; and former CNMI Governors Benigno Fitial and Eloy Inos.

Table 2.2 Primary roles of interviewees

Primary roles ⁴	Description of roles	Number of Interviewees
Local Government	Elected officials, government agency staff, advisors	23
Federal Government	U.S. federal agency staff and managers	12
NGO	Local and global environmental NGO staff	6
Private Sector (e.g., Industry)	Fishermen, tourism operators	4
Researchers and Contractors	University researchers and consultants	3
Community Organizations	Staff, leaders of local organizations not focused on environmental issues	1
Informed Citizens	Other local individuals involved in or with knowledge of MTMNM	1
Total		50

³ Note that some of our interviews involved multiple interviewees.

⁴ Describes an interviewee’s primary role during the designation process. Many interviewees held multiple roles (e.g. local elected officials who was also a fisher and/or cultural leader).

2.2 Stakeholders

Direct uses of the areas protected by MTMNM are limited, both prior to and after designation. There are two National Wildlife Refuges (NWR) which protect seafloor features of the MTMNM – the Mariana Trench NWR (Trench Unit) and the Mariana Arc of Fire NWR (Volcanic Unit). Access to the NWR is restricted to those holding permits from the US Fish and Wildlife Service. So far, permits have been sought only by researchers, who are and were the primary users of these spaces. The water column is not included in the NWR, therefore there are no restrictions to vessel travel or commercial fishing within the waters above Trench and Volcanic Units. Fishing is restricted within the Islands Unit, however, as the water column is included in the unit's design.

As is true of many LMPA sites (Gruby et al., 2017), there was an early perception among monument advocates that the remoteness of the northernmost Mariana Islands and limited direct uses of the space would minimize conflict and contestation of a conservation proposal. However, this perception did not account for the full suite of stakeholders' varied and complex relationships to spaces ultimately included within the MTMNM. The 2010 U.S. Census estimates the CNMI's population to be 24% Chamorro, and 5% Carolinian; Guam's population is estimated at 37% Chamorro and 12% other Native Pacific Islander groups⁵. Throughout pre-history, the ancestors of these Chamorro and Carolinian residents sailed the Mariana Archipelago, fishing the waters and utilizing marine resources. Though the Islands Unit is currently uninhabited, Asuncion, Maug, and Farallon de Pajaros (Uracas) have historically had indigenous residents (Allen & Amesbury, 2012), with a community on Asuncion as recently as 1945 (Kotowicz & Richmond, 2013). Owing to the remoteness of the uninhabited islands, travel to the Islands Unit can be cost prohibitive. Fuel alone can cost between \$4,000 - \$15,000 for a single trip depending on the vessel. Direct uses of the Islands Unit by CNMI and Guam residents is thus limited to an average of 3.8

⁵ 2010 census data did not include estimates of Guam's Carolinian population.

trips per year⁶ (Richmond & Kotowicz, 2015). A 2012 survey showed that just 7% of respondents from CNMI and 8% from Guam had visited the three northernmost islands (Kotowicz et al., 2017). One federal official we interviewed stated that since rules on fishing were finalized in 2013, no permits have been issued for “traditional indigenous” fishing within the Islands Unit. Even so, maintaining the opportunity to fish within the three northernmost islands – even if the ability to do is limited – is culturally important for CNMI and Guam residents (Richmond & Kotowicz, 2015).

In Table 2.3, we give an overview of the key individuals and groups active in MTMNM designation or management. In addition to those listed in the table, other stakeholders include traditional leaders and organizations, informed community organizations and members, small-scale fishers and organizations, and tourism authorities and business owners. These stakeholders were engaged in monument support or opposition to varying degrees (for detailed information, see “Politics”).

⁶ Based on trips taken from 1979 – 2009.

Table 2.3 Stakeholders

Key Actors		Role in MTMNM Designation	MTMNM Authority & Responsibilities
U.S. Federal Government	President George W. Bush administration, White House Council on Environmental Quality (CEQ)	On January 6, 2009, Bush designated MTMNM via Presidential Proclamation 8335 eleven days before leaving office. CEQ Chair Jim Connaughton negotiated monument support with Governor Fitial prior to designation.	U.S. presidents have used authority under the Antiquities Act of 1906 to designate national monuments in federal lands and waters to protect “historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest” (2014).
	USFWS	The USFWS was not engaged in the MTMNM designation process, but was named as the primary managing agency by former Secretary of the Interior Dirk Kempthorne.	Primary management responsibility of the MTMNM. The USFWS manages the two NWR within the MTMNM – Mariana Trench NWR (Trench Unit) and the Mariana Arch of Fire NWR (Volcanic Unit) and grants access to the units via Special Use Permits. Access is requested primarily for research activities, though select commercial activities (e.g. photography, videography) may also be permitted.
	NOAA	The MTMNM was initially conceptualized and advocated in relation to NOAA’s National Marine Sanctuaries Program.	NOAA Fisheries has primary management responsibility for fisheries resources within the MTMNM. NOAA Fisheries’ Pacific Islands Regional Office (PIRO) issues permits to community residents of the CNMI and Guam for non-commercial fishing activities within the Islands Unit.
	Department of Defense (DOD)	The Bush Administration consulted with DOD as part of the designation process.	Proclamation 8335 requires the armed forces, including the Coast Guard, to act in a manner consistent with the proclamation as reasonable and practicable, but also includes a provision stating that “The prohibitions required by this proclamation shall not apply to activities and exercises of the Armed Forces” (Proclamation 8335). Both the DOD and US Coast Guard have seats on the MTMAC.
	United States Coast Guard	No clear role in MTMNM designation process.	
	Western Pacific Regional Fishery Mgmt. Council (WESPAC)	Primary external opponent of LMPA designation evidenced in 2008 letter to Bush Administration accompanied by 19 supporting documents, stating that a designation “ignores the wishes of the indigenous people of the CNMI” (Martin, 2008).	WESPAC members develop fisheries management recommendations for the EEZs of Hawai’i, American Samoa, Guam, and the CNMI. Rules are finalized by NOAA. WESPAC was engaged in developing fishing regulations within the Islands Unit.
Governments of the CNMI and Guam	Office of the Governor	Governor Fitial (CNMI) denied support of an LMPA in a December, 2007 letter to Pew. The governor pledged support after negotiations with CEQ in late 2008. Governor Camacho (Guam) supported Governor Fitial’s position in a 2008 letter to the Bush Administration.	The CNMI government is designated as a “cooperating agency” within Proc. 8335. This gives a consultative role in the management of the MTMNM as a whole and three designated seats on the MTMAC. To comply with federal law, all seats must be filled by government officials.

	Legislature	The CNMI legislature passed resolutions which intersected with the designation process: J.R. 16-04 asking for additional consultation; and J.R. 16-03 opposing the designation. The legislature of Guam supported the position of the CNMI government in a 2008 letter to the Bush Administration.	<p>In 2016, the US conveyed the CNMI government ownership of submerged lands 0-3nm from shoreline within Islands Unit (and other parts of the CNMI). The USFWS and NOAA will continue management responsibilities for this portion of the Islands Unit until the CNMI government chooses to take over these responsibilities, but they must manage these submerged lands in a manner consistent with the original proclamation.</p> <p>The government of Guam currently doesn't have authorities or responsibilities associated with the MTMNM.</p>
	Delegates to the U.S. House of Representatives	During the designation process, delegates Tenorio (CNMI) and Bordallo (Guam) engaged in designation process through letters of opposition to the Bush Administration.	
	Other Elected Officials (including municipal and island mayors)	Other elected officials within the CNMI and Guam engaged in designation process through letters to the Bush Administration, with mixed attitudes toward the MTMNM.	
	Agencies	Local government agencies (primarily in CNMI) were invited to discuss LMPA concept by Pew early in designation process.	
	Advisors and consultants	Governmental advisors and consultants (legal, environmental) engaged both directly, through publically expressing support/opposition, and indirectly, as advisors to actors directly involved in the negotiations.	
International NGOs	Pew Charitable Trusts (Pew)	Initiated discussion of LMPA in the CNMI and Guam. Funded economic and environmental scoping and research, advocacy and outreach.	No direct authorities, responsibilities
Local NGOs	Marianas Islands Nature Alliance (MINA)	Initially identified by Pew as a potential organization to spearhead advocacy, MINA declined involvement.	No direct authorities, responsibilities
	Friends of the Monument (FOM)	Local organization established and funded by Pew to support monument advocacy and outreach throughout the designation process.	No direct authorities, responsibilities

The proceeding sections are based on consistent reports and perceptions of interviewees. Our goal is not to give “the truth” of the MTMNM designation process, politics, and outcomes, but rather to document perceptions about them. Throughout, we do include facts about the MTMNM’s design, legal frameworks for designation, and stakeholder involvement. Due to the fact that the MTMNM was a more salient issue within the CNMI, we have focused this report primarily on the CNMI.

2.3 Process leading to the designation of the MTMNM

The idea for an LMPA in the Marianas – Interviewees gave various accounts for the initiation of the MTMNM, attributing the idea to Pew, the Bush Administration, and a small group of local actors. Some federal employees perceived the idea as originating from the Bush Administration, with Laura Bush as the initiator for President Bush’s interest in a “Blue Ocean Legacy”, and pointed to researchers on prior cruises in the Northern Islands and Marianas Trench as generating interest in the Marianas Archipelago. Local interviewees identified Pew as the initiator within the CNMI and Guam.

In early 2007, the former director of Pew’s Global Ocean Legacy program, Jay Nelson, approached elected officials in the CNMI regarding the creation of an LMPA within the Mariana Islands. Owing to a lengthy colonial history, ongoing struggles for self-determination in governance since World War II, recent federalization of immigration and labor regulations, and concern over an impending military build-up, many local government officials were wary of external initiatives that could result in decreased local control in the region. However, one elected official, former CNMI legislator Cinta M. Kaipat, took an interest in opening a dialogue within the wider community about the potential benefits of an LMPA and worked alongside Nelson to raise awareness through local media outlets. Kaipat’s attempts to facilitate a meeting between Nelson and Governor Fitial were unsuccessful. In December of 2007, Nelson wrote to Governor Fitial asking for the government’s support of an LMPA designation. The letter states that the National Marine Sanctuary Program (see Fig. 2.3) would be the principal federal agency involved in

monument management. In March of 2008, Governor Fitial responded to Nelson, declining support for an LMPA designation due to concerns that it may limit the CNMI government in “carefully, prudently and strategically balancing economic, environmental, social, cultural, and other considerations in deference to [...] local constituents and stakeholders” (Fitial, 2008).

Despite the lack of endorsement from Governor Fitial, Pew supported the creation of a local organization, FOM, to help coordinate outreach, stakeholder meetings, and advocacy for the establishment of the monument. The group was comprised of CNMI residents and financially supported by Pew. FOM members reached out to government officials and attempted to mobilize support from local residents through the media, public discussion forums, presentations, and promotional materials about the potential benefits of an LMPA. One former member of FOM describes their efforts thus: “We did meet with some of these leaders, and the sad fact of it is that we really tried to get a public dialogue going. We tried to prepare the whole community, to understand why is it we feel it's important to consider having this monument.”

Marine National Monument (MNM) vs. National Marine Sanctuary (NMS)

Though the MTMNM was designated as a Marine National Monument (MNM), it was initially conceptualized and largely advocated in connection to NOAA's National Marine Sanctuary (NMS) Program. In the December, 2007 letter to Governor Fitial, Jay Nelson states that NOAA's NMS Program would be the principle federal agency and would coordinate management planning with the CNMI. Sample budgets for NOAA's Hawaiian Islands Humpback Whale NMS were referenced during the monument initiation process.

NMS are designated through an act of Congress and have a budget allocated at the time of designation. The process is considerably lengthier than MNM designation, requiring extensive public engagement periods. MNM designation is a unilateral action by the President given authority under the Antiquities Act.

Local and non-local interviewees recognized that CEQ had an interest in speeding up the designation process in order to secure a “Blue Legacy” for outgoing President Bush. Many interviewees characterized this as the primary reason for a MNM designation. Both supporters and opponents of the MTMNM indicated that an NMS designation would have been favorable to a MNM. Some key stakeholders were actively supporting an NMS designation at the time of research, while others fear that an NMS may expand the MTMNM boundaries and/or undermine local resource management authority. Friends of the Marianas Trench, a FOM spin off group, submitted the petition to NOAA in December, 2016 for consideration of an NMS overlay within the monument. In early 2017, NOAA placed the MTMNM on the national inventory for possible sanctuary designation.

Figure 2.3 Monuments vs. Sanctuaries

Tensions build & promises are made – The monument proposal was deeply controversial among key stakeholders. Opponents pointed to the process of initiation and promotion, a general mistrust of non-local actors, and disregard for the CNMI government’s opposition to the proposal as primary reasons for their position. Much of the opposition came from individuals within the CNMI government, echoing Fitial’s concerns⁷. To show support for Governor Fitial’s position, local government opponents denied requests from Pew to discuss the LMPA with various agencies. A number of opponents also had strong ties to WESPAC and a desire to continue fisheries management through the council. One former government official offered the following perspective on the initiation process:

“The [local] administration back then sort of felt like something was going on that they weren’t even [...] consulted. So like I said earlier, had the federal government come in and asked the local government, I’m sure that things would be a little more smooth. But no – it went the other way through Pew. I don’t know if they were in cahoots with Pew, but it was Pew that was driving the [...] social side so it came to a point where there was a lot of tugging going on between the government and [...] this idea of the creating of the monument.”

As FOM mobilized an increasingly large base of public support for the monument proposal, staunch opposition continued from Governor Fitial’s Administration and CNMI government agencies, individual fishermen and fisher organizations in the CNMI and Guam, WESPAC, and some community members. In mid-2008, CEQ Chairman, Jim Connaughton, took over primary negotiations for the proposal. Although it was not required under the US Antiquities Act, CEQ sought to gain the support of the local government, which claimed to support marine conservation in concept but continued to oppose the LMPA (see “Politics”). In October 2008, CEQ organized a large, open public meeting in the CNMI. Those in opposition to the MTMNM demonstrated their positions with “No Pew Monument” signage, while

⁷ There was little support for the LMPA concept within local government (see “Politics”). Kaipat’s vocal support of an LMPA designation was a departure from the prevailing narratives among elected officials.

supporters wore orange shirts promoting the proposal (see “Politics”). Meeting attendees were broken into small groups and comments, suggestions, and expectations for the monument were recorded.

Eventually it became evident to local government officials that the designation of an LMPA was inevitable. Through negotiations with Connaughton in late 2008, Governor Fitial agreed to the designation so long as certain conditions were met. Although there is no written record of these conditions, interviewees involved in the negotiations recalled that they included: co-management authority, local and indigenous access, a visitor’s center in the style of the National Park Service, conveyance of submerged lands from the US federal government to the CNMI, exclusive mineral rights for the CNMI, economic development and employment opportunities, and federal support for monument enforcement and monitoring. Since the designation, word about the negotiations has disseminated throughout the local communities. There is a broadly held perception that Connaughton promised to meet these conditions. However, some interviewees expressed doubt as to whether Connaughton actually promised to meet these conditions, or rather indicated that he would communicate them to President Bush. In either case, the conditions and Governor Fitial’s support of the proposal represent a critical moment in the designation process.

Having gained official support of Governor Fitial, President Bush designated the Marianas Trench Marine National Monument via Presidential Proclamation 8335 under the authority of the Antiquities Act eleven days before leaving office, in January 2009.

2.4 Design and management

Boundaries – The initial boundaries under discussion included all Northern Mariana Islands from Anatahan north. Early supporters of the LMPA rejected this idea as it would interfere with interests in resettling some of the Northern Islands. They also recognized the difficulty in gaining public support for protecting such a sizeable area, and suggested limiting the boundaries to the three northernmost islands

of Asuncion, Maug, and Farallon de Pajaros (Uracas). These islands were already designated as nature preserves by the CNMI Constitution (Article XIV: Natural Resources, Section 2), meaning that they could not be inhabited. While the protected areas established by Article XIV are entirely terrestrial, the preceding Section 1 specifies that marine resources shall be “controlled, protected, and preserved [...] for the benefit of the people” (“Commonwealth Law Revision Commission”). Article I, Section 9 ensures the right to a clean and healthful environment including waters. Owing to the CNMI’s supporting legislation, the three northernmost islands were seen as a logical choice for further protection. LMPA advocates assumed that a designation would complement existing conservation efforts.

Pew and FOM’s vision for the monument leading up to the designation was a LMPA extending 200 miles from the coast of the three northernmost islands – the entirety of the US’s EEZ. At the time, these waters were controlled entirely by the US federal government despite competing territorial claims from the CNMI. The final boundaries and access rules were adapted during closed door, late-stage negotiations between a small group of local government officials and CEQ.

Islands Unit – In the time leading up to the designation, discussions focused on the three northernmost islands of the CNMI, which were designated as the Islands Unit in Proclamation 8335. The FOM group advocated for a no-take monument, except for traditional subsistence fishing, including “the full Exclusive Economic Zone surrounding the islands of Uracas, Maug, Asuncion, encompassing the water column, the sea life and the geological features at the bottom” (Friends of the Monument, 2008). The final design of the islands unit is as follows:

- **Boundaries & Features** – submerged lands and waters surrounding Farallon de Pajaros (Uracas), Maug, and Asuncion up to 50nm from the shoreline.
- **Rules** – commercial fishing prohibited; permissions for non-commercial fishing (e.g. traditional indigenous, recreational) for community residents of the CNMI and Guam; fishers submit a log of

their catch within 30 days of each trip; access granted by NOAA Fisheries' Pacific Islands Regional Office (NOAA Fisheries PIRO, 2017).

Trench & Volcanic Units – The Trench and Volcanic Units were discussed as possible additions to the monument within closed door meetings between CNMI government officials and CEQ, and came as a surprise to almost everyone else. One monument advocate described her reaction to the units being included in Proclamation 8335: “We didn't know anything about it. [...] That was as much a shock to us as it was to anybody.” A federal manager echoes this: “I remember reading the email [...] when the three monuments were created [...] I thought ‘Holy shit! We got the Trench too!’”

CEQ's initial proposal for the units included the seafloor features as well as the water column with restrictions on fishing activities. CNMI government officials successfully contested the inclusion of the water column, arguing that the unique features of the units are on the seafloor and that pelagic fishing within the water column wouldn't impact the units. The current design of these units is as follows:

- **Boundaries and Features:**

Trench Unit: seafloor features extending to the northern (CNMI) and southern (Guam) edge of the US's EEZ; established as the Mariana Trench NWR January 16, 2009.

Volcanic Unit: seafloor features extending 1nm from 21 underwater volcanoes and vents; established as the Mariana Arc of Fire NWR on January 16, 2009.

- **Rules (both units)** – water column not included, so no restrictions on vessel passage or fishing activities; access to protected areas is granted by the US Fish and Wildlife Service via Special Use Permits (SUPs) which have been requested by domestic and international researchers (US Fish and Wildlife Service, 2014).

Proclamation 8335 includes a special provision stating the “prohibitions required by the proclamation shall not apply to activities and exercised of the Armed Forces,” but also states that they should conduct their activities in a manner consistent with the protections as “reasonable” and “practicable.” Federal employees noted that this was a common provision within US Marine National Monuments, and that former President Bush did not view military actions and conservation as incompatible. However, this was a cause for concern among some interviewees, which saw it as contradictory and potentially harmful to the health of the MTMNM.

Management and decision-making – The proclamation instructs coordinated management between the Secretary of the Interior (US Fish and Wildlife Service) and Commerce (NOAA), with the US Fish and Wildlife Service holding primary management responsibility over the monument with the exception of fishery-related activities, which was designated to NOAA. It also states that the Departments of Defense, in addition to other relevant agencies, will be consulted for management planning. Proclamation 8335 specifies that the CNMI government will have three representatives on the monument advisory council (MTMAC) (described below) and will have a consultative role in management of the Islands Unit. Proc. 8335 does not give Guam a seat on the MTMAC. A leader in the fishing community in Guam indicated that this wasn’t a concern, as the MTMNM is “more of a CNMI issue”. Proc. 8335 includes provisions for “traditional indigenous fishing” within the waters of the Islands Unit (for detailed information, see Richmond & Kotowicz, 2015). Within a week of the designation, then-Secretary of the Interior Dirk Kempthorne issued Secretary’s Order 3284 which established the Trench and Volcanic Units as National Wildlife Refuges – the Mariana Trench NWR and the Mariana Arc of Fire NWR, respectively (US Fish and Wildlife Service, 2013). For an overview of agency authorities, see Table 2.4, “Stakeholders”.

Proclamation 8335 calls for a management plan to be in place within two years of the MTMNM’s designation. As of July, 2017, monument authorities were still working to finalize a formal management

plan⁸. Interviewees cited the following reasons for the delay: differing agency mandates and processes, limited resources, delays in communication between authorities, and changes in personnel. Currently, management is the responsibility of federal designees, under advice from the MTMAC. The MTMAC first convened in 2012 and adopted bylaws in September, 2013. The MTMAC is required to meet in person once per fiscal year and may schedule additional teleconference or phone meetings when necessary. It is comprised of three officials of the CNMI government, one representative from the Department of Defense, and one from the US Coast Guard. Each representative's appointment lasts for three years. Though Guam does not have a seat on the MTMAC, a small number of interviewees discussed allowing Guam "observer" status in order to remain informed on MTMNM developments. Interview data indicates that though federal agency managers are not legally required to adhere to the recommendations of advisory councils, the input of the MTMAC is both valued and taken into account in the planning and management of the MTMNM. Interviewees local to the CNMI generally did not perceive the MTMAC as true co-management authority as they felt was promised through the negotiation process with CEQ.

Funding – Most interviewees expressed frustration over lack of funding and resources for MTMNM management, enforcement, monitoring, outreach, education, and research. Participating MTMAC agencies have financial responsibility for their representatives, while federal agencies assume financial responsibility for overall MTMAC operating costs. Federal agencies also have financial responsibility for management; the USFWS for the Trench and Volcanic Units, and NOAA for the Islands Unit. Interviewees raised two key issues regarding funding for the MTMNM: concern over a future Visitor's Center and remorse that the MTMNM wasn't designated through NOAA's Marine Sanctuaries program.

- **Visitor's Center** – Progress on the visitor's center has since been stalled due to a lack of funding.

The lack of progress on the MTMNM Visitor's Center is a major source of disappointment across

⁸ This continued to be true through February, 2018, the end date for data collection for all thesis research.

stakeholder groups including local supporters, opponents, managers, and federal agency employees (see “Outcomes”). Scoping and feasibility studies have been conducted with funding from federal agencies. The scoping process identified an out-of-commission lighthouse on Saipan as the selected site for the MTMNM visitor center, but it was later deemed structurally unfit for the required facilities. One federal employee explained attitudes toward the Visitor’s Center at an early MTMAC meeting: “You know, ‘Where’s the visitor center? It’s so many years afterward now and we don’t see anything.’ And so – our, previous Deputy Regional Administrator also was in the meeting. [...] She just felt sincere, deep compassion [...] for the people in response to these promises that were made and now they have nothing. And so she was committed to fulfilling that promise.” She went on to explain how a lack of funding has stalled progress: “So what we did, was, without any money available for a visitor’s center, we went out to the community to find out what would that look like to them? What’s their vision and goals and of the monument visitor’s center? And, [...] do we have any, uh, ideas for funding? Kind of is hard to put that one out there because the government doesn’t have those deep pockets to fulfill that promise.”

- ***National Marine Sanctuaries Program*** – As previously noted, the MTMNM was initially conceptualized and advocated in connection to NOAA’s National Marine Sanctuary Program (see Box 2.1 “MNM vs. NMS”). Interviewees across stakeholder groups felt that a national marine sanctuary designation versus a monument designation would have resulted in greater availability of management and implementation funding.

Enforcement & monitoring – Monitoring and enforcement of rules within the Islands Unit presents a challenge owing to the unit’s remoteness. Currently, the US Coast Guard patrols waters in and around the Islands Unit a few times per year, but lacks the capacity to monitor activity more frequently. Vessel Monitoring Systems are used within the Northern Islands (including the Islands Unit), but response to

suspicious activity is limited because of the 10+ hours required to access the unit. Interviewees expressed that this effort would likely be wasted as illegal fishers would have adequate time to flee. Satellite and other forms of monitoring the Islands Unit are currently cost prohibitive. Owing to the remoteness of the Islands Unit and associated costs for vessel travel, interviewees speculated that illegal and commercial fishing within the MTMNM boundaries are rare, isolated incidents, though some said that the increased presence of foreign fleets in the Pacific could have an impact.

Enforcement is less of a concern within the Trench and Volcanic Units, where only the seafloor features are protected. The international research community is currently the only user of these units, and may request Special Use Permits through the US Fish and Wildlife Service's Marine National Monument Management division.

2.5 Politics

Support for the MTMNM – In the fall of 2008, Pew commissioned a quantitative telephone research study of 400 registered voters on the CNMI's island of Saipan (Q Mark Research, 2008). The study showed that after rating the strength of arguments for and against an LMPA designation, 55% of respondents held a favorable attitude toward designation, while 25% held an unfavorable attitude. The remaining 20% did not report an opinion. A 2012 randomized telephone survey of 500 residents from each territory found that residents were generally supportive of the designation, but that public awareness of the MTMNM was low (Kotowicz et al., 2017). While the official position of the CNMI government during the designation

process was one of strong opposition, there was support for an LMPA from a range of stakeholders within the CNMI, including local business owners, educators, NGO staff, community members, as well as some elected officials and government employees. As one former government employee explained: “if Fitial’s against it everyone had to be against it. But yet, talking in the community, people were really signing the petition [in support]. They had a signup sheet at Costco. The community was signing for it.”

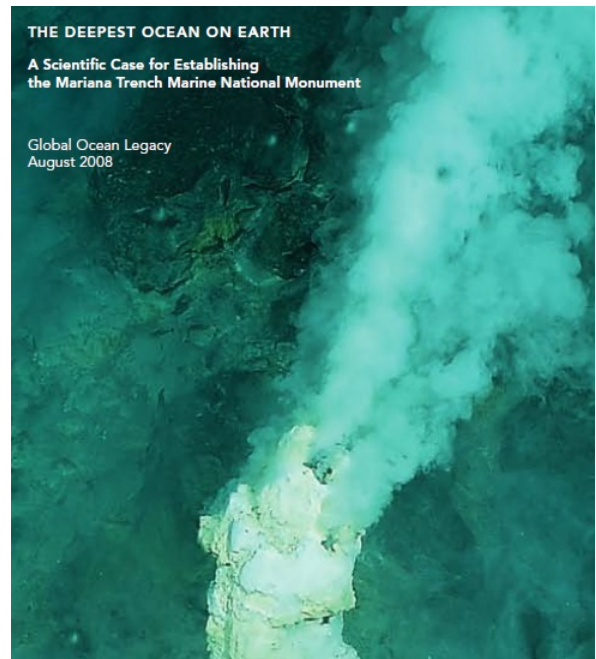


Figure 2.4 Cover of scientific assessment

Arguments in favor of a monument were tied to two reports that Pew commissioned in the summer of 2008: an economic impact study ("The Economic Impact of a proposed Mariana Trench Marine National Monument" Iverson, 2008) and a scientific assessment ("The Deepest Ocean on Earth: A Scientific Case for Establishing the Mariana Trench Marine National Monument" Kelsey, 2008; see Fig 2.4). The economic impact report projected potential revenue increases in the multimillions from spikes in tourism, research, and federal funding, while the scientific case argued the need for protection of the unique geological, volcanic, and microbial features of



Figure 2.5 MTMNM promotional sticker

the proposed units, highlighting applications to research on ocean acidification and resilience of corals. The FOM group spearheaded efforts to build local support for an LMPA designation by disseminating information from these reports in presentations, and conducting community workshops and distributing promotional materials such as stickers, posters, and t-shirts. FOM

petitioned resident community members and business owners, claiming 5,600+ signatures of support. They also spearheaded a letter-writing campaign through which students wrote letters to President Bush expressing their views on a potential LMPA. FOM was largely active at the grassroots level; their attempts to gain access to high-level conversations during the designation and subsequent planning meetings have been unsuccessful.

Support for an LMPA designation was also expressed through letters to the editors of local news sources such as the Marianas Variety and Saipan Tribune. These letters were drafted both by local community members and residents of the US mainland and other insular areas. Among the supporting documents we gathered were letters to the Bush Administration (both the President and the CEO) encouraging an LMPA designation from the Saipan Chamber of Commerce and the high-profile marine conservationist Jean-Michel Cousteau.

While few local politicians or government employees publicly expressed support for the monument (with exceptions, like former legislator Cinta Kaipat), several former government employees we interviewed described an atmosphere of trepidation among their colleagues in publicly expressing support for the MTMNM before it was designated, given the strong opposition from the CNMI governor and administration at the time. One government agency official explained: “There was a lot of fear about doing anything that would be seen as opposing the current administration at the time. [...] Like not every government agency, you know, was necessarily opposed. Like people that were associated with government agencies expressed at least their personal support, ya know?” A former government employee described a perception of pressure to conform with the administration’s position thus: “There was a line drawn between the agencies and the government of, you, oh you have these employees that are saying – that are for it – you better tell these employees to stop talking. And when I came in it was at that point where, ok you guys can't say anything about this anymore.” Some interviewees noted that local youth were vocal in their support of an LMPA designation (example of monument promotion pictured in

Fig. 2.5), despite opposition from community elders, which represented a departure from traditional age-based deference.

People we interviewed who supported the monument cited the potential benefits of an LMPA designation as the primary justification for their past and current position of support, including the potential for world-wide attention from media, scientists, and tourists; contributions to the Micronesia Challenge (a regional conservation commitment among five islands) and “bragging rights” due to the comparative size of the LMPA; the potential for increased revenue and job creation due to an influx of external visitors (tourists, researchers, etc.), federal monument funding, and related support facilities; educational benefits from research and ecotourism; and increased access to the Northern Islands. Though few (if any) of these benefits have been realized as a result of the MTMNM, the monument supporters we interviewed continued to express hope for eventual success. One local monument supporter expressed this sentiment thus: “I will continue to say that I am hopeful. I don't want to say that it is completely bleak and that hope is lost.”

Opposition to the MTMNM – Opposition came from a variety of key stakeholder groups throughout the Mariana Islands including indigenous and local community members; WESPAC; individual fishers and local



Figure 2.6 Stickers circulated throughout the designation process in opposition to the monument

fishing cooperatives; local resource managers, scientists, and other local agency employees and consultants; and elected officials at a variety of levels of government throughout the CNMI, Guam, and other Micronesian states. Opponents created fliers and buttons stating “No Pew Monument” (Fig. 2.6), which government officials used to show their resistance. Opponents also resisted efforts by speaking out at meetings and workshops, creating signs and slogans, petitioning, and demonstrating. In April 2008, the CNMI Senate passed J.R. 16-

04 opposing a unilateral monument designation from the President and asking that no monument be established in the Mariana Islands without further “study, discussion, and deliberation”. The resolution also emphasizes the need for any proposal to consider local input, conservation efforts, and knowledge. Throughout the summer of 2008, letters of opposition were sent to Washington D.C. from the Mayors of Saipan, Rota, Tinian and Aguiguan, and the Northern Islands; legislators and federal delegates; and concerned citizens. The letters ranged from outright rejection of the monument to appeals for a longer, better executed designation process. In a letter to President Bush dated June 6, 2008, for example, Valentin Taisakan, Mayor of the Northern Islands, requested time for additional local input within the designation process. Taisakan explained how the six year process for the Northern Hawaiian Islands MNM (now Papahānaumokuākea) was adequate to educate the community. In early September, 2008, the CNMI legislature passed J.R. 16-13 which officially opposed the designation. A week later, the Carolinian Affairs Office Advisory Committee wrote the Bush Administration (Bush and CEQ Chairman Connaughton) emphasizing native title rights to the sea with references to the US Magnuson-Stevens Act and the Informal Composite Negotiating Text of the UN Convention on the Law of the Sea. They asked for a roundtable discussion with Governor Fitial on “the issues surrounding our traditional rights to the resources found in our oceans and lands through a mutual consent as stipulated in the Covenant” (Carolinian Affairs Office, 2008). The Manamko Council (Chamorro and Carolinian elders) and Council on Carolinian Affairs passed resolutions voicing their support of Governor Fitial, the legislature, and the island mayors. Throughout the fall and winter of 2008, letters of opposition were sent to President Bush and the White House CEQ from the Governor Camacho of Guam, Guamanian legislators, leaders from Palau, the CNMI, the Marshall Islands, Yap, Pohnpei, Kosrae, and Chuuk, as well as the Guam Fisherman’s Cooperative Association. WESPAC wrote to the Bush Administration emphasizing that there was no pressing need for protection within the region and arguing that designation would hinder economic

development in the CNMI. When CEQ Chairman Connaughton arrived in Saipan in October, 2008, he was met by supporters but also demonstrations from the local community and elected officials in opposition.

Overall, opponents of the MTMNM cited the designation process as the primary source of contention. Even the most vocal opponents of the MTMNM insisted that they were supporters of marine conservation and were primarily opposed to the designation process. Specifically, many interviewees took issue with the way in which Pew and CEQ continued to push for the monument despite the strong and repeated rejection of the idea from Governor Fitial. Some opponents felt insulted by the designation process and characterized it as rushed, top-down, and characterized by disregard for CNMI sovereignty. Long before the MTMNM was established, Article XIV, Section 2 of the CNMI constitution designated the islands of Maug, Uracas, Asuncion “as uninhabited places and used only for the preservation and protection of natural resources”. While supporters saw the monument as complementing these protections, opponents viewed the MTMNM both as commentary on the CNMI’s ability to adequately manage marine resources and as a federal assertion of authority. For opponents, the MTMNM is perceived as a threat to self-determination within the Mariana Islands, specifically with regard to access rights and the Commonwealth’s right to sustainably manage marine resources. An elected official offered this perspective:

“It's really almost insulting, you know, that in 1976 when our leaders drafted our constitution, they had the foresight to see that these islands were unique. [...] When we live in island environments, by nature we have to be very mindful of our environment and the resources [...] Now you tell me that all of a sudden this refuge office that was probably just put together in the 80s...all of a sudden it's got all the knowledge and have exclusive rights to conservation, and not to trust any members [...] of coastal communities or inland communities, that they're the only ones that can be paid and know how to do this? That's insulting.”

Perceived external agendas were also a major source of opposition. Some interviewees perceived former President Bush as caring only for his political legacy; CEQ Chairman Connaughton as willing to make promises he couldn't deliver in order to gain the support of Governor Fitial; and the Pew Charitable Trusts as primarily interested in additional political influence in Washington D.C. Opponents also expressed concern over lack of science used in determining the MTMNM boundaries which led to doubt over its conservation efficacy.

Elements of the broader historical and political context are also key to understanding some of the opposition to the MTMNM. First, the CNMI has been asserting authority and sovereign control over submerged lands and marine resources since establishing the Covenant with the US in 1975. The CNMI's territorial claims, which included enacting local law and engaging the US in a lengthy legal battle, remained unrecognized by the United States when Pew began to advocate for a federally designated LMPA in (partially) disputed waters in 2007. Additionally, the MTMNM designation process took place amid a number of other federal decisions with major implications for CNMI, which are locally and collectively referred to as 'federalization' or 'federalism'. These included a military buildup throughout the Marianas Archipelago, a shift to federal control of immigration to US Customs and Border Protection from local authorities, and application of the federal minimum wage. As a local consultant explained this confluence of factors: "Tourism dropped, the garment workers left, garment factories left, and [...] then federalism came in at the same time. You know it was like 1-2-3. So there was a real heavy sense of uh, heavy sense of 'what was going on here?'" Both opponents and supporters of the MTMNM recognized these broader shifts and associated tensions between the CNMI and the US federal government as important context for understanding the staunch opposition within the CNMI to another federal proposal: the MTMNM

2.6 Outcomes

Unfulfilled promises & lacking social benefits – A perception of unfulfilled promises is one of the most pervasive outcomes of the MTMNM to date. The majority of interviewees – including supporters and

many monument opponents – had expected that the MTMNM would bring specific benefits to the Mariana Islands. They attributed these expectations to “promises” they felt were made by Pew, FOM, and/or CEQ throughout the designation process. Some interviewees took issue with this perception, explaining that the benefits discussed during the designation process, such as economic development and job creation, were presented as possible outcomes from an LMPA designation rather than promises. Similarly, some doubted whether CEQ Chair Connaughton promised line items negotiated with Governor Fitial, suggesting it was more likely that he said that he would communicate them to President Bush. Regardless of why and how it emerged, however, the perception of unfulfilled promises is an important and influential outcome in itself as many interviewees use this exact phrase when asked to describe the MTMNM outcomes. Below, we describe the specific items interviewees discussed when describing their perception.

- **Visitor’s Center** –For many interviewees, a visitor’s center that could attract tourists and support local research and education represented a key component of the vision for the MTMNM. One official expressed frustration over stalled progress thus: “well the visitor’s center was one. That was another venue to provide jobs. It’s what, six years already? We still don’t, no word on the visitor’s center.”
- **Co-Management** – Co-management authority was put on the table early in the designation process. Jay Nelson’s December 2007 letter to Governor Fitial references the co-management structure of the Northwest Hawaiian Islands monument (later Papahānaumokuākea) as a possible model for the CNMI. According to interviewees involved with the negotiations with CEQ, CNMI officials actively sought co-management authority and it was promised as a condition of the designation. Proclamation 8335 did not give the CNMI shared decision-making power for the MTMNM. Instead it established the MTMAC (see “Design”), which gives three CNMI representatives an advisory role in monument management, which federal agencies may choose

to follow or ignore. Interviewees had varied perceptions on whether the CNMI's role constitutes co-management. Local interviewees felt that their role does not constitute co-management. Perspectives from federal managers ranged from questioning the authority of the executive branch to designate co-managers to asserting that agency consideration of the CNMI's advice constituted a co-management relationship.

- ***Economic Development*** – Many interviewees referenced unfulfilled promises related to economic development and job creation. The economic impact assessment commissioned by Pew in 2008 projected \$10 million in direct spending, over \$14 million in sales, over \$4 million in tax revenue, and creation of 350+ jobs associated with the MTMNM (Iverson, 2008). The additional revenue was attributed to an expected influx in tourism and business development associated with the monument, federal support for management and facilities, and an increase in use of the monument by researchers and scientists. Though some interviewees cited an increase in research uses associated with the monument, no one perceived economic development resulting from the designation. Interviewees said that the remoteness and resulting costs of travel to the Islands Unit, the inaccessibility of the unique features of the Trench and Volcanic Units, and the lack of a Visitors Center limited interest from potential tourists. Interviewees also reported that few, if any, jobs have been created resulting from the designation. When asked about the study commissioned by Pew, one FOM member said, “Yeah, the assumptions in that study were wrong. The assumptions were that it would be larger, and therefore higher priority. The assumptions were that it would be a Sanctuary.”
- ***Mineral Rights*** – Some interviewees discussed deep sea mining for rare minerals as a future means for economic development within the CNMI. CNMI government officials who engaged negotiations with CEQ characterized exclusive mineral rights within the boundaries of the MTMNM as another unfulfilled promise.

For many interviewees, the perception of unfulfilled promises has served to solidify feelings of mistrust toward external actors and the US federal government. There was a range of attitudes expressed toward the promises including anger, mistrust, insult, confusion, disappointment, and apathy. Embedded within the context of their colonial experience, many interviewees saw unfulfilled promises as cautions toward further engagement with the federal government and external actors. Interviewees engaged in current management and planning efforts recognized the perception of unfulfilled promises as hurdles to overcome. Because Proclamation 8335 does not speak to the majority of these promises nor allocate a budget for the operation and development of the MTMNM, federal agency managers are constrained by both existing resources and the binding language in the proclamation. Many interviewees – including supporters and opponents alike – held the perception that nothing has been gained through the monument designation. This perception is characterized by a lack of tangible benefits to the local communities, few prospects for enforcement and monitoring, delays in management planning, and poor dissemination of knowledge about the MTMNM. All of these perceptions contribute to an overall sense that the monument is languishing or stagnating. Many felt that this sense of stagnation was typical of federal bureaucracy, but some questioned if it was due to in-fighting between federal agencies. Lack of funding, resources, political will (both federally and locally), and changes in personnel were cited as contributing factors. Many interviewees were unsure of what was happening with monument planning, who may have been benefitting from the MTMNM, and how to navigate the managerial structure. Interviewees also questioned the conservation value of the MTMNM pointing to limited human uses prior to designation, a lack of scientific benchmarking, and no monitoring to determine its effectiveness. One local MTMNM supporter summarized the sentiment thus: “So, right now nothing is happening. It's sad. It's really truly a paper park. It's just people pushing papers and coming up with ideas, but nothing really happening.”

Most interviewees said that because there wasn't much happening with the MTMNM there are few costs associated. However, a small number of interviewees employed in CNMI government agencies cited drains on local agency resources related to costs associated with the MTMAC. Proclamation 8335 specifies that participating agencies will cover the costs associated with their representatives and that the Departments of Interior and Commerce will share the operating costs. Even so, these interviewees stated that in agencies with limited resources, every additional task is at the expense of others. Federal agency managers also recognized limited resources as an obstacle in planning and management of the MTMNM (see "Design").

Sovereignty & access – Since the late 1970s, the CNMI had been in a long-standing legal dispute with the United States over exclusive control and ownership of marine resources and submerged lands covering 0-3nm from the shoreline (hereafter: "submerged lands") of the 15 Northern Mariana Islands (see Gruby et al. 2017). Another condition the Fitial Administration is said to have negotiated with the CEQ, and understood as a promise of designation, was the conveyance of these submerged lands to the CNMI. In 2013, a bill was passed through the U.S. Congress to convey submerged lands to the CNMI. One senior US federal official attributed the political support for the conveyance to promises made during the MTMNM designation process. Within the first 120 days of the bill's enactment, however, former President Obama reserved conveyance of submerged lands within the Islands Unit until the government of the CNMI and the Secretaries of the Interior (USFWS) and Commerce (NOAA) "have entered into an agreement for coordination of management that ensures the protection of the marine national monument" (Obama, 2014). In late 2016, the reserved lands were conveyed to the CNMI, though they contained an easement ensuring that the submerged lands would continue to be protected in perpetuity in accordance with Proclamation 8335. Because the MTMNM was negotiated at a high political level, it intersected with ongoing conflict regarding sovereignty over submerged lands. While the CNMI's territorial claims were

ultimately recognized, their sovereignty over submerged lands in the Islands Unit is limited by the easement (Gruby et al., 2017).

Despite the permissions for traditional indigenous fishing included in the MTMNM regulations, a number of interviewees perceived that the MTMNM restricted access to the Islands Unit. Richmond and Kotowicz (2015) argue that permitting and regulatory requirements (e.g. prohibitions on commercial and non-commercial on the same trip) imposed by the MTMNM may be hindrances to existing fishing practices. Interviewees also highlighted perceptual and symbolic aspects of restricted access to the Islands Unit, recognizing that while trips are currently cost prohibitive, there was still a sense of loss associated with the notion of having to request a permit from a federal office in Honolulu. One vocal monument opponent explains the sense of loss associated with restrictions from the MTMNM thus: “What we lost, I would say, is we permanently lost fishing rights to those waters. Whether we used them or not is not the question. The question is what did we lose? And we lost... permanently lost fishing rights. I think that's it. I don't think it was that big of a loss. It's just, it was a tough loss, hard to swallow.”

Political tension & mistrust –The MTMNM is embedded within larger political and historical contexts which contributed to tensions and mistrust (see “Introduction”). Interviewees expressed increased tension and mistrust in two general ways: as a perception that the US federal government seemed to have little trust and faith in the local community, and as increased distrust of the federal government and non-local actors.

- ***Distrust of the CNMI government*** – Some interviewees perceived the designation as evidence that the US federal government lacked trust in the CNMI and Guam to properly conserve and manage marine resources. This perceived lack of trust angered and insulted some interviewees, who referred to cultural values of conservation, deep connections to ocean space and resources,

as well as the efforts to preserve the northernmost Mariana Islands within the CNMI's constitution. As one interviewee described:

"If you approach it from the local standpoint, where we understand our pre-contact history, that we come from a people, a seafaring people, so we are one with our environment, we do have viable conservation practices in place today that were used thousands of years ago. But then the problem surfaces when you have this other component, extraneous component that comes in and says 'You don't know conservation. Conservation is now this.' So, the fact that we've existed as a people for over four thousand years in our very small islands, protection of the ocean, and everything therein, so that is not conservation?"

- ***Distrust of external actors, agendas*** – The designation also resulted in increased mistrust of the US federal government for many interviewees. Mistrust was expressed in various forms, the most pervasive of which was a perception of the hypocrisy between conservation efforts and increased military presence in the Northern Islands. In the words of one former elected official:

"See that [conservation] doesn't jive with all these intended military activities out here. How can you say you're going to protect the environment for the next generation of the global neighborhood? I mean, including us here, that live here. And then, you're saying that the military's going to come through here and do whatever the hell it is that it wants to do? That doesn't – that's not logical. But yet, every single piece of policy or proposed policy, regulation of federal law, that's coming out of DC, that's what it boils down to. You just strip back the layers and that's what it is."

Some speculated that the Bush Administration strategically took advantage of the insular areas' limited capacity for legal recourse throughout the process. Others cited the US's history of mistreatment of other indigenous groups. One opponent felt that the connections between CEQ

and the Departments of Commerce and the Interior were “like mafia – orchestrated”. These perceptions were heavily linked to the designation process. When asked what the community has learned through the monument designation, one interviewee had this to say:

“Something about trust. Something about trust. Umm, we continue to believe our white brother. We continue to believe that the US government can do, is for our good. We continue to believe that. The lesson that we're learning is that the US government is concerned about its good. And what happens to the CNMI harms us. It's something called collateral damage, and we're learning to see that we are viewed, can be viewed as collateral damage.”

Conflict & social division – Conflict and social division were some of the most salient outcomes of the MTMNM designation, existing at different levels of social organization: among community members; between the local government and community members; among sectors of local government; and between the local and federal governments. Additionally, some interviewees perceived conflict among federal agencies stemming from MTMNM management efforts. Many interviewees recognized that the dominant narratives for support and opposition were influenced by external actors – Pew and WESPAC. Opponents of the monument felt that Pew had negatively influenced the process while supporters had similar views toward WESPAC. Polarization of attitudes was fueled by the community’s existing mistrust of external actors. Some interviewees felt that a younger generation was heavily involved in advocating for the MTMNM, which was a departure from traditional cultural deference to older generations. As previously addressed (see “Politics”), some local government employees felt pressured to suppress their support for the MTMNM. Some monument advocates felt that they had intentionally been excluded from key moments of the designation process. Some expressed doubt over the local government’s political will for management planning and improvement. Former and current MTMAC members perceived conflict between federal agencies over responsibilities and authorities and felt that it had stalled progress in the

MTMNM. Several local interviewees attributed individual-level negative outcomes to the MTMNM designation process such as exclusion and ostracism from the community, fear and reticence in expressing support, and job loss. Some members of FOM later felt ostracized due to their advocacy.

Hope for the future – Despite the salient perception of few gains from the MTMNM, many supporters and some opponents expressed hope for the MTMNM to be a future success. Overall, supporters see the MTMNM as a work in progress that, through improvements in management and increased local support and political will, can deliver on their initial visions for an LMPA. The hope expressed by some opponents was more subtle: because the MTMNM is there to stay, there is hope for it to eventually return benefits for the people of the CNMI. Interviewees hoped for a working management plan which incorporates local culture, helps to foster connections to the northernmost islands, and contains robust education, outreach, and research programs. Others expressed more general hopes for the monument’s success including a desire for the MTMNM to be on par with famous US National Parks.

Legacy effects – The MTMNM was sold as a means of economic development, job creation, and greater local autonomy. Many of these benefits were based on Pew-funded scoping studies and outcomes seen in other LMPA sites (e.g. Papahānaumokuākea), yet none of these have been realized in the ways any of the stakeholders anticipated. Ultimately, this has resulted in increased negative attitudes toward and/or disappointment in the MTMNM by some key stakeholders. Some interviewees recognized that because of the perception of unfulfilled promises resulting from the MTMNM designation, they were more likely to be skeptical and/or process-focused with similar conservation interventions in the future, especially those driven by external actors. However, interviewees emphasized that the MTMNM has not negatively impacted indigenous conservation ethics. The majority of interviewees local to the CNMI and Guam spoke of local conservation ethics owing to a 4,000+ year history of Chamorro and Carolinian resource

management practices. Even opponents would often say they supported marine conservation even if they didn't support the designation of the monument; in their view the monument reflects an imposition of the U.S.'s definition of conservation.

Benefits – Though most interviewees reported no benefits resulting from the MTMNM, some highlighted the following as benefits that have accrued to the local community as well as benefits to external actors.

- ***Increased research opportunities*** – Local and non-local interviewees identified the research community as the primary direct user of the MTMNM. A few interviewees cited an increase in research as an overall benefit, recognizing a potential for additional exposure and education. There were conflicting viewpoints on whether increased research had, at the time of our interviews, resulted in research opportunities for CNMI and Guam residents. Some interviewees noted that a number of local scientists and researchers have been able to participate in recent research, which was cited as a benefit, though other interviewees were critical that research cruises do not provide more opportunities for locals. Some interviewees perceived research as benefitting the federal government and larger research community more so than local stakeholders.
- ***Greater awareness and recognition of Mariana Islands*** – Some interviewees described a sense of recognition for the value of the archipelago's unique features and marine resources as a benefit stemming from the MTMNM. A local marine biologist, Steven Johnson (see a selection of the full interview at <https://humansandlargempas.com/voices-from-the-field/>), described how the designation helped to quell feelings of being a “forgotten child in the larger framework of the United States”.

- ***Job creation*** – A limited number of jobs (3 – 4 at most) was discussed as a benefit resulting from the MTMNM. However, interviewees made clear that they were at the federal agency level and were not filled by members of the local communities.
- ***Blue legacy & political power*** – Many interviewees perceived the Bush Administration and Pew as the primary beneficiaries of the MTMNM, suggesting that the monument designation gave President Bush an outgoing Blue Legacy and enabled the Pew Charitable Trusts to further solidify their position as a politically powerful global environmental NGO. A number of interviewees saw Pew as the primary driver and beneficiary of the MTMNM.

2.7 Key Lessons Learned

Overall, most interviewees across stakeholder groups felt frustrated by and/or disappointed in the MTMNM. Some see it primarily as a tool for government and NGO elites to benefit politically. Others hold out hope that improvements to management, monitoring, and enforcement were possible. Below we discuss key lessons from the Marianas Trench Marine National Monument which can be used to inform the future of LMPA planning, designation, and implementation.

Recognize that remote, uninhabited sites have stakeholders –

- Uninhabited spaces, including those that have never been populated, may still be culturally significant.
- Sites with limited, immediately visible direct uses may still have user groups.

A transparent, contextually appropriate designation process is essential –

- Design a contextually appropriate stakeholder engagement process with a clear plan for gathering, evaluating, and weighing public input. Ensure that this process is genuine in taking diverse stakeholder views into account.
- Take the local historical and political contexts as well as perceptions about process into account throughout designation efforts. Ignoring such local contexts can lead to missed opportunities, bolster mistrust, and ultimately compromise the success of an LMPA.
- Recognize tradeoffs in using the Antiquities Act to designate LMPAs as marine monuments. Though the designation process happens more quickly relative to the National Marine Sanctuaries process, it may be at the expense of lasting positive outcomes.

Deliver social benefits –

- Expectations raised during the designation process will affect how an LMPA is evaluated and perceived later. Be both conservative and realistic in how potential benefits are discussed and portrayed.
- Ensure that resources are provided to deliver on promises made in conjunction with the establishment of LMPAs. Do not leave this essential planning piece to be accomplished post-designation as we have seen with the MTMNM.

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3.1 Introduction

Large marine protected areas (LMPAs, also known ‘large scale MPAs’ or ‘very large MPAs’) – those in excess of 100,000km²⁹ – are an impactful yet nascent marine conservation tool. Currently, 33 LMPA sites (11 of which await full implementation) cover 4.5% of world oceans (Marine Conservation Institute, 2017). Mobilization of the model is a recent phenomenon with over 80% of global LMPAs designated as of 2010 or later (Marine Conservation Institute, 2017). LMPAs hold the promise of conservation outcomes not attained by smaller, nearshore (hereafter, ‘conventional’) MPAs. They may encompass vast, remote swaths of open ocean, islands and atolls, and/or entire pelagic and benthic ecosystems including trenches and seamounts – spaces not typical to conventional MPAs (Toonen et al., 2013; Wilhelm et al., 2014). By spanning diverse bio-regions, habitats, and ecosystems (Singleton & Roberts, 2014; Wilhelm et al., 2014), they offer protection to highly migratory species such as marine mammals and tuna (Wilhelm et al., 2014). Because they often encompass remote and uninhabited ocean spaces, it has been assumed that, relative to conventional MPAs, LMPAs have fewer political, administrative, (Balmford et al., 2004) and financial (McCrea-Strub et al., 2011) barriers to establishment. LMPAs are presumed to engage fewer vested stakeholders than conventional MPAs (Singleton & Roberts, 2014) and their human dimensions, including social outcomes, remain largely under studied (Gruby et al., 2016).

Emerging research has shown that LMPAs impart social outcomes both similar to and distinct from those of conventional MPAs (Gruby et al 2017). Some LMPA sites have resulted in social outcomes at the highest levels of political organization, offering mechanisms to interpret and apply international law (Rieser, 2011), as well as mixed outcomes for territorial sovereignty (Gruby et al., 2017). Some sites are

⁹ LMPAs have been defined with dimensions ranging from 30,000km² (Elizabeth M. De Santo, 2013), to 100,000km² (Gruby et al., 2017; Gruby et al., 2016; Spalding et al., 2013), to 250,000km² (Gray et al., 2017; Toonen et al., 2013).

known to increase cultural connections to remote ocean space, or offer the potential for economic and geographic social benefits through new marine management strategies (Gruby et al., 2017). Like conventional MPAs, high levels of stakeholder participation in LMPA design, monitoring, management, and enforcement has been shown to increase social wellbeing (Ban et al., 2017). Stakeholder engagement within individual LMPAs, both through active solicitation as part of the designation process (Gruby et al., 2017) and through legal contestation of a designated site (Appleby, 2015) has opened windows of opportunity for traditional and indigenous claims to marine space and resources. Individual LMPA sites have raised concerns for justice and equity ranging from restricted access (Richmond & Kotowicz, 2015) to continuing community displacement (Harris, 2014b). Within specific contexts, LMPAs are shown to spark conflict (Laemmle, 2010), which may affect how stakeholders engage with other marine conservation initiatives (Gruby et al., 2017). Yet, we have an incipient understanding of the range of social outcomes which stem from LMPAs. As they continue grow in number and size, empirical study of the social outcomes of LMPAs is increasingly vital (Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016). Within this manuscript, I contribute to this developing body of knowledge through an in-depth, qualitative case study of key stakeholder perceptions, opinions, and experiences of the most salient social outcomes resulting from the designation of the Marianas Trench Marine National Monument (MTMNM), an LMPA in the US insular areas of Guam and the Commonwealth of the Northern Mariana Islands (CNMI) in the tropical western Pacific Ocean.

A robust understanding the social outcomes that can arise in a longer-standing LMPA may inform evolving political debates regarding US National Monument designations for large-scale conservation in marine spaces. Within the United States, Executive Orders 13792 and 13795, released in April, 2017, called for review of US National Monuments, including the MTMNM, with regard to size, degree of public consultation, economic impacts, and potential to hinder industry, among other factors. Though the final report of Interior Secretary Zinke's findings did not recommend changes to the MTMNM, it did suggest

reduction of boundaries within two other US Pacific Marine National Monuments (MNM) – the Pacific Remote Islands MNM and the Rose Atoll MNM – citing reduced commercial fishing opportunities in both LMPA sites (Zinke, 2017). Meanwhile, congressional concern over executive overreach with respect to National Monuments – specifically, the ability designate large-scale conservation areas as a unilateral action – has rekindled attempts to limit presidential authority under the Antiquities Act (Rep. Bishop, 2017; Rep. Labrador, 2017; Rep. Simpson, 2003; Rep. Walden, 2017; Sen. Crapo, 2017; Sen. Murkowski, 2017). Such political events point to a growing public concern over social outcomes of large-scale conservation initiatives such as the MTMNM, as well as the policy mechanisms used for designation. Still, some scholars have argued the US Antiquities Act is a “creative” solution for designating LMPAs as political “win-win[s]” (Alger & Dauvergne, 2017, pp. 38, 40). Empirical research on the suite of social outcomes resulting from a long-standing LMPA designated as a US Marine National Monument is essential not only to ensure the LMPA model’s efficacy as a global conservation tool, but also to ensure that various, ongoing debates surrounding the model, including policy frameworks for designation, are informed by a grounded understanding of their social impacts.

3.1.1 Political history of the Mariana Islands¹⁰

In order to understand the range of social outcomes resulting from the MTMNM, it is necessary to situate it within historical context. Indigenous Chamorro have inhabited the Mariana Islands since about 2000 B.C. and interacted with Caroline Islanders (Carolinians) for much of their history (Allen & Amesbury, 2012; Richmond & Kotowicz, 2015). The region has a complex colonial history dating from the

¹⁰ I use the terms ‘*Mariana Islands*’ or ‘*Marianas*’ in reference to the island chain comprised of the Commonwealth of the Northern Mariana Islands (CNMI) and Guam. The term ‘*CNMI*’ refers to the Northern Mariana Islands under their current territorial arrangement with the United States. When discussing the CNMI independent of its commonwealth status, I use the term ‘*Northern Mariana Islands*’ (*NMI*). In deference to the vernacular of interviewees, I use the term ‘*northernmost islands*’ when referring to Asuncion, Maug, and Farallon de Pajaros (Uracas) – the islands surrounded by MTMNM Islands Unit.

1500s, including periods of control by Spain, Germany, Japan, and the US (Allen & Amesbury, 2012; Allen & Bartram, 2008). During WWII, the region was a battleground between the United States and Japan, and after regionally devastating warfare, a strategic outpost. After the war, the Northern Mariana Islands (NMI) (along with present day Federated States of Micronesia, Palau, and Marshall Islands) were the UN placed the region under US naval control as part of the Trust Territory of the Pacific Islands (TTPI). In 1969, regional congressmen within the TTPI began negotiating political status with the US. The NMI saw commonwealth status as a pathway to development while maintaining a degree of autonomy (Hezel, 2003). The Covenant to Establish the Commonwealth of the Northern Mariana Islands (hereafter, the Covenant) was signed in 1975, ensuring that the CNMI's right of self-governance "will not be unilaterally withdrawn by Congress" (7 FAM 1120). Prior to conveyances in 2013 and 2016, the CNMI was the only US insular area without exclusive control over coastal submerged lands, and had made numerous legal attempts to assert authority within this space and the wider surrounding EEZ (see Gruby et al., 2017). The Commonwealth Constitution contains broad language which designates the three northernmost islands (later included within the MTNMN) as terrestrial protected areas (Article XIV, § 2), ensures that marine resources shall be "controlled, protected, and preserved [...] for the benefit of the people" (Article XIV, § 1), and gives CNMI residents the right to a clean, healthy environment (Article I, § 9; 1978).

Guam has a distinct political history. In 1898, the US "quietly seized Guam" from Spain (Owen, 2010, p. 308) through the Treaty of Paris following the Spanish-American War. The US put Guam under naval control the following year. Shortly after the attack on Pearl Harbor, Japanese forces occupying the NMI seized Guam until 1944, when the US regained control (Rogers, 1995). Prior to the establishment of the TTPI, Guam's Congress had petitioned the US for local governance (Owen, 2010). The Guam Organic Act designated the island an unincorporated territory (1950). After additional petitions, Guam gained the right to adopt a constitution in 1976 (H.R. 9460).

Under these territorial arrangements, citizens of the CNMI and Guam are US citizens, but are not permitted to vote in national elections; and, though they have congressional representation, the officials do not have full voting rights. The territorial statuses of the CNMI and Guam therefore limit their power to influence US federal decisions. Several controversial, federally mandated actions took place near when the monument was proposed, including a regional military buildup (Hofschneider, 2016; Natividad & Kirk, 2010; Owen, 2010, 2011), as well as shifts in immigration controls, and enforcement of the federal minimum wage (Misulich, 2011).

3.1.2 Monument overview

On January 9, 2009 – eleven days before leaving office – former President George W. Bush declared the MTMNM via Proclamation 8335. The MTMNM encompasses 250,487km² of submerged lands and waters divided into three management ‘units’ (see Fig. 3.1, adapted from NOAA Fisheries PIRO): the Trench Unit contains submerged bottom features of a portion of the Mariana Trench; the Volcanic Unit (starred) includes submerged lands within 1 nautical mile(nm) of 21 designated undersea volcanoes and thermal

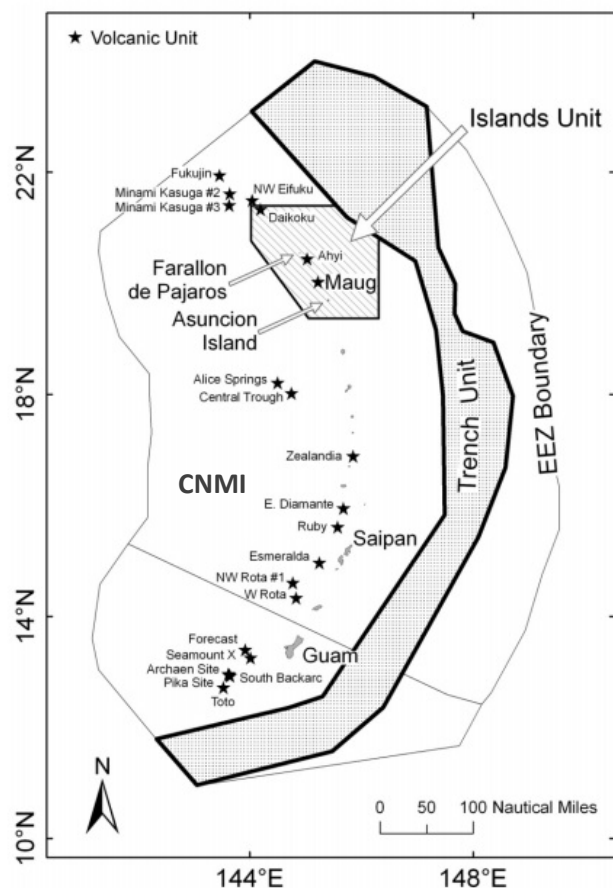


Figure 3.1. Marianas Trench Marine National Monument

vents; and the Islands Unit, including the waters and submerged lands extending 50 nautical miles from the shoreline of the three northernmost islands in the CNMI – Farallon de Pajaros (also known as Uracas), Maug, and Asuncion. Two US federal agencies, the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA), are the primary management authorities in

consultation with the Department of Defense and the CNMI government. The USFWS manages two National Wildlife Refuges (NWR) within the MTNMN – the Mariana Trench NWR (covering all spaces of the Trench Unit) and the Mariana Arch of Fire NWR (covering all spaces of the Volcanic Unit). The NWR in the MTNMN do not include the water column, therefore there are no restrictions to fishing or vessel passage in the waters above. Currently, permits to the NWR have only been issued for research purposes. In contrast to the Trench and Volcanic units, the Islands Unit does restrict commercial fishing while allowing sustainably managed “sustenance, recreational, and traditional indigenous fishing” (Bush, 2009). NOAA is the primary management agency within the Islands Unit. The Marianas Trench Monument Advisory Council (MTMAC) – comprised of three representatives from the CNMI government, one from the Department of Defense, and one from the US Coast Guard – serves as an advisory body to monument management and planning.

While the present-day direct human uses of monument water are very limited, there are important historical and contemporary cultural connections to these areas. The 2010 US Census estimates the CNMI’s population as 24% Chamorro and 5% Carolinian; Guam is estimated at 37% Chamorro and 12% other Native Pacific Islander groups¹¹. Throughout pre-history, the ancestors of these Marianas residents sailed the region, fishing its waters and utilizing marine resources. Though the Islands Unit is currently uninhabited, Asuncion, Maug, and Farallon de Pajaros (Uracas) have historically had indigenous residents (Allen & Amesbury, 2012), with a community on Asuncion as recently as 1945 (Kotowicz & Richmond, 2013). Owing to the islands’ remoteness, travel can be cost prohibitive, however. Fuel alone can range between \$4,000 – \$15,000 for a single trip, depending on the vessel. Direct uses of the Islands Unit by local residents is thus limited to an average of 3.8 trips per year¹² (Richmond & Kotowicz, 2015). A 2012 survey showed that just 7% of respondents from the CNMI and 8% from Guam had visited the three

¹¹ Census data did not include Carolinian demographics for Guam.

¹² Based on trips taken between 1979 – 2009.

northernmost islands (Kotowicz et al., 2017). A federal official interviewed for this study stated that no permits have been issued for traditional indigenous fishing since rules were finalized in 2013. Still, maintaining the opportunity to access and fish the three northernmost islands – even if the ability to do is limited – is culturally important for many within the CNMI and Guam (Richmond & Kotowicz, 2015).

3.1.3 Research on the MTMNM

The MTMNM has been invoked in various theoretical debates about LMPAs, many of which have been challenged in a generalized way (O’Leary et al., 2018). These include claims that conservation targets drive LMPA proliferation (De Santo, 2013), and that LMPAs may advance sovereignty of small-island states, including indigenous claims to ocean space (Leenhardt et al., 2013). For some, the MTMNM has also raised questions about Bush’s Pacific LMPAs furthering US territorialization of the Pacific EEZ (Rieser, 2011). Laemmle (2010) asserts that, through use of the Antiquities Act, the Bush Administration failed to fully consider local opposition to the MTMNM and rushed aspects of the designation process (Iverson, 2010). The language of Presidential Proclamation 8335, which designated the MTMNM, is less specific than that of other US LMPAs, ultimately contributing to delays in management planning (Peet, 2014). Still, the MTMNM has been cited as an example of “strong collaboration” in management and research (Friedlander et al., 2016, p. 135). In terms of social outcomes, Richmond & Kotowicz (2015) demonstrate that historical and contemporary use of the spaces included in the MTMNM has been underestimated, and argue that restricted access was a primary motive for local opposition. Gruby et al. (2017) demonstrate that the MTMNM’s designation intersected with ongoing struggles for sovereignty and authority within the EEZ surrounding the CNMI, with mixed political and legal impacts. Kotowicz et al. (2017) show that the public in the CNMI is not well-informed about the MTMNM, yet shows general support for it. While these studies do offer valuable insight into select aspects of the MTMNM’s human dimensions (e.g. applications of international marine governance agreements, policy frameworks used for

designation, and management challenges and opportunities) and offer limited information on social outcomes (e.g. restricted access and implications for equity, intersection within ongoing struggles for sovereignty and resulting limitations, and limited public knowledge), none address the range of social outcomes which have resulted in the MTMNM, as I discuss here.

3.2 Methodology

This study builds upon existing work examining social outcomes of the MTMNM through a primary focus on stakeholders’ perceptions and experiences of social outcomes – both material and intangible. Reliance on perception is consistent with social science methods for evaluating impacts of protected areas (de Lange et al., 2016) and is recognized as an essential element in understanding and improving conservation because perceptions – regardless of their veracity – affect the way people understand, experience, and respond to conservation (Bennett, 2016). Moreover, the field of social impact assessment argues that “perceived impacts are real social impacts” (p. 152) and cautions against oversimplifying outcomes (Vanclay, 2012b), which is echoed in the wider literature on social outcomes of protected areas (West et al., 2006).

Data for this manuscript include 48 semi-structured interviews with 50 interviewees¹³ conducted during 3.5 cumulative months of fieldwork in the CNMI, Guam, and Hawai’i (Table 3.1). These interviews, which concluded in February, 2016 are the primary data source within this study. Primary and secondary

documents including: legal, regulatory, and policy documents; letters and advocacy materials; as well as news sources and social media

Table 3.1. Data collection

Field data (48 interviews, field documents) were collected over a cumulative 3.5 month period. Additional documents and follow-up communication were collected throughout the study period. Data collection through Feb. 2016 was performed by Dr. Rebecca Gruby and research assistant Robbie Greene. Subsequent document collection and select, specific follow-up communication was performed by Katie Wilson (author) and Dr. Rebecca Gruby

Date	Location	Data
May – Aug. 2015	CNMI	Interviews (35), documents
May – Aug. 2015	Guam	Interviews (6), documents
Jan. – Feb. 2016	Hawai’i	Interviews (9), documents
Aug. 2016 – Feb. 2018	Colorado (CSU)	Documents, follow up communication

¹³ Some interviews involved multiple interviewees.

were collected throughout the study period. Interviews and field document collection was performed by Dr. Rebecca Gruby and research assistant Robbie Greene. I continued to

Table 3.2. Description of interviewees

Primary roles of interviewees with code, description of role, and total number of interviewees per role. Several interviewees held multiple roles – e.g. a local elected official who was also a fisher and/or cultural leader.

Primary roles	Description of roles	Interviewees
Local government [-LGOV]	Elected officials, government agency staff, advisors	23
Federal government [-FGOV]	US federal agency staff and managers	13
NGO [-NGO]	Local and global environmental NGO staff	6
Private sector [-PS]	Fishers, tourism operators	3
Researchers, contractors [-RC]	University researchers and consultants	3
Community orgs. [-CO]	Leaders, staff of local orgs. (non-environment)	1
Informed citizens [-IC]	Local individuals involved with MTMNM	1
Total		50

gather primary and secondary documents beginning in August, 2016, and followed up on specific, pointed questions with select interviewees. Dr. Gruby also continued data collection of this nature throughout the study period. Interviewees were identified through combined purposive and snowball sampling methods. The majority of interviewees (72%) were officials from the governments of the CNMI and Guam (e.g., elected officials and agency staff) or the US federal government (Table 3.2). Data collection and analysis focuses primarily on the CNMI because the MTMNM was and continues to be a more salient issue within the Northern Mariana Islands. Only a small portion of the MTMNM boundaries extends into Guam's EEZ. We did not interview key high-level political actors involved with the initiation and designation of the MTMNM, including Former President George W. Bush; Jim Connaughton, Chair of the White House Council on Environmental Quality (CEQ) during the George W. Bush Administration; and Former CNMI Governors Benigno Fitial and Eloy Inos.

Interviews focused on political, economic, cultural, environmental, and institutional dimensions of the MTMNM designation process. They were then transcribed (Table 3.3) and uploaded, along with documents and field notes, to QSR NVivo for analysis. Initial thematic coding focused on the human dimensions of LMPAs (Gruby et al., 2016), and engaged a coding framework attentive to how interviewees experienced

Table 3.3. Interview naming schema

Such that "GU-NGO1" indicates interview was conducted on Guam with 1 of 6 total interviewees in an NGO role.

Interviews named with attention to the following factors		
Location of interview	CNMI [CNMI] Guam [GU] Hawai'i [HI]	
Interviewee role and number	Local government [-LGOV]	1 – 23
	Federal government [-FGOV]	1 – 13
	NGO [-NGO]	1 – 6
	Researchers, contractors [-RC]	1 – 3
	Private sector [-PS]	1 – 3
	Community orgs [-CO]	1
	Informed citizens [-IC]	1

and perceived social outcomes; how such outcomes emerged; and interviewees' interpretations of outcomes (Gruby et al., 2017). To analyze the data, I used inductive thematic coding to derive categories of outcomes as experienced and perceived by interviewees. Because primary data collection was completed in early 2016, interviewees' perceptions of ongoing processes were current at the time of field data collection. My interpretations of issues which occurred after February, 2016 is primarily based on document analysis.

Within this study, I do not seek to explain '*the story*' of the MTMNM designation, but rather to share '*the stories*' as they were experienced by individuals engaged in the process. Additionally, I recognize that the social outcomes of conservation interventions are complex and varied: stakeholders at all levels of social organization experience and/or understand them differently; they evolve over time, and may impart both initial and long-term effects; and they often invoke conflicted attitudes and perceptions, among other factors. The discussion of outcomes is, therefore, not exhaustive. Rather, I offer a detailed description of the most salient social outcomes derived from my analysis.

3.3 Results

Designation of the MTMNM was and, to a lesser extent, continues to be a contentious issue within the Marianas. The majority of interviewees across stakeholder groups discussed the designation process as a major factor that shaped social outcomes, so for context I begin this section by providing a concise overview of this process as it was experienced, understood, and represented by interviewees (3.3.1). Then, I describe social outcomes within five themes that emerged as most salient in the data: unfulfilled promises of social benefits (3.3.2); increased social division and eroded trust (3.3.3); territorial politics and sovereignty (3.3.4); legacy effects (3.3.5); and hopes for future outcomes (3.3.6). Finally in the discussion and conclusion, I reflect on the lessons that can be taken from the MTMNM case.

3.3.1 MTMNM designation process

Interviewees identified the Pew Charitable Trusts (Pew), the Bush Administration, and a small group of local actors as initiating the MTMNM's designation process. Some federal government officials perceived Laura Bush as the initiator for the former president's interest in a 'Blue Ocean Legacy', while the majority of local interviewees identified Pew as the primary initiator within the Marianas. In early 2007, Jay Nelson, former director of Pew's Global Ocean Legacy program, approached CNMI elected officials, as well as a local conservation NGO, regarding the creation of an LMPA. Few government officials initially took interest in the externally mobilized concept, fearing that it may limit regional autonomy and control of marine resources. However, one former CNMI legislator – Cinta Kaipat – sought to create a wider community dialogue about the potential benefits of an LMPA, and worked with Nelson to raise awareness through local media. Nelson wrote to Governor Fitial in December 2007 requesting support of an LMPA designation. In March 2008, Governor Fitial declined Nelson's request due to concerns that an LMPA designation may limit the CNMI government in "carefully, prudently and strategically balancing economic, environmental, social, cultural, and other considerations in deference to [...] local constituents and stakeholders" (Fitial, 2008).

In the course of the designation process, Pew commissioned three reports intended to garner support for an LMPA: an economic impact study, a scientific assessment, and a telephone opinion survey of 400 registered voters on Saipan Island. The economic impact study projected over \$28 million in potential revenue from direct spending, sales, and taxes, as well as the creation of 350+ jobs due to spikes in tourism and research (Iverson, 2008), while the scientific case highlighted the unique geological, volcanic, and microbial features of the northernmost islands, arguing that their potential applications to research on ocean acidification and resilience of corals warranted designation as a protected area (Kelsey, 2008). The opinion survey showed that after respondents engaged with arguments for and against an LMPA, 55% held a favorable attitude toward designation, while 25% held an unfavorable attitude. The

remaining 20% did not report an opinion (Q Mark Research, 2008). A local grass-roots advocacy group, Friends of the Monument (FOM), was established with financial support from Pew. Comprised of CNMI residents, FOM organized outreach through local media, public discussion forums, presentations, and promotional materials. Their efforts centered on potential social benefits resulting from an LMPA designation, drawing from the reports Pew commissioned and members' visions of LMPA success. One FOM member explained, "We tried to prepare the whole community to understand why we feel it's important to consider having this monument" (CNMI-NGO1). FOM mobilized an increasingly large base of public support from local business owners, educators, NGO staff, and community members, as well as some elected officials and government employees. The group's petition for designation gained a reported 5,600+ signatures, yet their attempts to engage government opponents were largely unsuccessful. LMPA supporters, including locals and residents of the US mainland, wrote letters to the editors of local news sources, the Marianas Variety and Saipan Tribune. The Bush Administration also received letters of support from the Saipan Chamber of Commerce and the high-profile marine conservationist Jean-Michel Cousteau, among others.

Despite the growing base of support for an LMPA, many stakeholders saw the potential for negative impacts, and staunch opposition continued from Governor Fitial's Administration, indigenous and local community members, the Western Pacific Fishery Management Council (WESPAC), individual fishers and local fishing cooperatives, local resource managers, scientists, and other local agency employees and consultants, and a range of elected officials throughout the Pacific Islands. In April 2008, the CNMI Senate passed J.R. 16—04 opposing a unilateral monument designation without further "study, discussion, and deliberation". The resolution emphasized the need to consider local input, conservation efforts, and knowledge. Throughout the summer and fall, letters of opposition were sent to Washington D.C. from the Mayors of Saipan, Rota, Tinian and Aguiguan, and the Northern Islands; legislators and federal delegates; WESPAC; leaders of the Federated States of Micronesia, Palau, and the Marshall

Islands; and concerned citizens, among others. The letters ranged from rejection of the monument to appeals for a longer, better-executed designation process. In early September, the CNMI legislature passed J.R. 16—13, which officially opposed the designation. A week later, the Carolinian Affairs Office Advisory Committee wrote former President Bush and White House CEQ emphasizing native title rights to the sea with references to the US Magnuson-Stevens Act and the Informal Composite Negotiating Text of the UN Convention on the Law of the Sea. They asked for the Bush Administration to hold a roundtable discussion with Governor Fitial on “the issues surrounding our traditional rights to the resources found in our oceans and lands through a mutual consent as stipulated in the Covenant” (Carolinian Affairs Office, 2008). Amid the controversy, CEQ Chair, Jim Connaughton, took over primary negotiations for the proposal. Although it was not required under the US Antiquities Act, CEQ sought to gain the support of the local government, which claimed support for marine conservation yet continued to oppose the LMPA. Eventually, it became evident to Governor Fitial’s Administration that an LMPA designation was inevitable, and high-ranking CNMI officials agreed to closed-door negotiations with Connaughton. In late 2008, Governor Fitial agreed to the designation so long as certain conditions were met. Though there is no written record of these conditions, interviewees involved in the negotiations recalled that they included: co-management authority, local and indigenous access, a visitor’s center in the style of the National Park Service, conveyance of submerged lands from the US federal government to the CNMI, exclusive mineral rights for the CNMI, economic development and employment opportunities, and federal support for monument enforcement and monitoring. Having gained official support of Governor Fitial, President Bush designated the MTMNM via Presidential Proclamation 8335 under the authority of the Antiquities Act eleven days before leaving office, in January 2009.

3.3.2 Unfulfilled promises of social benefits

Many interviewees across stakeholder groups and positions relatedly held the perception that little, if anything has been gained through the MTMNM. A diverse range of stakeholders across the spectrum of monument support and opposition felt the MTMNM resulted in few social benefits. A conservationist who supports aspects of the MTMNM expressed remorse that “it’s just people pushing papers and coming up with ideas, but nothing really happening” (CNMI-LGOV5). Related to this perception of a lack of social benefits was the expectation that they would be forthcoming. Every interviewee, regardless of role or attitude toward the MTMNM, recognized that numerous stakeholders perceive unfulfilled promises stemming from the designation process. Interviewees attributed the perception to Pew’s localized efforts to build support for an LMPA and to the negotiations with CEQ. Perceived promises from CEQ included the establishment of a visitor’s center, co-management authority for the CNMI, allowances for fishing within the monument, exclusive mineral mining rights for the CNMI, and conveyance of submerged lands. These can be traced to a closed-door meeting between Chairman Connaughton and Governor Fitial’s Administration during Connaughton’s October 2008 visit to Saipan, in which CNMI officials negotiated support for an LMPA contingent on the Bush Administration meeting certain conditions. Some interviewees questioned the strength and legality of the perceived promises stemming from these negotiations. Was there a promise that these conditions would be included in the final proclamation, or a promise to communicate them to President Bush? Did Connaughton have the legal authority to authorize co-management? Would he then knowingly promise to do so? While I cannot answer these questions, I did find that the perception of unfulfilled promises has diffused to broad groups of MTMNM stakeholders. This perception continued to be salient at the time of research, despite fulfillment of some conditions, such as fishing allowances within monument boundaries being included in Proc. 8335 and submerged lands being conveyed to the CNMI. However, while the CNMI did gain control of submerged lands in 2013, the reserved portion within the MTMNM boundaries was conveyed in late

2016, after fieldwork concluded. The 2016 conveyance included a conservation easement limiting the CNMI's authority over submerged lands within the Islands Unit of the MTMNM.

Overall, LMPA advocates expressed deep disappointment in and frustration over the MTMNM's current state and aspired to improve it. As one advocate stated, "I feel bad that nothing is happening – that they're not taking advantage of something that we could" (CNMI-NGO1). Another advocate expressed a "burning desire" to see the MTMNM envisioned by advocates and supporters, but lamented the "roadblocks and opposition" in moving forward (CNMI-NGO5). Non-governmental advocates engaged in mobilizing support for the MTMNM emphasized that they made no promises in their promotion efforts, but instead focused on potential benefits. Many interviewees perceived economic development as an unfulfilled promise, with some referencing the economic impact assessment commissioned by Pew; though an MTMNM advocate explained, "It wasn't really a promise, it was more the possibility" (CNMI-NGO1). Numerous interviewees did not distinguish between CEQ and Pew when discussing unfulfilled promises, but rather attributed them generally to one or both actors. According to one former CNMI government employee, "Pew Charitable Trust seems to be the crux of the matter, because they come out here, give us all promises that never happens" (CNMI-LGOV2). Promises attributed to Pew's promotion efforts include economic development and job creation; increased education, research, tourism, and recognition associated with the monument; and increased local authority within the monument boundaries and EEZ. Interviewees cited a number of reasons why promises remain unfulfilled, ranging from funding and resources to legal capacity. While Proc. 8335 does grant the CNMI three seats on the MTMAC, local stakeholders do not perceive this as true co-management authority. Construction of a visitor's center is stalled due to lack of funding, though federal funds were available to scope and ultimately exclude a potential site.

Finally, a small number of interviewees expressed disappointment that the MTMNM hasn't delivered on their own early visions for the LMPA. We refer particularly here to ongoing efforts to resettle

Pagan Island and the establishment of a world-class research institute. A monument advocate discussed intersecting benefits that could have strengthened connections to the northernmost islands: “There would be a research station on Pagan, and [...] things would happen as a result [...] it wasn’t just resettlement, it was a combination of things” (CNMI-NGO6).

3.3.3 Increased social division and eroded trust

My analysis revealed several distinct social outcomes relating to conflict and trust. These include: increased social division between local stakeholders (3.3.3.1); eroded trust in the US government, including a locally held perception that federal actors have limited confidence in the CNMI’s ability to effectively manage marine resources (3.3.3.2); and an elevated wariness toward external actor engagement in the designation process (3.3.3.3).

3.3.3.1 Local social division

Local conflict and social division were among the most salient outcomes of the MTMNM designation process, existing at various levels of social organization: among community members; between community members and the local government; and within different sectors and agencies of local government. Some local interviewees also mentioned conflict between federal agencies stemming from MTMNM management planning.

Vocal supporters felt ostracized. Some made direct links between monument support and loss of their voter base or local government contracts. A key opponent also recognized that vocal supporters were not re-elected. Few local politicians and government employees publicly expressed support for an LMPA. As described by several former and current government employees, there was an atmosphere of apprehension toward expressing opinions counter to those of Governor Fitial’s Administration. One such interviewee explains, “There was a line drawn between the agencies and the government of you [...] have

these employees [...] that are for it, you better tell [them] to stop talking". The interviewee went on to describe an expectation that supporters remain silent "cause you work for the governor", and perceived that: "There was some people that [...] were given more of a hard time because they had supported it or had been associated with people who were strong supporters." (CNMI-LGOV4). Another former government employee stated that community members were showing support through a petition organized by FOM, which gained 5,600+ signatures: "If Fitial's against it everyone had to be against it, but yet, talking in the community, people were [...] really [...] signing for it." (CNMI-LGOV13). Area youth were also supportive, as evidenced through a letter writing campaign organized by FOM.

Though supporters saw an LMPA as an opportunity to deliver social benefits, strengthen cultural connections to the northernmost islands, and ensure invaluable marine resources for future generations, other groups within the community adopted equally vocal, staunchly opposed views. Interviewees expressed various motivations for opposition, including: fear that an LMPA would limit local government authority within marine spaces and access to valuable marine resources; a perception that additional conservation measures were, from an ecological standpoint, unnecessary, and the LMPA concept was an external form of conservation imposed by community outsiders; and perceptions that external actors mobilizing the LMPA stood to benefit most from a designation. As the opposition movement grew, these concerns, fueled by frustration over how the designation process was unfolding, contributed to some interviewees' perception of the MTMNM as a top-down decision made at the highest level of the US federal government. A former CNMI government advisor explained his approach to disseminating opposition to community priests thus: after a FOM member presented on the potential benefits of an LMPA, "I got up and I unplugged the karaoke system [...] speakers, and microphones, wrapped the cords, put them around my arms and walked out." After some time, "I walked back in [...] and said 'I have just done what the government has done to us. I've taken your property without discussing it with you, without your permission'" (CNMI-LGOV11). Several leaders at the village level organized around

opposition. However, a resource manager in the CNMI felt as though village opponents misunderstood the MTMNM issue: “The more they don’t understand, the angrier they get [...] they’re just looking at the other local guys that are fighting for it, ‘what’s wrong with you guys, why are you letting people come out here and just take our lands?’” (CNMI-LGOV10).

While interviewees such as FOM members highlighted the lasting effects of social division through exclusion from management planning processes and feeling ostracized from the broader community, other interviewees felt that the MTMNM designation served as a flashpoint for conflict that has since cooled. A CNMI government employee explains, “Everybody fights about it, but then it’s just, you know, family” (CNMI-LGOV10). One resource manager discussed conflict between resource user groups that played out during public meetings, but also recognized that such conflicts were long-standing and often apparent in public discussions of resource use: “It’s something that’s been going on for a long time” (GU-LGOV3). Several interviewees agreed that there were a number of existing tensions within the community prior to the mobilization of an LMPA designation.

3.3.3.2 Eroded trust in CNMI-US relations

When reflecting on the MTMNM’s implications for relations with the United States, numerous opponents felt that the designation resulted in eroded trust. Interviewees holding this perception described both a further erosion of trust in the federal government, as well as a perception that the federal government does not trust local actors. These perceptions were invoked in various ways – from influencing interviewees’ perceptions of the MTMNM’s impacts, to feeling insulted by the federal government’s actions, to perceptions about the meanings of and underlying reasons for the MTMNM designation. While some, such as an elected official, pointed to an existing mistrust related to recent labor interventions: “We don’t trust the federal government. [...] I look at the federal minimum wage and immigration and how that was implemented”, which ultimately influenced their perception of impacts

from federally designated protected areas, “[now] all these naming’s of MPAs [...] they're basically killing our livelihood, our fisheries” (CNMI-LGOV17). Others, including a high ranking elected official, felt that through the MTMNM designation, the US federal government was asserting “it's got all the knowledge and [...] exclusive rights to conservation”. The interviewee went on, stating that the federal government doesn’t “trust any members of small communities in the United States – coastal communities or inland communities”. Ultimately, the interviewee held a perception that actors at the federal level think “they’re the only ones that can be paid and know how to do this. That’s insulting.” (CNMI-LGOV1). When explaining similar perceptions of mistrust, numerous opponents referenced the provisions for marine resource protection within the Commonwealth Constitution (see 3.1.1 Political history of the Mariana Islands, 3.3.4.1 Perceived loss of territorial sovereignty) and a local ethic of marine conservation. A fisher and resource manager from Guam recalled his reaction to a NOAA scientist who suggested additional protections for the three northernmost islands long before the MTMNM designation process was initiated: “They’re already protected under CNMI [Constitution]. What's your problem? You're gonna insult the people in CNMI. That they can’t protect their own resource.” (CNMI-PS1). When discussing former President Obama’s decision to reserve the portion of submerged lands within the MTMNM boundaries from the 2013 conveyance, the high ranking elected official who, as described above, felt insulted by the MTMNM, felt the federal government “didn't trust that we have the ability to be more conservative in terms of conserving our resources”. For this official, mistrust of the CNMI’s capacity to effectively manage natural resources is a primary reason why “it has to be federal policy all the time” (CNMI-LGOV1).

A smaller number of interviewees referenced other regional contexts and aspects of the designation process when explaining eroded trust. Some felt that the MTMNM could be a reaction to environmental degradation of marine spaces due to historical and ongoing military activity. While supporters and those with mixed attitudes toward the MTMNM felt this could be a potential conservation

benefit, opponents felt it amounted to contradictory behavior on the part of the US. One elected official stated that having federally mandated conservation regulations amid military uses of some islands was “kinda like a slap in our face” (CNMI-LGOV8). A very small number of opponents speculated that the MTMNM was a potential ‘smokescreen’ for military uses of the Marianas Trench. Others, including a vocal opponent, interpreted the MTMNM as part of a perception that the US has a broader agenda of “empire building, expansion, business, and [...] defense of the country of course” (CNMI-IC1). Some, including a resource manager from the CNMI, felt that federal actors misrepresented the potential for CNMI authority in governance of the MTMNM: “Co-management is just a term that gets thrown out there a lot by the federal government as a way to, kind of, qualify them doing what they wanna do and just like, trying to get local buy-in” (CNMI-LGOV20). Amid these varied perceptions of eroded trust in local actors on the part of the federal government, as well as eroded trust toward the federal government itself, a former advisor to the CNMI government explained broad takeaway perception about the MTMNM experience: “Something about trust, something about trust. [...] We continue to believe that the US government [...] is for *our* good. [...] The lesson that we're learning is that the US government is concerned about *its* good” (CNMI-LGOV11, emphasis added).

3.3.3.3 Mistrust of external actors and agendas

The majority of local stakeholders interviewed for this study expressed mistrust of both the actions and underlying motives for external actor engagement in the MTMNM designation process. These perceptions were primarily divided according to interviewees’ support or opposition, with supporters mistrusting the involvement of WESPAC and opponents mistrusting Pew and the Bush Administration. A small number of interviewees with mixed levels of support or opposition recounted details from the designation absent of a strong perception of mistrust.

When recalling early conversations over a potential LMPA, a former CNMI government employee who supported the designation “felt it was two competing forces, Pew and WESPAC”. The official went on to explain, “Pew actually wanted to do a presentation and [a local resource management affiliate] didn’t allow it. [...] It looked like WESPAC was pushing their agenda” (CNMI-LGOV13). One government official with mixed attitudes toward the MTMNM recounted WESPAC’s influence on local government opposition: “There were a couple of resolutions expressing opposition that came out of both houses and I remember WESPAC flying people out here to testify” (CNMI-LGOV21). The official described testimonials about Hawaiian fishers who were denied access to waters after designation of the Papahānaumokuākea Marine National Monument. A local resource manager who supported the LMPA concept felt that WESPAC attempted to bolster the number of fishing trips to areas slated to be included in the MTMNM boundaries: “WESPAC at one point started paying fishermen in Rota [...] to go to the Northern Islands and fish, to say that we do go up there, and that’s where we fish” (CNMI-LGOV5). Such accounts of WESPAC’s role in the opposition movement explain the strong perception of mistrust from MTMNM supporters. While discussing the narrative of opposition, an MTMNM advocate insisted, “I go back to a very well-oiled campaign machine, which was WESPAC, who took every piece of information [presented by advocates] and turned it just enough to make it viable and slippery” (CNMI-NGO5). While another MTMNM advocate questioned WESPAC’s motives for involvement: “The underlying thing is more losing control of the Pacific so that their money will be lessened [...] that’s what WESPAC is, the more control of the ocean, the more money they get” (CNMI-NGO1). Supporters also felt that WESPAC drove the narrative that an LMPA designation would challenge the CNMI’s sovereignty and right to self-determination with respect to marine resource management. In March and September 2017, during hearings before the US House of Representatives’ Water, Power and Oceans Subcommittee, CNMI Congressman Rep. Gregorio Kilili C. Sablan questioned WESPAC’s role in lobbying against regional environmental protection measures.

Additionally, Rep. Sablan requested the newly appointed assistant administrator of NOAA Marine Fisheries to investigate delays in implementing a management plan for the MTMNM (Downey, 2017).

Opponents of the MTMNM were equally concerned over Pew's potential motives for designating an LMPA, often citing the group's ties to the petroleum industry. An elected official from the CNMI expressed wariness thus, "We've been here thousands of years [...] now all of a sudden, this multi-billion dollar foundation finds it interesting [...] to finally protect our environment." Ultimately, the official felt that "[the] hidden agenda is they're finally discovering all these resources and they wanna extract them" (CNMI-LGOV17). A local opponent echoed this perception asserting that the MTMNM is "a smokescreen to make Pew look like [...] they're really supporting the environment when they're an oil company" (CNMI-IC1). Some opponents, including one high-ranking CNMI government official, felt that through mobilizing the designation of an LMPA in the Marianas, Pew stood to gain further prestige as an effective conservation NGO: "Pew is actually out to conquer the world of conservation internationally" (CNMI-LGOV1). Another opponent who held a seat on the MTMAC felt that the group's emphasis on social benefits and the subsequent negotiations of line items with White House CEQ amounted to "hot air in the process so that Pew can be part of the higher-ups in Washington" (CNMI-LGOV2). Interviewees with such perceptions highlighted aspects the designation process which contributed to mistrust of Pew and the Bush Administration: "The discussion really didn't come from our federal government initially. It was a non-government organization that brought this up" (CNMI-LGOV1). For some opponents, the conservation agenda of a large multinational NGO being codified into federal law amounted to "deceptive engagement" on the part of Pew and federal government actors (CNMI-CO1). MTMNM opponents also questioned Bush's desire for an outgoing 'Blue Oceans Legacy' as a way to mitigate negative public perceptions about his presidency: "He was just trying to go out looking green" (CNMI-IC1). The actions of the former CEQ Chair were also enrolled in perceptions of mistrust. According to one vocal opponent, "Connaughton was the one that pushed it over the edge, got the Governor to approve, sign off on it, and

that way Bush [...] had a clear conscience, even though there were still a lot of pissed off people.” (CNMI-RC2)

3.3.4 Territorial sovereignty

My analysis revealed a suite of interrelated political and institutional outcomes that are enmeshed in the CNMI’s territorial relationship with the United States. These include: perceptions of centralized control by the federal government and of restricted authority over and access to culturally significant waters (3.3.4.1.); perceptions about the MTMNM designation process as an opportunity for political leverage with the federal government (3.3.4.2); and the mixed outcomes associated with conveyance of submerged lands to the CNMI (3.3.4.3).

Here, it is essential to understand the conditions under which the Northern Mariana Islands (NMI) agreed to commonwealth status. During the TTPI period following WWII, NMI delegates made several appeals for annexation by the United States, which were denied by the UN. In the late 1960s and early 1970s, the Congress of Micronesia, representing all islands under TTPI administration, engaged in political status talks with the US. The majority of congressional delegates rejected the commonwealth concept, feeling that by asserting its sovereignty in the proposed arrangement, the US, in the words of Congressman Henry Samuel from the Marshall Islands, “assumes that America knows what’s best for Micronesia” (Hezel, 2003, p. 334). However, delegates from the NMI vehemently petitioned for commonwealth status. Senator Francis Palacios of Saipan argued that to ignore the NMI’s desires and force them into a governance structure with the other Micronesian states would be “to revert to a colonial mentality” (Hezel, 2003, p. 336). With consideration for four principles raised in prior status negotiations, including the right to political sovereignty, self-determination, adoption of a constitution, and the right for either party to terminate the territorial association, the NMI entered into political status discussions with the US independent from the Congress of Micronesia. The Covenant to Establish the Commonwealth

of the Northern Mariana Islands (the Covenant), the legal status agreement between the US and the NMI, was formalized in 1975 (Hezel, 2003). This contextual history plays a major role in the contemporary territorial relationship – and perceptions thereof. As one CNMI government advisor explained, “The way people feel out here is that we entered into a Covenant [...] people thought that [...] the limited degree of independence granted by the Covenant meant something” (CNMI-LGOV12). The expectation that the US take a ‘government-to-government’ approach in the CNMI had wide ranging effects. As one high-ranking CNMI government official pointed out when explaining the involvement of external actors, the LMPA concept was locally mobilized by Pew, an NGO. The official contrasted this with the legal requirements for interventions affecting federally recognized tribes: “They have tribal rights. The federal government has come to realize that they need to work together” (CNMI-LGOV1). The push toward CNMI government inclusion in the designation process was a primary focus of MTMNM opponents’ appeals to the Bush Administration (see 3.3.1 MTMNM designation process).

3.3.4.1 Perceived loss of territorial sovereignty

As mentioned earlier, the Commonwealth Constitution contains broad language which designates the three northernmost islands as terrestrial protected areas (Article XIV, § 2), ensures that marine resources shall be “controlled, protected, and preserved [...] for the benefit of the people” (Article XIV, § 1), and gives CNMI residents the right to a clean, healthy environment (Article I, § 9; 1978). Several interviewees perceived these regulations either as sufficient protection measures, or as creating a de facto MPA in the waters surrounding the northernmost islands. As one local resource manager and former MTMAC member explained, “It’s in our constitution. It’s fine where it is, don’t touch it.” The interviewee went on, describing that after Proc. 8335 designated the MTMNM, “all of this federal interventions, all of a sudden got us all with their control saying ‘hey this is our jurisdiction’”. Yet, even with these conflicted feelings over authority, the interviewee felt that the underlying conservation ethic of the MTMNM was

compatible with the CNMI's regulations, and signaled a missed opportunity on the part of advocates: "Had the federal government come in and say, 'Hey so you got these three islands preserved in your Constitution. What do you think about extending that out fifty miles out from the island?' I don't know that that's such a bad idea. It's consistent with what the forefather[s] had created" (CNMI-LGOV6). A high-ranking elected official echoed these concerns: "When our leaders drafted our Constitution, they had the foresight to see that these islands were unique", and through LMPA designation, the official felt that the message from bureaucrats has been, "Yeah, this is very unique. Now we've got to do something proper" (CNMI-LGOV1). With the colonial history of the Marianas informing continued hope for political self-determination, one cultural leader from the CNMI felt that, though some headway has been made under commonwealth status, "no matter how vehemently we try [...] to be counted as a viable voice at a level playing field, we always get slapped down". Ultimately, "that's where you find [...] conflict with things such as the Marine National Monument. [...] A lot of us [...] do not agree with how it came about, because we were not allowed a voice" (CNMI-CO1). These perceptions are in contrast to those of advocates and supporters within the Marianas, who felt that an LMPA would complement the conservation measures in the Commonwealth Constitution. As one advocate explained, "The reasoning for not extending the protections to the waters is that [...] [the drafters of the Constitution] didn't have the expertise at the time" (CNMI-NGO2). Because the three northernmost islands are so remote, supporters felt an LMPA could strengthen the legal framework for regional conservation ethics without disturbing ongoing resource uses, such as fishing. According to one supporter, opposition wasn't about the MTMNM itself, "it was about federal takeover" (CNMI-NGO5). A conservationist within the CNMI who opposed the MTMNM confirmed this sentiment: "There's very vague language in [...] the Constitution [...] about these sorts of jurisdictions [...] I see it [...] as just something else that's being done out here with disregard for whether it matters to us or not" (CNMI-NGO6).

Numerous stakeholders, primarily opponents and CNMI government affiliates, felt that the MTMNM designation resulted in a loss for the people of the Marianas. An advisor to the CNMI government concisely identified this perception: “If the feds are gonna create this National Monument [...] there's no way around the fact [...] it's at the perceived loss of the CNMI” (CNMI-LGOV23). This sense of loss, which some interviewees conceptualized as the federal government taking something from the CNMI, was expressed variously. Some, such as one former MTMAC member, felt that outsiders were seeing financial benefits that are not shared with the CNMI: “There are scientists and business people who would go to the deepest ocean, take photos, and make money, and we haven't seen a penny of it” (CNMI-LGOV2). When discussing a sense of loss associated with the Trench and Volcanic Units, one resource manager from the CNMI felt that, “whatever they find [...] to be of interest to those [in] federal government, they will keep that away from us, so we will not know what is really down there” (CNMI-LGOV14). Although Proc. 8335 does specify that sustainably managed “sustenance, recreational, and traditional indigenous fishing” are permitted within the MTMNM, others, including one outspoken MTMNM opponent, focused on implications for fishers: “What we lost, I would say, is we permanently lost fishing rights to those waters. Whether we used them or not is not the question” (CNMI-RC2). A high-ranking elected official echoed this concern: “The fact [is] that now you have a boundary up there you cannot enter into and you don't know why” (CNMI-LGOV1).

This sense of loss is in stark contrast to the potential territorial benefits LMPA advocates presented. Nelson's December 2007 letter to Governor Fitial referenced benefits to the State of Hawai'i through designation of the Northwest Hawaiian Islands Marine National Monument (now Papahānaumokuākea), stating that it “effectively extend[ed] the area of state authority by almost 20 times, well into what were formerly exclusively federal waters” (Nelson, 2007). In their promotion efforts, FOM discussed the potential for the CNMI to gain broader authority and enforcement capacity within the northernmost waters. Moreover, federal officials interviewed for this study indicated that there have

been no substantive changes either to CNMI authority or fisheries management practices resulting from the MTMNM. Why then, do perceptions of loss of authority and access persist? One advisor to the CNMI government offered an explanation: “It’s really more about being dictated to [...] it’s about the independence and sovereignty of the Commonwealth” (CNMI-LGOV12). In other words, the sense of loss and restricted access are, in the majority of the spaces within MTMNM, more symbolic than they are material (though the conditions placed on submerged lands in the Islands Unit are an exception (see 3.3.4.3 Conveyance of submerged lands)). Conflicts over the MTMNM designation process and the resulting sense of loss experienced by some stakeholders are rooted in a perception of how the territorial arrangement between the United States and the Northern Mariana Islands should be honored.

3.3.4.2 CNMI expression of sovereignty through monument design

Despite their perceptions of loss of territorial control, the CNMI government was ultimately able to express sovereignty by influencing the design of the monument, including both the boundaries and the rules. The final boundaries of the MTMNM outlined in Proc. 8335 differ greatly from the LMPA proposed by Pew and affiliated advocates. Nelson’s initial concept was to designate the entire EEZ from Anatahan Island to its northernmost boundaries as no-take. The design was rejected early on, even by monument advocates, because it would interfere with ongoing efforts to repopulate Pagan Island. According to a former elected official, having the boundaries begin with Anatahan “would basically kill our efforts to resettle the people” to Pagan. The interviewee went on to explain, “Asuncion had been designated a sanctuary. I knew no one was allowed to live there. [...] Then the last two islands north are blocked. [...] I knew that that was a pretty safe bet to say ‘Okay let’s move the boundary up north’” (CNMI-NGO4). The design that FOM advocated was a no-take LMPA covering the EEZ of the three northernmost islands with special allowances for indigenous fishing. LMPA opponents referred to this design as the ‘Pew Monument’ in local and regional campaigns. As opposition to the design grew, White House CEQ entered into

discussions with high-ranking CNMI government officials with the objective of gaining their support (see 3.1 MTMNM designation process). According to a high-ranking CNMI government official, CEQ took over because “in the court of public opinions, [the] Pew proposal had become [...] polarizing. [...] There was no compromise” (CNMI-LGOV1). Interviewees engaged in closed-door discussions with CEQ agreed that the Fitial Administration’s final endorsement of the MTMNM came after seeing the ‘writing on the wall’; they felt that a designation would occur with or without their consent. As one CNMI government official explained, “Bush was gonna make it anyway, whether we want it or not. So what choice do we have? The choice is get some of our ideals” (CNMI-LGOV2). CNMI government officials took this opportunity to leverage Governor Fitial’s support for an LMPA in exchange for specific items. In the words of an official engaged in the negotiations, “We gave [CEQ Chair Connaughton] a shopping list to go back to the President” (CNMI-LGOV1). While some of these items were not included in Proc. 8335 and have since been enrolled in perceptions of unfulfilled promises (see 3.3.2 Unfulfilled promises of social benefits), the discussions did shape the final design of the MTMNM.

Negotiations focused heavily on fishing access, among other changes. One high-ranking official recounted exchanges with Connaughton that effectively reduced the boundaries of the Islands Unit to 50nm from the shoreline from the original 200nm, and excluded the water columns from the Trench and Volcanic Units. Through the negotiations, Governor Fitial was able to sign off on an iteration of the MTMNM that bore little resemblance to the LMPA advocated by Pew and affiliates. A former elected official explained, “There were concessions made [...] like additional fishermen's access [...] I think they felt like enough concessions had been made so that they could be more comfortable endorsing” (CNMI-LGOV21). In considering the final design for the MTMNM, a high-ranking official engaged in the negotiations felt that CEQ and the Bush Administration “took our conversations [and] picked up on our concerns”. Yet, the official expressed deep frustration over the designation by raising the question, “Are we going to be victims because somebody's walking out the door [...] and he wants to leave an ‘Ocean

Legacy’?” (CNMI-LGOV1). The majority of opponents, many of which are or were CNMI government officials, expressed similar perceptions toward the final MTMNM design. Concessions made during negotiations with White House CEQ did not temper their negative feelings toward the MTMNM and, overall, such interviewees did not characterize the changes as ‘wins’ for the CNMI. Rather, as outlined above, they expressed a sense of loss resulting from the designation. Interviewees holding such attitudes pointed to perceptions of unfulfilled promises, concerns over the designation process, and limited power in the territorial relationship with the US as contributing to their sense of loss.

3.3.4.3 Conveyance of submerged lands

The right to exclusive ownership of submerged lands has long been a priority for the CNMI. Shortly after the Covenant was finalized, the CNMI attempted to assert authority over submerged lands and marine resources in the 12-mile surrounding territorial sea by enacting laws in 1979 and 1980. This spurred a series of legal battles with the US (see Gruby et al., 2017). Prior to 2013, the CNMI was the only US insular area without sovereign control over submerged lands. The conveyance of submerged lands emerged as a bargaining chip for CNMI officials engaged in negotiations with CEQ Chair Connaughton in 2008, who reportedly agreed to this as a condition for their approval for the MTMNM. In September 2013, the US Congress passed P.L. 113—34 which amended 48 U.S.C. Ch. 15 §§ 1704-1705 Conveyance of Submerged Lands to Territories, to include the CNMI. Then, 119 days after P.L. 113—34 was enacted, then-President Barak Obama passed Proc. 9077, which reserved conveyance of submerged lands within the MTMNM boundaries, as well as lands adjacent to Tinian and Farallon de Medinilla Islands, which are leased by the US military. Proc. 9077 specifies that the reserved submerged lands within the MTMNM can be conveyed once the CNMI government and Departments of Interior and Commerce enter into “an agreement for coordination of management that ensures the protection of the marine national monument” (Obama, 2014). In September 2016, the CNMI government entered into an agreement with

the USFWS and NOAA for coordinated management of submerged lands within the Islands Unit. Then, in November, the reserved portion of submerged lands was transferred to the CNMI via Patent Number 2016—1, which included a conservation easement requiring that the lands be managed in accord with Proc. 8335 in perpetuity. At the time of interviews, this reserved portion of submerged lands had not yet been conveyed, and there was a general understanding among some interviewees within both the CNMI and federal governments that their conveyance was contingent on adoption of a final management plan. Several interviewees also understood that the conveyance would likely include a conservation easement that would require the CNMI to manage the submerged lands in accord with MTMNM rules in perpetuity, even if the LMPA were dissolved. Two interviewees who have served on the MTMAC, a high-ranking US federal official and a resource manager from the CNMI, suggested that the MTMNM designation likely influenced the decision to convey the submerged lands. The federal official referenced the Fitial Administration’s closed-door meetings with CEQ: “As [a] result of the commitments [from negotiations with Connaughton], there was a concerted effort [...] with positive results towards [...] submerged lands being granted to the CNMI” (GU-FGOV10). The official from the CNMI offered a tempered perception: “Maybe it was [...] the Proclamation that spurred this idea of the submerged land conveyance. Maybe” (CNMI-LGOV6).

My goal is not to establish a causal link between the MTMNM and conveyance of submerged lands, but rather to recognize that despite these perceptions of the CNMI’s ability to effectively leverage support for the MTMNM toward their territorial claims, many interviewees did not characterize the submerged lands conveyance as a ‘win’. A former CNMI government advisor demonstrated indignation toward the perception of territorial gain from the conveyance in stating, “Isn’t the CNMI happy because it got [the submerged lands] back? I’m happy because I got back what’s mine? It’s mine. What’s worth dancing a jig about that? It belongs to me. Let’s start with that premise. It wasn’t yours to begin with” (CNMI-LGOV11). Similarly, a CNMI resource manager felt that Obama’s decision to reserve conveyance

within the MTMNM limits the right to indigenous self-determination: “They don’t wanna give us [...] the submerged lands which is basically ours. [...] Everything off there is ours and they're [...] putting these obstacles for [...] natives to [...] pursue what they wanna do” (CNMI-LGOV7). Still others, including one former MTMAC member, felt that the need for a coordinated management plan for submerged lands in the Islands Unit, as well as the conservation easement, exemplified the lack of consideration for local conservation frameworks: “We intend to preserve these islands; we demonstrated that in the Constitution, what other evidence do you need? [...] yet you still insist that we sign [...] an agreement that says that we are going to preserve it?” (CNMI-LGOV6).

When considered within the historical, political, and cultural contexts of the Mariana Islands, outcomes relating to territorial sovereignty have the potential for various lasting effects; not only in terms of CNMI-US relations, but also for the elevated significance of the areas included in the MTMNM, as well as perceptions of limited autonomy owing to the CNMI’s territorial status. When reflecting on material outcomes affecting Marianas residents, a former MTMAC member stated, “When it became a monument, it sort of elevated the importance of it. [...] I don’t know that it has really [...] changed much but it certainly has gotten much [more] important as far as when you discuss it” (CNMI-LGOV6). A former advisor to the CNMI government explained how the elevated importance of the MTMNM can be understood within the contexts of the Marianas: “We're learning to see that we [...] can be viewed as collateral damage. And we're prospering no matter what. [...] All the other countries come through here, and hey, we still stand. So with this experience we still stand. Taking that property? Disrespecting us? We go on” (CNMI-LGOV11). In other words, the MTMNM, for some Mariana Islanders, serves as a reminder of the various limitations placed on indigenous authority and self-determination through centuries of control by world powers. Within this perception, the MTMNM is a symbol that, yet again, the attitudes, feelings, and desires of Marianas residents, many of which are indigenous Chamorro and Carolinian, are of little concern to global

political elites. For some, this has resulted in a profound sense of loss, which the US federal government fails to recognize.

Such perceptions may be continuing to influence CNMI government petitions for remittance of these perceived losses. For example, CNMI Senate Resolution 20—05, enacted in July 2017 in response to Executive Orders 13792 and 13795 asked that Interior Secretary Zinke and Commerce Secretary Ross “restore the fishing and mining extraction rights that were taken from the CNMI through the unilateral designation” of the MTMNM. Even if the conditions for conveyance of submerged lands in the MTMNM had not included a conservation easement, they still would not grant the CNMI authority over the lands in the Trench and Volcanic Units, as they are outside of the 0-3nm jurisdiction. While I do not know the full intentions of the CNMI Senate in drafting Res. 20—05, I argue that the perception of loss, much like the Fitial Administration’s decision to leverage monument support toward territorial claims, may be leveraged toward future political goals of the CNMI government.

3.3.5 Legacy effects for conservation

Nearly every interviewee expressed marine conservation as a deeply held personal and/or cultural value, regardless of their role or opinion of the MTMNM. Numerous supporters felt their attitudes toward the MTMNM are an expression of this ethic, with many endeavoring to protect marine resources for future generations. One advocate felt that the MTMNM represented an opportunity to “take those cultural values into the present century” (CNMI-NGO4). Opponents underscored marine conservation as a strongly held value, but perceived the MTMNM as an external form of conservation. An involved community member felt a clear message through the MTMNM designation: “You don’t know conservation. Conservation is now this.” The interviewee went on to explain, “We’ve existed as a people for over four thousand years in our very small islands, protection of the ocean, and everything therein, so

that is not conservation?” (CNMI-CO1). Yet, even amid mixed perceptions how the MTMNM fits (or fails to fit) within regional ethics, I found several potential legacy effects for conservation.

Despite the differing interpretations of the MTMNM’s implications for conservation values, interviewees were clear that the designation has not changed regional attitudes toward conservation. According to a resource manager who generally opposes the MTMNM, “The conservation idea is favorable out here. [...] There's no fish that is extinct out here because of overharvest [...] we're very good stewards of the ocean” (CNMI-LGOV2). Even so, some interviewees expressed an increased wariness toward area based management and MPAs resulting from the MTMNM designation, emphasizing the need for scientific data to inform such interventions. Numerous interviewees described a similar sense of wariness toward externally mobilized initiatives and suggested that in the future, key actors in the Marianas will focus heavily on the process for conservation decisions. Some interviewees, including a community organization leader, felt that collaboration is key: “It's like marriage [...] you both understand that if there is an issue to be resolved, it takes the both of you” (CNMI-CO1). Others, including a high-ranking resource manager, felt that the perception of unfulfilled promises would cause residents to be “more focused on how it happen[s] and the process” (CNMI-LOGV5). Here, the regional history of externally mobilized interventions is relevant (see 1.1 History and context in the Mariana Islands). Therefore, I do not argue that attention to process and collaboration exist solely as a result of the MTMNM designation, but rather that the MTMNM elevated the importance of process-oriented factors such as collaboration in externally mobilized conservation decisions.

While I found varied attitudes among interviewees, high-ranking elected officials in the CNMI have used the MTMNM as a cautionary tale for large-scale marine conservation initiatives elsewhere. In May 2016, CNMI Governor Ralph Torres wrote to then-President Barack Obama regarding proposed expansion of the Papahānaumokuākea Marine National Monument (PMNM). His letter explained that the CNMI had seen few of the social benefits enrolled in the MTMNM designation process and highlighted the delays in

management planning. Governor Torres encouraged Obama to “ensure [the] decision of whether to expand the PMNM is based on solid fact – not optimistic promises”, and to “ensure proper management of all the existing US marine monuments” (Torres, 2016). Rather than expressing stern opposition, Governor Torres asked Obama to focus on support of existing monuments while considering the merits of expanding the PMNM. Roughly a week later, the Marianas Variety reported Governor Torres did not support the proposed expansion, “citing the CNMI’s disappointing experience with the Marianas Trench monument” (Villahermosa, 2016). The article also quoted Department of Lands and Natural Resources Secretary Seman, a supporter of Governor Torres, as stating, “We rely on the ocean for our future [...] any marine monument expansion will take away what is really for us” (Villahermosa, 2016). Such engagement not only echoes the sense of loss associated with political and territorial outcomes (see 3.3.4 Territorial sovereignty), but also demonstrates these outcomes’ potential influence on conservation initiatives across levels of social and political organization.

Finally, a small number of stakeholders recognized that the MTMNM may serve to legitimize regional conservation ethics and practices to outsiders. As a resource manager from the CNMI explained, “When people from the states come in, they wanna change something”, however, a novel, high profile LMPA can serve to “suppress their desire to change stuff all of a sudden”. The interviewee went on to state that, “it kinda lets people know that hey, we have some knowledge of how to manage our resources”. Overall, the interviewee doubted the MTMNM’s conservation benefits, focusing instead on its potential to improve external perceptions of resource management expertise in the CNMI. “It helps [...] let people know [...] we have people who are knowledgeable and schooled; [who] know how to do things” (CNMI-LGOV20).

3.3.6 Select benefits and hopes for future outcomes

A small number of interviewees (5) identified select benefits stemming from the MTMNM designation. These included a moment of international recognition for the CNMI and the creation of a few jobs (though it was noted that none of them were filled by Marianas residents). Some interviewees, speaking somewhat cynically, identified former-President Bush's 'Blue Ocean Legacy' as one benefit resulting from the designation. Numerous interviewees from a range of stakeholder groups and on all sides of the issue hold out hope for the delivery of social benefits. Several expressed specific hopes for the final management plan, including: a system for monitoring social indicators (HI-FGOV2); attention to regional trust building strategies (GU-RC1); and recognition of community specific needs and contexts (CNMI-LGOV1). Some interviewees were more general in their hopes for the MTMNM, such as one influential fisher with close ties to the opposition movement: "I don't mind the designation as a monument, I just hope that the rules and regs can be a little more sensitive to the cultural values and needs of the Pacific Islander" (GU-PS1).

Advocates' visions for an LMPA included robust education and research programs and interviewees across the spectrum of support and opposition hope for additional opportunities in these areas. A small number of interviewees, including MTMNM advocates, opponents, and federal managers discussed education and research opportunities resulting from the designation. Some noted marine science curricula implemented in US elementary and middle schools throughout the Pacific, which one advocate described as a "direct byproduct of [a] grant that was [...] specifically aimed at the Marianas Trench Monument" (CNMI-NGO5). Federal managers described educational outreach opportunities associated with NOAA's Okeanos Explorer vessel cruise to the MTMNM, including a facilitated live-stream of the vessel's ROV film, as well as a workshop entitled 'Why Do We Explore?' that helped teachers incorporate information from the Okeanos cruise into lesson plans. Others, including opponents and those with mixed attitudes, described an increase in research cruises and a few limited opportunities for

researchers from the Marianas to participate. Even so, there was a broad shared hope for better-developed and integrated education and research programs. One advocate described a vision for research training opportunities to be “connect[ed] with our college [...] so our students [...] could become expert[s]”. The interviewee emphasized that, “my main objective is to develop more the know-how of the Pacific people” (CNMI-NGO1). A high-ranking government official and MTMNM opponent shared this vision: “These programs should be institutionalized and not just the policy or just the plan, but [...] part of [the] research” (CNMI-LGOV1). Several interviewees, including a coastal manager, envisioned a future visitor’s center supporting these programs: “It will have regular science visits so all that science will be shared with everyone [...] multiple languages and the opportunity to help young scientists [...] it’s actually a working marine laboratory that includes community education [and] development” (CNMI-LGOV9). This vision for a visitor’s center underscores the need for community education and outreach, a sentiment shared by an elected official: “We need to bring [the MTMNM] out to the public and educate the people” (CNMI-LGOV8); and supported by research on public understanding of the MTMNM (Kotowicz et al., 2017). Additionally, a federal manager discussed the potential to deliver on a hope shared by stakeholders in the Marianas – strengthening connections to the northernmost islands through incorporating Chamorro and Carolinian culture and history. To this end, the interviewee described education and interpretive programs focused on indigenous history and uses of the Islands Unit, as well as opportunities to broaden community perceptions of indigenous culture as ever changing and adapting over time.

Overall, interviewees showed broad consensus with their hopes for further education, research, cultural, and community programs associated with the MTMNM, yet there is contention over how to realize such visions. At the time of interviews, interviewees from nearly every stakeholder group representing a range of attitudes toward the MTMNM agreed that the National Marine Sanctuaries (NMS) process was preferential to the designation process for Marine National Monuments (MNM). The National Marine Sanctuaries Act, 16 U.S.C. 32 § 1434 (2000) specifies that NMS designations are subject to public

engagement and comment periods, require a completed draft management plan prior to approval, and must include an allocated budget for management and operating costs, none of which are required by the Antiquities Act of 1906, 16 U.S.C. § 431 et seq. The majority of interviewees felt that these requirements would have effectively mitigated concerns over the MTMNM designation process, while also ensuring select social benefits and preventing delays in management planning. In late 2016, FOM, with support from Pew, spearheaded the movement toward an NMS overlay through a rigorous nomination application to NOAA Office of National Marine Sanctuaries (ONMS). The application included letters of support signed by Governor Torres, Rep. Gregorio Kilili C. Sablan, numerous Island Mayors and municipal councils, as well as environmental and community organizations. The group submitted supplemental materials to ONMS on January 17, 2017, which, in addition to claiming continued support from these parties, outlined potential partnerships and collaborations within both the Marianas and greater Pacific region aimed at delivering some of the social benefits enrolled in early visions of the MTMNM. On January 18, 2017, the Saipan Tribune reported that Senate President Palacios, who was serving as acting governor while Governor Torres and Lieutenant Governor Hocog were off-island on extended engagements, urged Governor Torres to rescind support for the NMS overlay proposal. In the article, Senate President Palacios expressed concern over proposed expansion to the Islands Unit from 50nm to 200nm and inclusion of the water columns above the Trench and Volcanic Units. Senate President Palacios is quoted as asking, “Why is the marine monument, with supposedly all its restriction for conservation, can transpose to a better situation by making it and calling it now a marine sanctuary?” (Rabago, 2017). Despite these concerns, NOAA’s ONMS Director gave notice of the nomination’s acceptance in mid-March, officially placing the MTMNM on the list of sites to be considered for future NMS designations (Armor, 2017). Two days later, Rep. Gregorio Kilili C. Sablan announced progress toward his and Governor Torres’ joint effort toward an NMS overlay. Then, on July 11, 2017, the CNMI Senate passed Res. 20—05, which, in addition to requesting changes to mining rights and fisheries management authority within the MTMNM (see 3.3.4.3

Conveyance of submerged lands), recommended that “National Marine Sanctuaries not be established in the CNMI as they are not needed nor wanted”. Through personal communication in late January 2018, a vocal MTMNM opponent indicated that the strength of Governor Torres’ support for an NMS overlay was waning and that the progress toward an NMS designation had rekindled concern for limitations to resource use and extraction within the MTMNM boundaries.

Importantly, I do not endeavor toward a normative analysis of this chain of events, nor do I wish to present them as the only factual representation of the process toward a potential NMS overlay. Rather, I address this aspect of the MTMNM to demonstrate that hopes for the future, like all social outcomes, are not static. Instead, they have the capacity to evolve and develop over time, which necessitates continued and ongoing research into both outcomes and the factors that shape them if such research intends to inform effective conservation decision making. In terms of the MTMNM, these events demonstrate the likelihood for continued tension between two competing goals – movement toward advocates’ visions for an LMPA and the subsequent delivery of social benefits, and concerns for the right to self-determination and authority over marine resource management. Finally, I feel it is important to recognize again that both the series events relating to a NMS overlay, as well as the suite of social outcomes I have presented, does not capture the full range of public opinion toward the MTMNM.

3.4 Discussion

This case study has shown ongoing tension between an objective of MTMNM advocates (the delivery of social benefits) and a deeply held value of MTMNM opponents (territorial sovereignty). The primary data for this study, perceptions expressed by key stakeholders, indicates the tension is now so deeply enmeshed in the social fabric of the MTMNM that it continues nearly decade after designation. However, research into public opinion of the MTMNM demonstrates the same attitudes have not diffused to the general public. Through a randomized telephone survey of 1,000 Marianas residents conducted in

2012, Kotowicz et al. (2017), found that nearly two-thirds of respondents from the CNMI had heard of the MTMNM, though 57% of them reported that they knew little to nothing about it. In contrast, 72% of respondents from Guam had not heard of the MTMNM (Kotowicz et al. 2017). Of the total respondents who were aware of the MTMNM, 52% reported either strong or moderate support of the MTMNM when first hearing about it, while only 14% reported moderate or strong opposition (Kotowicz et al. 2017). Interviewers provided the respondents with information on the MTMNM including its location, date of designation, permitted activities, as well as information on the government agencies involved in management. At the end of the survey, 65% of the total respondents reported moderate to strong support for the MTMNM (Kotowicz et al. 2017). The interviewers also intended to gather data on the level of social acceptance with regard to activities within the MTMNM and found that 82% supported scientific research and 75% supported tourism (Kotowicz et al. 2017). Additionally, when asked about the permitting process for fishing uses, 61% of respondents favored more restrictive permits, while 34% favored a less restrictive permitting process (Kotowicz et al. 2017). In their analysis, Kotowicz et al. found that fishing households, which comprised 36% of the total, tended to be more aware of the MTMNM, but less supportive than the majority of respondents (2017). Overall, 82% of respondents felt that the MTMNM would provide protection for marine resources (Kotowicz et al. 2017). The majority of respondents felt there was their potential for their household to be at least somewhat positively affected by the MTMNM; the largest group (49%) felt that they would be positively affected, while 38% felt their household could experience both positive and negative effects (Kotowicz et al. 2017). This indicates that the general public within the Mariana Islands is, on the whole, supportive of the MTMNM, yet awareness is lacking. Moreover, as stated above, the findings of Kotowicz et al. (2017) show that though there may be strongly divided opinions among key stakeholders involved at various stages of LMPA initiation, mobilization, and planning, these attitudes are not shared by the wider public. Ultimately, this signals that, in the case of the MTMNM,

there is still time to deliver benefits that expect and hope for without encountering a negative legacy effect among the broader public.

When the LMPA concept was first mobilized in the Mariana Islands in 2007, advocates and supporters saw the potential for various social benefits, in addition to the potential economic and conservation benefits in reports commissioned by Pew. They envisioned an LMPA strengthening connections to the difficult to access but culturally important northernmost islands. They saw an opportunity to support Pacific peoples through education and research opportunities. They dreamed of bringing international attention to the region, resulting in an influx in tourism and research voyages. In sum, they saw an opportunity to support their community and capitalized on it by advocating their vision. Though there has been limited delivery on advocates' visions for social benefits, interview data shows that hope for them to be realized has diffused to a broad group of key stakeholders within this study, including vocal opponents. Yet, there remains tension over mechanisms to secure such benefits. Members of FOM, the grassroots advocacy group which helped to mobilize support for an LMPA, have successfully nominated the MTMNM to be included in a list of potential future NMS sites. And, though there was initial support for an NMS overlay among CNMI government actors, study data indicates that this support has waned over concern for feared negative impacts to CNMI sovereignty. The most specific of these fears is adjustment of the MTMNM's boundaries from those which the Fitial Administration negotiated with White House CEQ in 2008 to a design similar to that advocated by FOM during the MTMNM designation process. Importantly, some stakeholders concerned with territorial sovereignty have claimed that they would like to see delivery on many of the social benefits envisioned by LMPA advocates, but there is growing opposition to an NMS overlay as a pathway to realize them.

How might these two objectives be realized and move beyond the current divisive, ideological stalemate? As is true of conflict within many conservation interventions, there are no easy answers. However, lessons can be distilled from this continued tension. First, when an LMPA is advocated in

conjunction with social benefits, delivery of those benefits is paramount. In broadest terms, the MTMNM case demonstrates that delivery of social benefits is key, and, at the same time, the process and mechanisms by which those benefits are secured is of equal weight and importance. This requires careful, intentioned planning including realistic methods for achievement of goals. Within the MTMNM, aspects of the current governance structure and ongoing management planning may provide opportunities. A high-ranking senior US official interviewed for this study indicated that the Monument Advisory Council (MTMAC) recognizes the importance of ensuring social benefits and has created a prioritized list of some which were enrolled in the MTMNM designation process. The official expressed that developing strategies to deliver them is a goal of the MTMAC. Several interviewees at the federal level echoed this by expressing both a deep interest in and commitment to ensuring the MTMNM is beneficial to those in the Marianas. The Monument Management Plan, which at the time data collection, was finalized, but not yet adopted and implemented, could be an additional opportunity to develop cohesion by ensuring that there are contextually appropriate, actionable steps to ensure that the MTMNM meets the expectations of stakeholders.

3.4.1 Conclusion

Lessons from the MTMNM can also be applied to better understand the ‘people-centered’ aspects of LMPAs more generally. Though some have theorized that LMPAs in remote, uninhabited marine areas will engage fewer stakeholders (Balmford et al., 2004; Singleton & Roberts, 2014), the MTMNM demonstrates that this is not always the case. Instead, the MTMNM not only demonstrates that such stakeholders exist, it underscores that may see an LMPA designation as a pathway to securing social benefits in dimensions of economics, culture, territory and politics, and marine governance, among others. Failing to meet community expectations, including the adequate delivery and equitable distribution of social benefits, is known to compromise the socio-ecological effectiveness of conventional MPAs (Charles & Wilson, 2009;

Christie 2004; Fox et al. 2012). Understanding that similar expectations are possible within remote LMPAs can help to leverage the success of future sites through ensuring that promises of social benefits are, first and foremost, both conservative and attainable; and, that planning the mechanisms for delivery of such benefits is considered to be of equal importance as mobilizing stakeholder support.

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Chapter 4. Conclusions

It is my hope that the content of this thesis is interpreted as a constructive contribution to the growing bodies of knowledge about LMPAs. Within this research, I have endeavored to document the multifaceted ‘people-centered’ dimensions of a longer-standing LMPA site not as a critique of the LMPA model, but to offer insight into the myriad of factors which may (or may not) contribute to a successful LMPA. I firmly believe a theme which has been highlighted in the literature: as we begin to move beyond recognizing that LMPAs do indeed have both human dimensions and social outcomes to compiling a robust understanding of the range of each across disciplines in the conservation social sciences, we will be closer to leveraging the LMPA model toward its best chances of social and ecological success (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016).

4.1 Summary of findings

LMPAs are a nascent and growing marine conservation solution. They hold the promise of conservation benefits which are not attainable by conventional MPAs (Graham & McClanahan, 2013; Singleton & Roberts, 2014; Toonen et al., 2013; Wilhelm et al., 2014) and, according to some, are the best hope for meeting global conservation targets (Toonen et al., 2013; Wilhelm et al., 2014). However, with rapid proliferation of the LMPA model, their human dimensions and resulting social outcomes remain largely understudied (Gruby et al., 2016), which has given rise to various claims (Balmford et al., 2004; McCrea-Strub et al., 2011; Singleton & Roberts, 2014), counter-counter claims (De Santo, 2013; Devillers et al., 2015; Leenhardt et al., 2013) and rebuttals (O’Leary et al., 2018) about these dimensions of LMPAs. My thesis addressed the call for additional research on the human dimensions of LMPAs (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016) through an in depth qualitative case study

of the Marianas Trench Marine National Monument (MTMNM) est. 2009 – an LMPA designated by former-President Bush via authority under the US Antiquities Act. The primary research objectives of my thesis are twofold: (1) to empirically examine a suite of human dimensions of the MTMNM; and (2) to document the social outcomes of the MTMNM with rich, nuanced description. Through analysis of social outcomes, I have identified immediate and continuing outcomes, and discovered how social outcomes, as well as some of the contextual features that shaped them, have ongoing influence in the Mariana Islands.

As part of the Human Dimensions of Large MPAs project (Dr. Rebecca Gruby, PI), chapter 2 addresses the human dimensions of the MTMNM from the mobilization and designation processes through February 2016. The chapter is intended for an applied audience within the LMPA practitioner community and offers a ‘high-level’ account human dimensions of the MTMNM. Within this chapter I: identify key actors throughout the MTMNM designation process, as well as their continued authority and responsibilities within the LMPA; give a detailed account of the designation process; explain the MTMNM’s resulting design, regulations, management structure, funding, and enforcement capacities; discuss relevant politics; describe the social outcomes from a broad perspective; and offer lessons that which can be used by LMPA practitioners. Chapter 2 offers key takeaway points which inform my in-depth analysis in chapter 3. First, the MTMNM designation process resulted in tension and conflict among LMPA advocates and the CNMI government. This ultimately shaped the designation process, with White House CEQ ultimately negotiating CNMI government support for the designation. Through negotiations with CEQ the CNMI government had an opportunity to affect the final boundaries and rules of the MTMNM and assert desired outcomes, which some stakeholders perceived to be ‘promised’ within the course of negotiations. Some of the objectives of these negotiations differ from advocates’ visions for an LMPA – namely, the adjustment of boundaries within the MTMNM from 200nm to 50nm from the shoreline of the Islands Unit and exclusion of the water columns within the Trench and Volcanic Units. Yet, some of

the objectives were congruent with those of advocates, including allowances for certain types of fishing, the creation of a MTMNM visitor's center, co-management authority for the CNMI, economic development in the way of tourism and research opportunities, and increased enforcement capacity an authority within the MTMNM boundaries. In addition these items, advocates envisioned an LMPA as delivering additional social benefits to the Marianas. These included international attention to and recognition of the region, strengthened cultural connections and access to the three northernmost islands, the potential to increase use and settlement of islands south of the Islands Unit, but currently cost prohibitive for regular travel and repopulation, as well as robust education and public outreach programs. With the exception of fishing access, which was specified in Proc. 8335, and receipt of submerged lands, which were conveyed in 2013 and 2016, few of these benefits have been realized. Within this chapter, I also give an overview of resulting social outcomes from the MTMNM, including the perception of unfulfilled promises, concerns for sovereignty and access, political tension and mistrust at various levels of social order, conflict and social division, legacy effects, and perceptions of minimal benefits from the LMPA.

Within chapter 3, I give an in-depth analysis of social outcomes in the form of a manuscript intended for publication in a peer reviewed journal. This chapter offers find additional insights regarding specific outcomes. In terms of unfulfilled promises, advocates were clear that they presented the potential for social benefits as possibilities only. Additionally, specific interviewees held hopes for social benefits beyond those specifically addressed in the mobilization and promotion efforts. Numerous interviewees described a perception of pressure to suppress their support for an LMPA, and though some reported that social division sparked by the MTMNM has cooled, some has continued. There is eroded trust in CNMI-US relations, as some interviewees perceive the MTMNM as one action within a 'wave of federalization' and/or interpret the MTMNM designation as evidence of a perception that US lacks faith in CNMI's ability to effectively manage and conserve marine resources. An existing sense of mistrust

within the Marianas was exacerbated within the designation process, and served to fuel social division, tensions, and government opposition to the MTMNM. For some MTMNM opponents, the designation comes with a perceived loss of sovereignty and sense that the US disregarded the voice of the local community, despite the fact that MTMNM advocates and supporters primarily included residents of the Marianas. However, the designation process also resulted in an opportunity for the CNMI government to express sovereignty through changes to the monument's boundaries and rules while also asserting their desire for specific outcomes. In addition to fishing allowances, one of these claims has been realized – the conveyance of submerged lands – though a portion of these lands include a conservation easement that ultimately limits CNMI sovereignty over them. The experience with the MTMNM has not dampened regional conservation ethics, but it has demonstrated the importance of process-oriented factors in conservation decision making even in remote marine areas. The MTMNM experience has also been leveraged by high-ranking officials in the CNMI to caution against actions in other similar conservation efforts. The MTMNM has thus far resulted in few social benefits, yet there is hope for it to deliver on some of the social benefits envisioned within the designation process. There is continued tension within the Marianas over the possibility for a National Marine Sanctuary overlay to be included as part of the MTMNM. While advocates feel this change will help deliver social benefits, opponents in the CNMI government are concerned over the potential for negative impacts to sovereignty.

4.2 Limitations of research and further opportunities

As with all research, this study had several limitations. The interviewees we engaged are predominantly (72%) from roles in territorial or US federal government positions – 46% territorial and 26% federal. This implies that the findings of this research are specific to *key stakeholders* who were close to the processes in the MTMNM. These experiences and outcomes are not representative of the broader community of Marianas residents. In fact, Kotowicz et al. (2017) demonstrate that there is general support

for the MTMNM among Marianas residents, though there is lacking public knowledge about the LMPA. Therefore, it is important to underscore the fact that these findings cannot be extrapolated to represent the opinions of the broader public in the CNMI or Guam. Moreover, while the findings of this study of the MTMNM may inform processes related to future LMPAs and contribute to better understanding other LMPA sites, it should not be considered a surrogate for similar in-depth analysis of the social outcomes and specific contexts in such sites. In-depth qualitative study of both the human dimensions and social outcomes of such LMPAs, as well as developing novel methods to gather and analyze such data will contribute to our emergent, empirical understanding of the model more generally.

4.3 Contributions of research

This thesis contributes empirical knowledge to our understanding of both the human dimensions and social outcomes of the MTMNM, and has implications for the broader LMPA model. In the proceeding two sections, I identify how the MTMNM case relates back to the broad literature on conservation and the LMPA model (4.3.1 Advancing understanding of LMPAs) and specify how this research which can be utilized within the LMPA practitioner community (4.3.2 Research applications).

4.3.1 Advancing understanding of LMPAs

First and foremost, the research within this thesis directly contributes empirical knowledge of the human dimensions and social outcomes of a longer-standing LMPA which has been called for within the literature (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016), through the use of stakeholder perceptions as primary data sources for understanding social outcomes (Bennett et al., 2017; Bennett, 2016). The perceptions of local, involved stakeholders are widely accepted as a means to understand the social outcomes of protected areas (de Lange et al., 2016; Jones et al., 2017) as well as conventional MPAs (Charles & Wilson, 2009), and are increasingly becoming a focus within the literature

on LMPAs as well (Ban et al., 2017; Gruby et al., 2017; Kotowicz et al., 2017). Importantly, it is becoming widely accepted that such knowledge is crucial to the success of terrestrial and marine protected areas (Bennett, 2016; Bennett & Dearden, 2014; Jones et al., 2017) as well as LMPAs (Campbell et al., 2016; Christie et al., 2017; Gray et al., 2017; Gruby et al., 2016). Additionally, literature on terrestrial and marine protected areas argues that understanding context specific details can increase both effectiveness and equity (Rees et al., 2013; Waylen et al., 2010; West et al., 2006) which have been called into question within the LMPA model (De Santo, 2013; Devillers et al., 2015; Jones & De Santo, 2016; Leenhardt et al., 2013). Furthermore, specific aspects of the MTMNM case bare similarity to many of the human dimensions of conventional MPAs described by Charles and Wilson (2009), which are adapted in the research call set out by Gruby et al. (2016) including: charting objectives and attitudes; furthering understanding of place attachments in remote spaces; drivers and barriers to MPA creation; as well as a deeper understanding of site-specific contexts.

More specifically, individual contextual features of the MTMNM are shared by many other LMPA sites, so the case may be especially relevant for current and future LMPA sites with similar contextual features. Literature on the LMPA model (De Santo, 2013; Devillers et al., 2015; Gruby et al., 2016; Leenhardt et al., 2013) as well as studies of specific LMPA sites (Appleby, 2015; Gruby et al., 2017; Harris, 2014a; Kotowicz et al., 2017; Richmond & Kotowicz, 2015; Sand, 2012) demonstrate the tendency for LMPAs to be designated in overseas territories, which often have colonial or military histories as part of this context. My thesis demonstrates the centrality of territorial sovereignty within the MTMNM through the social outcomes of perceived loss of sovereignty, expressions thereof within the final MTMNM design, conveyance of submerged lands, and localized conflict including a perception of pressure to conform to territorial government actors' positions. This rich, detailed body data can serve to deepen our understanding of existing LMPA sites in overseas territories, and, importantly, inform processes for new

LMPA sites within overseas territories, which may help historically disempowered groups to “push back against colonial legacies and globalization processes” as some have envisioned (Gruby et al., 2016, p. 5).

Another key contribution of this research is in highlighting the importance of a designation process even for remote marine spaces where there are few direct human uses. By most standards, the MTMNM was rushed. For comparison, the process for Papahānaumokuākea was roughly 6 years, whereas the ‘on the ground’ designation within the Marianas took roughly 18 months. Looking at this process retrospectively allows for identification of missed opportunities. Specifically, I found there was a large missed opportunity on the part of the United States federal government, which was best expressed by a high-ranking official within the CNMI government who generally opposed the MTMNM:

“Looking back, had the federal government come in and say, ‘Hey so you got these three islands preserved in your constitution. What do you think about extending that out fifty miles out from the island?’ I don’t know that’s that’s such a bad idea. It’s consistent with what the forefather[s] had created right out of the gate. But it didn’t happen like that.” (CNMI-LGOV2)

In other words, the federal government missed an opportunity within the CNMI by not approaching the government directly initially, taking the position of a ‘government-to-government’ political agreement from the start. Within the territorial and historical contexts of the Marianas, treating the Commonwealth as a political body that warrants diplomatic interaction is of central importance to powerful, high-ranking government actors.

Amid the contention that arose in the MTMNM designation process, the fact that the Bush Administration designated the LMPA as a Marine National Monument under authority of the Antiquities Act was perceived negatively by some monument opponents and supporters. The MTMNM was largely advocated in relation to the US National Marine Sanctuaries program. This created confusion among numerous interviewees from all sides about the policy framework that would be used for the final designation. At the time of interviews, advocates believed that social benefits discussed within the

designation process would have come to fruition under a sanctuary designation, while some opponents felt that such a designation would have resulted in more consultation and, at the very least, secured more funding opportunities for the LMPA. Designation via the Antiquities Act is a unilateral action as it requires designation through presidential proclamation. This ultimately fueled perceptions among some MTMNM opponents that former-President Bush was the primary benefactor of the designation and solidified some perceptions of the process as ‘top-down’. Ultimately, this work demonstrates the importance of a well-planned, consultative, and transparent designation process.

Finally, the other issue of central importance within the MTMNM case, delivery of social benefits, also serves to advance our understanding of LMPAs. This finding pushes back against early assumptions that LMPAs are unpeopled even if they have few direct users (Balmford et al., 2004; Singleton & Roberts, 2014). This finding aligns with important themes within the literature on the human dimensions of conventional MPAs (Charles & Wilson, 2009), indicating that aspects of LMPAs do not differ from conventional MPAs to the degree that some have theorized. It also aligns with calls for research on the human dimensions of LMPAs (Christie et al., 2017; Gruby et al., 2017).

4.3.2 Research applications

The research within my thesis can have practical applications as well. As Shackeroff et al. (2008) demonstrate, practical contributions of studies which situate ocean spaces as peopled seascapes serve to inform marine management by “better enable[ing] managers to *situate*, or contextualize, marine management strategies socially, historically, and geographically” (p. 48, emphasis in original). Because the MTMNM is yet to have a fully implemented management plan, the findings within chapters 2 and 3 may serve to inform management planning and implementation processes within the site. Additionally, the detailed information about the MTMNM designation process and roles therein, as well as the lessons discussed in this chapter may have applications to the broad LMPA practitioner community informing

reflection and perhaps future decision-making by donors, NGOs, governments, and others. Additionally, the implicit jurisdictional conflicts addressed through the lens of territorial conflict may help the LMPA practitioner community conceptualize issues known to be of importance within conventional MPAs, including the intersection of management authorities and the relationships between them (Charles & Wilson, 2009; Pomeroy et. al, 2007). As indicated in throughout chapter 3, the findings of this thesis may also serve to inform ongoing political conversations about the value of the United States' Antiquities Act as a policy framework for LMPA designation, as it focuses exclusively on issues of social importance which have been underscored in recent congressional bills and executive orders.

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