Equity and access in marine protected areas: The history and future of ‘traditional indigenous fishing’ in the Marianas Trench Marine National Monument

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Abstract

Marine protected areas (MPAs) — or sections of the ocean set aside where human activities such as fishing are restricted — have been growing in popularity as a marine conservation tool. As a result, it is important to examine the socioeconomic consequences of MPAs and how they may affect nearby communities. This study explores social and equity issues surrounding the designation of the Marianas Trench Marine National Monument, an MPA that includes protections around the three most northern islands in the US territory of the Commonwealth of the Northern Marianas Islands (CNMI). We gathered oral history interviews with 40 individuals from CNMI and Guam who had connections to the waters in the newly-designated MPA and reviewed key documents in order to (1) document historical and current use of the waters in the MPA and (2) consider the implications that proposed fishing regulations in the MPA may have for the local communities. Our study documented 129 trips to visit the waters in the MPA in living memory. We found that due to distance, trips to the MPA waters were rare but culturally significant events that provided residents from CNMI and Guam with connections to their indigenous roots. Regulation of fishing in the new MPA has the potential to directly and indirectly restrict local access to these culturally important waters. This research highlights the importance of better collaboration with local partners and better consideration of social and equity concerns in the siting and regulation of MPAs.

Introduction

Marine protected areas (MPAs) — or sections of the ocean set aside where human activities such as fishing are restricted — have been growing in popularity as a marine conservation tool. For example, in 1992 the United Nations Convention of Biological Diversity set a target to have 10% of the world’s oceans designated as MPAs by 2010 — recently extended to 2020 due to lack of achievement (Leenhardt, Cazalet, Salvet, Claudet, & Feral, 2013; Wood, Fish, Laughren, & Pauly, 2008). In the effort to increase MPA coverage, there has been a movement to develop large-scale marine protected areas that cover areas larger than 100,000 km² with ten such areas declared since 2004 (Leenhardt et al. 2013). This movement is likely to continue as in June 2014, US President Barack Obama announced plans to develop the world’s largest MPA which would more than double the globe’s MPA coverage (Eilperin, 2014). Leenhardt et al. (2013) argue that due to the lack of ecological data about the areas and their general remoteness, the designation of these large-scale MPAs may be as much about geopolitics — or the ability of various nation-states to meet agreed upon percentages of MPA coverage — as about achieving tangible near-term conservation outcomes. All of these prospects highlight the importance of gaining better empirical information about large-scale MPAs and how their implementation may affect nearby communities and ecosystems.

Alongside the expansion of MPAs worldwide, there has been substantial research focused on their social and ecological effects. Ecologically, research has shown that MPAs can be effective in conserving certain marine species and habitats (Gell & Roberts, 2003; Hastings and Botsford, 1999; Roberts, Hawkins, & Gell, 2005; White & Kendall, 2007). However, many scientists caution that MPAs should not be a one size fits all conservation solution as

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their success is highly dependent on context, design, and the species of interest (Agardy et al., 2003; Hilborn et al., 2004; Kaiser, 2005). Human dimensions research reveals that the designation of MPAs can have significant socioeconomic implications for communities that live near and utilize these marine spaces (Cocklin, Craw, & McAuley, 1998; Pomeroy, Mascia, & Pollnac, 2007). MPAs can limit access to fishing grounds, which can deliver economic and cultural hardships to communities with strong attachments to those grounds (Badalamenti et al., 2000; Christie et al., 2009; Mascia, Claus, & Naidoo, 2010). Additionally, scholars have shown that MPAs can present equity or environmental justice concerns if MPA placement disproportionally affects certain user groups, ethnic groups, or socioeconomic classes (Christie, 2004; Jones, 2009; Singleton, 2009). Research into the governance structure of MPAs has revealed that the process to establish MPAs can be important for their social and ecological success (Ferse, Manez Costa, Manez, Adhuri, & Glaser, 2010; McCay & Jones, 2011; Singleton, 2009; Weible, Sabatier, & Lubell, 2004). Several studies found that the inclusion of collaborative or participatory approaches to designating and regulating MPAs can increase the social equity and conservation effectiveness of those MPAs (Christie et al., 2009; Mascia, 2003; Pollnac, Crawford, & Gorospe, 2001). Overall, this body of research underscores the importance of examining the social, economic, and cultural conditions of affected communities both before and after the implementation of MPA networks (Klein et al., 2008; Pomeroy, Parks, & Watson, 2004).

This manuscript focuses on social and equity concerns surrounding the Marianas Trench Marine National Monument (the Monument), a large-scale MPA established by US President George W. Bush through presidential proclamation in 2009 (Presidential Documents, 2009). The Monument encompasses 61 million acres of ocean near the US territories of the Commonwealth of the Northern Marianas Islands (CNMI) and Guam. The Monument consists of three units—the Trench, Volcanic, and Islands Units. The Islands Unit of the Monument includes the waters out to 50 nautical miles surrounding the three northernmost islands of the territory of CNMI — Uracas, Maug, and Asuncion — all of which are currently uninhabited (Fig. 1). This is the only portion of the Monument that includes fishing restrictions and as a result it was the most contentious.

The proclamation provided the following guidelines for the regulation of fisheries in the Islands Unit

Within the Islands Unit of the monument, the Secretary of Commerce shall prohibit commercial fishing. Subject to such terms and conditions as the Secretary of Commerce deems necessary for the care and management of the objects of the Islands Unit, the Secretary ... shall ensure that sustenance, recreational, and traditional indigenous fishing shall be managed as a sustainable activity consistent with other applicable law and after due consideration with respect to traditional indigenous fishing of any determination by the Government of the Commonwealth of the Northern Mariana Islands (Presidential Documents, 2009).

While the categories of commercial, recreational, and sustenance (catching and consuming fish while visiting an area but not

Fig. 1. Maps of the boundaries of the Marianas Trench Marine National Monument. Map to the right is the official Department of Fish and Wildlife Map depicting the Trench (red), Islands (yellow), and Volcanic (stars) Units. The map to the left shows the location of the Islands Unit of the monument in relation to the islands of the Mariana chain. The territory of Guam consists of the southernmost island in the chain and the remaining islands to the north are part of CNMI. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)
Source: Kotowicz and Richmond, 2013; original image courtesy of Barry Smith.
groups of Chamorro and Carolinian descent have sailed throughout the islands in the chain (Table 1). Since pre-history, indigenous groups make up a large portion of the populations of the territories surrounding just the northern three of those Northern Islands.

In 2011, at the beginning of debate and negotiations over the precise fishing regulations for the Islands Unit, we traveled to CNMI and Guam to gather information about local residents’ use of and connection to the Islands Unit of the Monument. The purpose of this research is two-fold:

1. To document historical and current use of the waters and lands of the Islands Unit of the Monument and to describe the connections that residents of CNMI and Guam have with the area.

2. To consider the implications that proposed federal fishing regulations established in a recent final rule may have for fishermen and community members from CNMI and Guam.

With an equity lens, we will seek to explore if the designation and regulation of the Monument could disproportionately affect or limit access to specific groups of people whether it be based on residency, ethnicity, type of use, cultural connections, or geopolitical position.

Background

The Islands Unit of the Monument is approximately 300 miles from Saipan, the nearest currently inhabited island in the Marianas chain (Fig. 1). As a result of this distance, much of the press leading up to the designation of the Monument described the Islands Unit with terms such as “remote” and “uninhabited” (Global Ocean Legacy, 2008; p. 1). A publication from the PEW Charitable Trusts — Global Ocean Legacy, a marine conservation organization, stated “this wild, dangerous, tantalizing region is so remote that many of its wonders are yet to be quantified” (Global Ocean Legacy, 2008; p. 1). While in present day, none of the islands north of Saipan are occupied year round, this has not always been the case. Archeological and oral historical research reveals a very much populated history of use and occupation of the area. Residents of Guam and CNMI refer to all the islands north of Saipan as the “Northern Islands” and CNMI has a Mayor of the Northern Islands who oversees activities in the area. To local residents, the Islands Unit represents something of an artificial distinction encompassing waters surrounding just the northern three of those Northern Islands.

Currently, there are two indigenous groups in the Marianas chain — the Chamorros and the Carolinians. Combined, these groups make up a large portion of the populations of the territories of Guam and CNMI — ranging from 32 to 64% of the population of the islands in the chain (Table 1). Since pre-history, indigenous groups of Chamorro and Carolinian descent have sailed throughout the Mariana Archipelago to fish in its waters and hunt on its islands. The Chamorros have occupied the islands as early as 2000 BC (Allen & Bartram, 2008). The Carolinian people traveled to and traded extensively with residents of the islands and established permanent settlement in Saipan in the mid-1800s (Allen & Amesbury, 2012). Through periods of Spanish, German, Japanese, and American influence, the population, culture, and language of these indigenous groups, including their connection to fishing and the sea, has remained strong (Allen & Amesbury, 2012; Allen & Bartram, 2008).

In the decades before World War II, several settlements were established in the islands north of Saipan to work in and facilitate the copra trade. The most recent settlement on Asuncion was disbanded in 1945. In our study, we were able to interview two elders who recounted living on Asuncion in their early childhoods. Since 1945, residents of CNMI and Guam have traveled to the islands of the Islands Unit for various cultural, academic, and economic purposes (Kotowicz and Richmond, 2013). Currently on Saipan there is a “back to the islands movement” where some residents are seeking to establish long-term settlements on several of the islands north of Saipan (personal communication, Northern Islands Mayor’s Office 2011). While the islands near to and within the Islands Unit are currently uninhabited, it is possible that this status could change in the future.

Environmental groups such as the PEW Charitable Trusts praised the establishment of the Monument as a boon for marine conservation (Broder, 2009; Global Ocean Legacy 2008; PEW, 2011). However, residents of CNMI and Guam had more mixed feelings about its designation. Government officials from the two territories were concerned that the designation impinged on their right to regulate the use of their own resources and that regulations in the Monument could restrict their territories’ economic opportunities and could cause negative social and cultural impacts to their fishing communities (Broder, 2009). In 2008, governors and mayors from CNMI sent a series of letters to George W. Bush and the PEW Charitable Trusts indicating their opposition to the Monument (Coral Reef Task Force, 2008). But there also was a CNMI group called Friends of the Monument that expressed support for the Monument. The designation of the Monument was primarily a top-down process initiated at the federal level, and the governments of the territories as well as the general public had little opportunity to participate. However, we heard accounts that extensive lobbying from the CNMI government is what led to the inclusion of protections for “traditional indigenous fishing” in the final proclamation (personal communication, CNMI government official 2011).

Finally, in discussions to regulate the Monument, regulators on all sides agreed that to participate in “traditional indigenous fishing”, individuals must be residents of CNMI or Guam. Since the percentage of the population that is indigenous is so high in the Marianas, most residents of the territories experience some connection with the indigenous history and culture in the islands. In addition, it would not be practical or desirable to distinguish indigenous from non-indigenous people in a regulatory sense. Also in correspondence relating to the Monument, CNMI government
officials tend to use the term "indigenous" to refer to all people who are from the territory rather than those with a specific ancestry (Fitial, 2008). Therefore, in our efforts to understand "traditional indigenous fishing", we gathered accounts and experiences of the Northern Islands from anyone residing in CNMI and Guam. However, given their connections to the Northern Islands, the majority of respondents we talked to were of Carolinian or Chamorro ancestry.

Methods

We utilized three primary methods for this project: review of float plans, oral history interviews, and document review.

Float plans

To assess the number and types of trips taken to the Islands Unit over time, we reviewed float plans maintained by the CNMI Department of Fish and Wildlife (DFW) enforcement vessels. Records from 2006 to 2011 provided vessel names, number of passengers and crew, estimated dates of departure and arrival, island of departure, islands intended to be visited, and the purpose of trip. Upon further discussions with the CNMI Emergency Management Office (EMO) who maintains the float plans, we came to understand that the float plans did not always provide accurate or complete accounting of trips to the Islands Unit (personal communication, CNMI EMO 2011). They were filled out prior to the trip and any changes in the destination would not be recorded in the plans. Additionally, the EMO indicated that developing a float plan was voluntary and many trips did not fill out float plans. Therefore, the plans were not used to estimate the number of trips to the Islands Unit; however, they did provide an initial estimate of how often and which boats traveled to the waters of the Islands Unit and a way to identify potential study participants to provide oral histories.

Oral histories

Given the lack of complete paper records, oral histories provided the most accurate and longest running information about travel to and use of the Islands Unit waters. Semi-structured oral history interviews were conducted during two visits to Guam and Saipan in 2011 and during a follow-up visit to Saipan in 2012. We conducted group or individual interviews with a total of 40 individuals with various types of connection to the Islands Unit waters (Tables 2 and 3). Initial discussions with people knowledgeable about the goals of the study helped us to identify a list of potential participants including fishermen, former residents of Asuncion, research scientists and government officials who had been to the area. We were greatly assisted by an individual who spoke Refaluwasch, the language spoken by Carolinians, and had familial or personal connections with many individuals who have visited the islands. He helped to identify and introduce us to many interview subjects.

In the oral history interviews, we asked respondents about their experiences with the islands and waters in the Islands Unit. If they had ever traveled to the Islands Unit, we asked them for specific information about every trip that they took to the Islands Unit including the date of the trip, the primary purpose of the trip, the vessel used for the trip, the crew on the trip, the places visited and activities conducted on the trip, the type of fishing that took place, and the dispensation of any fish that was brought back home after the trip was completed. We also asked interviewees about their cultural connections to the Islands Unit waters and their opinions about the Monument designation as well as the types of fishing regulations that were being considered to manage traditional indigenous fishing there.

We took several steps to assure the veracity of the data that we collected from oral histories to assure that trips to the Islands Unit were not over or under reported. First, by pressing interviewees for a number of specific details about each individual trip rather than asking for a broad overview of visits, we made it difficult to falsify or exaggerate travels to the area. In addition, where possible we conducted triangulation where we talked separately to different individuals who were involved in the same trips to ensure that they corroborated the experiences of each other. Finally, given that the Islands Unit is nearly 300 miles away across rough seas, only a small subset of vessels on CNMI or Guam have been large enough to successfully make the long journey. For example, at present day there are only two vessels on Saipan capable of making the journey. Therefore, the community of people that travel to the Islands Unit is very small and tight-knit. As a result, in the 40 interviews, we feel we were able to develop a near-census of trips taken to the Islands Unit in living memory. We were unable to speak with one captain who may have had valuable information. Oral history contributors also told us about foreign vessel owners who operated commercial fisheries in the Northern Islands but have since left the Marianas and we were not able to account for those trips.

Document review

Finally, to assess the implications of potential fishery regulations in the Monument, we reviewed government documents related to the management of the Monument including the proclamation, proposed management plans, environmental impact assessment documents, government communications, and the draft proposed rule related to fishery management in the Monuments.

Results and discussion

Historical and contemporary trips to the Islands Unit

The goal of this study was to document trips taken to the Islands Unit of the Monument. We uncovered accounts of 129 trips to the Islands Unit waters spanning the years 1939–2009 (Table 4). In the more recent past from 1979 to 2008, this encompasses an average of 3.8 trips per year. The accounts included descriptions of 16 different vessels that traveled to the Islands Unit. When discussing trip logistics, informants mentioned that travel to the Islands Unit was an expensive proposition. Based on reported use of fuel and prices as of late 2011, fuel alone for one trip could cost $4000–$15,000, depending on the type and size of boat. Despite

Table 2

<table>
<thead>
<tr>
<th>Description of oral histories.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>27 individual</td>
</tr>
<tr>
<td>Gender</td>
<td>35 males</td>
</tr>
<tr>
<td>Residence</td>
<td>38 Saipan</td>
</tr>
</tbody>
</table>

Table 3

Categories of the oral history contributors.

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong personal/Familial connections</td>
<td>9</td>
</tr>
<tr>
<td>Fishermen/Captains</td>
<td>14</td>
</tr>
<tr>
<td>Boat owners</td>
<td>5</td>
</tr>
<tr>
<td>Scientists</td>
<td>6</td>
</tr>
<tr>
<td>Government officials</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
</tr>
</tbody>
</table>
the long distance, high cost, and inconvenience of traveling to the three northernmost Mariana Islands, this research indicates that travel to the Islands Unit occurred regularly and that CNMI and Guam residents have maintained a connection to the Islands Unit waters over the past 70 years.

To contribute to discussions about “traditional indigenous fishing” we also gathered detailed information about the type of fishing that took place on the trip as well as what was done with the catch after harvesting (Table 4). The analysis reveals that fishing was an important part of all types of trips to the Islands Unit waters—fishing of some kind took place on 98% of the trips. The only two trips that did not include fishing were research trips where it was explicitly prohibited. On 93% of trips, fish caught in the Islands Unit waters was brought home for consumption or sharing with family, friends, and neighbors. One captain highlighted the cultural importance of sharing fish in the Marianas saying, “... if you go up there and you get the fish and bring it back here, you’re supposed to share it with family, that’s the cultural values ... it’s always in our tradition and culture, it’s inherent in our community” (Fisherman, personal communication, 2011).

In the oral history interviews, we heard accounts of several small–scale commercial fishing ventures that traveled to the Islands Unit over the course of the past 30 years (73 accounts of commercial fishing trips). These commercial fishing ventures were unique in several ways. First, aside from mention of one Japanese venture that failed and left the island, nearly all of the trips were run and staffed by local residents. These operations were very small in scale, attempting to sell their catch in local markets in Guam and CNMI. In addition to selling the fish, the operations also included mechanisms for the crew to bring back fish to share with family and friends for no monetary compensation—99% of fishing trips involved share of fish. Finally, nearly all reports of commercial fishing ventures indicated that due to a lack of a viable market, they were not really financially successful ventures—only 77% of the fishing trips we heard accounts from actually turned a profit. When we asked a crew member why they continued these commercial fishing ventures despite lack of profit, he responded, “To make our families happy from the foods that we brought back that are from our own home sweet homes and they’re very fresh” (Fisherman, personal communication 2011). His words indicate that commercial fishing played a large role in keeping the community connected to the islands.

The oral histories indicated that research trips to examine the flora, fauna, and geology of the islands also played an important role in keeping local residents connected to the Islands Unit. As a result of CNMI regulations, research trips to the Northern Islands were required to include at least one CNMI resident on board. 76% of research trips involved bringing fish back to CNMI and Guam for consumption and sharing. In one account, fish from a research vessel was brought back to provide food for an important wedding celebration (CNMI Scientist, personal communication 2011).

Table 4
Summary of trips to the waters of the Islands Unit of the monument accounted for in oral history interviews.

<table>
<thead>
<tr>
<th>Primary purpose</th>
<th># of Accounts</th>
<th>Years</th>
<th>Fishing took place</th>
<th>Fish brought back for sharing/Consumption</th>
<th>Fish sold not beyond expenses of trip</th>
<th>Fish sold beyond expenses of trip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Fishing</td>
<td>73</td>
<td>1979–2009</td>
<td>73</td>
<td>100%</td>
<td>72</td>
<td>99%</td>
</tr>
<tr>
<td>Research</td>
<td>30</td>
<td>1980–2010</td>
<td>28</td>
<td>93%</td>
<td>23</td>
<td>82%</td>
</tr>
<tr>
<td>Resupply</td>
<td>12</td>
<td>1939–1945</td>
<td>12</td>
<td>100%</td>
<td>12</td>
<td>100%</td>
</tr>
<tr>
<td>Visit/Explore</td>
<td>6</td>
<td>1985–2009</td>
<td>6</td>
<td>100%</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>Charter (tourist)</td>
<td>4</td>
<td>1995–2005</td>
<td>4</td>
<td>100%</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Charter (other)</td>
<td>4</td>
<td>1997–2010</td>
<td>4</td>
<td>100%</td>
<td>3</td>
<td>75%</td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>1939–2010</td>
<td>127</td>
<td>98%</td>
<td>120</td>
<td>93%</td>
</tr>
</tbody>
</table>

There were six accounts of trips to visit or explore the Islands Unit waters where CNMI residents arranged trips simply to see, fish in, and be connected to the waters of the islands. In these accounts, the boat owner along with friends and family would pool their resources and develop the trip themselves. Several respondents indicated that selling fish was essential to help offset the high costs of trips to visit or explore the Islands Unit waters (Two CNMI boat owners, personal communication 2011). Four of the six or 67% of trips to explore the islands involved the sale of fish to help offset the high costs.

Oral history conversations revealed that trips to the Islands Unit waters were rare but culturally important events. The logistical and financial difficulties associated with trips to the Islands Unit resulted in a situation in which those trips served multiple purposes and with trip participants opportunistically combining multiple activities into each trip. While Table 4 indicates “primary purpose”, many trips had multiple purposes including catching fish to share, catching fish to sell, conducting research activities, and making resupply trips to communities or groups who were living in some of the Northern Islands at the time. Accounts show that every effort was made to maximize the benefits from one individual trip while trying to minimize the costs through alignment with multiple people or agencies and through the sale of fish to offset costs.

Cultural connections to the Islands Unit

In their accounts of trips to the Islands Unit, many participants reflected on the cultural experience of their trips. Many communicated a sense of awe and wonder when describing their visits. One boat owner who traveled to Maug said, “It’s like you’re discovering, exploring something very different from out here. It makes you feel like you are actually an islander” (Boat Owner, personal communication 2011). Many who visited the islands indicated that a large part of the cultural experience was the fishing itself. One fisherman said, “I cannot really you know like find the right proper word to describe it but it will never be forgotten it was just the excitement that I seen out there catching a lot of fish it was so wow, overwhelming” (Fisherman, personal communication 2011). This quote helps convey the intangibles we encountered in many recollections of trips to the Islands Unit, many felt that they could not adequately express their experiences in words.

In addition to talking with fishermen and captains who went on trips, we also had conversations with individuals who had personal or familial connections to those who travelled to the Islands Unit although they had never been there themselves. Their stories highlight that the trips to the Islands Unit were culturally meaningful even to those who had never traveled there. Numerous accounts described how, when their boat returned from a trip, the dock in Saipan would be full of people looking to hear about the trip and share in the foods—in particular the fish—that the travelers brought back, some even referred to it as “Carolinian food” (CNMI
resident, personal communication 2011). Other accounts described how trips provided indigenous elders with access to types of fish that they enjoyed when they were young, but that are no longer available around Saipan (Boat Owner, personal communication, 2011).

In our discussions with residents of Guam and CNMI, we observed that the mere ability for local people to travel to or visit the Islands Unit was important. Many different individuals recounted to us a desire to visit all of the islands in the Marianas chain. Those who had a chance to visit all the islands in the chain reported that to us with pride. One stated, “I stepped on all the [Mariana] islands — all of them. That was my goal at least to say that I’ve stepped on all the islands” and then she added “it’s paradise” (CNMI Government Official, personal communication, 2011). Others who hadn’t visited the islands expressed a desire to one day do so (Fisherman/Captain, personal communication, 2011). In interviews and conversations, residents of CNMI expressed a belief that this goal of visiting all of the islands is linked with the many generations that came before them and lived and fished throughout the island chain.

Nearly all CNMI residents that we interviewed conveyed these notions of historical and cultural connections to the Northern Islands as well as an appreciation for their unique beauty and resources. But, not all respondents agreed on the designation and regulation of the Monument or the best strategies to protect this cultural resource. Several commercial fishermen described the importance of commercial ventures to their cultural experience of the islands and expressed a lamentation over the loss of commercial access from Monument designation (Three Fishermen, personal communication, 2011). Others that we interviewed felt that at least some forms of commercial fishing should be prohibited in order to continue to conserve these valuable places (Four CNMI Residents, personal communication, 2011).

Implications of monument regulation

On July 2, 2013 NOAA released a final rule related to management of fisheries in the Marianas Trench Marine National Monument (NOAA, 2013). Using information about the the patterns of use and connection to the Islands Unit water described above, we can consider the implications that these regulations may have for the future of fishing in and access to the Monument waters. As mentioned above, the regulations of the Monument were the product of significant debate and deliberation. Initial results from this study played directly into development of the Monument regulation and the text of the proposed rule includes a reference to an earlier version of our research as “one recent study” (NOAA, 2013, p. 12017).

As indicated in the proclamation, the regulations of the Monument do not permit commercial fishing. This prohibition means that the majority of the trips listed in Table 4 as having the primary purpose of fishing would be prohibited. This is the case even though many of the “commercial fishing” trips to the Islands Unit in CNMI and Guam’s history were so small-scale that they did not usually turn a profit. This prohibition would cut off one of the few opportunities that residents of the Marianas chain have had to visit and remain connected to the Islands Unit. The prohibition might not have a large immediate effect on local commercial fishermen, however. Very few commercial operations traveled as far north as Asuncion around the time of the Monument’s designation. Most operators said that with high fuel costs, commercial fishing in the Islands Unit was not financially viable. One operator said that his main concern with the Monument was over how it could affect the potential for future commercial fishing ventures should fishing in that area become viable again (CNMI commercial operator, personal communication 2011).

The majority of residents that we interviewed expressed a strong conservation ethic towards the Islands Unit and indicated that they would be supportive of at least some restrictions on commercial fishing in the area (Four CNMI residents, personal communication, 2011). Many expressed a sentiment that they did not believe individuals should be able to make a large if any profit off the resources in those treasured northern islands (Three CNMI residents, personal communication, 2011). However, locals’ visions of conservation of the Islands Unit encompassed preservation of the area so that it could continue to be fished by locals for generations, not so that it would remain untouched. One government official (2011) told us, “preservation for the fish and the islands will give us, well not me, but my great–great–great–great-grandchildren, the ability to say yeah — that’s the fish that my dad fishes.”

In oral history accounts, many expressed that their greatest concern for the preservation of the fisheries in the Islands Unit was large-scale commercial fishing by foreign vessels—an activity that was illegal even prior to the designation of the Monument. Due to their remoteness, enforcement of fishing regulations in those areas is extremely challenging and expensive. We heard reports from vessel operators who wanted, and illegal foreign fishing activities in the Islands Unit waters where nothing was done to punish the offender even when the operators reported the activities to the authorities (Two CNMI fishing operators, personal communication, 2011). Some respondents worried that the Monument designation would not do much to address the illegal fishing and enforcement challenges in the northern islands of the Marianas.

The rule does allow some kinds of fishing and requires anyone who intends to fish in the Islands Unit to first obtain one of two types of permits: a recreational charter permit or a noncommercial permit. The charter permit covers charter trips to take paid passengers to fish in the Monument waters. The noncommercial permit is meant to encompass the “traditional indigenous fishing” that is protected in the proclamation statute. To keep the fishing local, only residents of Guam or CNMI are eligible for noncommercial permits.

The regulations also provide a definition of “noncommercial” fishing. The rule states that “customary exchange of fish harvested within the Islands Unit under a noncommercial permit is allowed.” The rule further states that “monetary reimbursement under customary exchange shall not exceed actual fishing trip expenses related to ice, bait, fuel, or food” (NOAA, 2013). In other words, the rule explicitly permits expense fishing as a characteristic of “traditional indigenous fishing” in the Monument. The development of a noncommercial fishing category with allowance for small-scale sale of fish to cover expenses is nearly unprecedented and it reflects an effort from the regulators to accommodate the needs of local fishermen from the Marianas. Our research showed that expense fishing was an important component of trips; 46% of trips to visit and explore the Islands Unit involved the sale of fish to offset expenses and several travelers reported that they could not have afforded the trip without some sale of fish to offset costs. This permissive final rule means that trips to explore, fish in, and connect with the Islands Unit waters may remain a possibility for residents of CNMI and Guam. NOAA regulators initially intended to prohibit all sale of fish from the Monument, however after pressure from the locally-connected Council and the presentation of empirical research about the role of expense fishing in trips to the Monument, NOAA relented and agreed to this more culturally aware definition. This shift highlights the importance of local involvement in Monument rule-making processes as well as the importance of gathering and communicating rigorous sociocultural research to decision-makers.
The regulations do, however, still include some elements that could serve to hinder the practice of "traditional indigenous fishing" in the Islands Unit. Namely, several aspects of the regulation will likely restrict the flexibility and overlap that characterized many descriptions of past trips to the Islands Unit. First, the very requirement to obtain a fishing permit prior to traveling to the Islands Unit could hinder some of the opportunism that characterized historical accounts where many trips were planned fairly rapidly when the right weather, resources, and people could be brought together. At this point it is unclear how complex and lengthy the permitting process will be. In addition, according to the rule, only one type of fishing would be permitted in any given type of trip. For example, the regulations "prohibit the conduct of commercial fishing outside the Monument and noncommercial fishing within the Monument during the same trip" (NOAA, 2013).

Our summary of trip accounts reveals that commercial fishing trips nearly always included noncommercial fishing activities; 95% of commercial fishing trips included bringing back fish to share with friends and families — a type of noncommercial fishing. Commercial fishermen are some of the few island residents who regularly get close enough to the Islands Unit for a possible visit. One of the most recent trips to the Islands Unit accounted for in interviews occurred when that captain of a commercial fishing vessel residents fishing on three islands below the Islands Unit at the last minute "decided to head north" for some "adventuring" where they proceeded to Asuncion and Maug and did some small-scale, noncommercial fishing (Fisherman/Captain, personal communication, 2011). Under the new regulations, this type of trip to the Islands Unit would no longer be permitted. Boats with commercial fish on board will no longer be able to proceed to the Islands Unit to fish noncommercially.

In addition, under the new rule, recreational charter and noncommercial fishing are not permitted on the same trip. We heard accounts of four recreational (tourist) charter trips to the Islands Unit and all of the trips included bringing back fish for sharing and consumption. In one account, a charter operator stated that he would specifically have one crew member harvest fish to bring back to family and friends on CNMI while the other crew members would assist the charter tourists (Charter Operator, personal communication, 2011). Again, under the new rule, this kind of combined trip would no longer be permitted. The loss in the ability to practice multiple kinds of fishing on one trip may seem like a small detail, but given the logistical and expense challenges of pulling together even a single trip to the Islands Unit it could have substantial implications for local access to the Islands Unit as well as to the foods that are gathered on trips there. There is strong evidence to indicate that the lack of flexibility and overlap in the new rule will reduce the number of trips to the Islands Unit where fish is caught for the purpose of bringing it back to share with family and friends.

The final rule creates several concerns related to equity and access to the Monument. By permitting recreational charter fishing and research activities, while prohibiting commercial fishing and restricting aspects of noncommercial fishing, the regulations disproportionately target and limit trips conducted by local and indigenous people. All four of the recreational charter trip accounts involved Japanese or American tourists. In the accounts of research trips, generally less than half of the crew was from the Marianas, and often only one person on the trip was a Guamanian or CNMI resident. In contrast, in accounts of fishing trips (79) and trips to visit and explore the islands (6), respondents reported that all or nearly all of the passengers were indigenous Carolinian or Chamorro residents. Finally, the Monument regulations may inadvertently disadvantage local and indigenous groups by too neatly categorizing fishing practices into "commercial", "noncommercial" and "charter" — when in reality those fishing practices were more mixed and the lines between them blurred. The prohibition of multiple types of fishing in one trip is likely to limit opportunities for noncommercial fishing in the Monument and, as a result, the amount of fish that is brought back to share with family and friends. This will limit locals' access to culturally important foods from the Islands Unit.

Conclusion

Oral history research in CNMI and Guam reveals that despite their remoteness, the waters in the Islands Unit of the Monument remain culturally important. Although trips were rare, they occurred regularly throughout the Marianas history leading up to the designation of the Monument. These accounts reveal that fishing was an essential component of trips to the Islands Unit as a cultural event, a provider of sustenance, and, when fish were brought back home, a source of connection to others who were not on the trips. In some ways, final rule represents a step forward in terms of considering equity in MPA management. The rule establishes a new category of noncommercial fishing where the sale of fish is permitted to cover fishing expenses. This new definition shows that US regulators are working to better account for the complex nature of traditional fishing in a contemporary setting. Yet, even this relatively permissive rule is likely to limit local trips to the Islands Unit. Given the cultural connections to the Islands Unit, limitations in access would contribute to cultural loss for local residents.

As the trend to develop more and larger MPAs continues, proponents and developers of MPAs can learn important lessons from this case. First, solely top-down efforts to implement MPAs can serve to alienate local governments and people, creating conflict and equity concerns. By far the biggest concern that the local residents and government officials of CNMI had with the designation of the Monument was with the top-down nature of the proclamation. Several CNMI residents stated that they felt as if the proclamation represented a breach to their sovereignty, where the US government had essentially come in and stolen three of their islands (Fitial, 2008; two CNMI government officials, personal communication 2011). The real irony is that most of the people we talked with believed that the waters surrounding the Islands Unit should be protected. In fact, prior to the Monument, the CNMI Constitution had already designated the islands of Asuncion, Maug, and Uracas as wildlife conservation areas (Fitial, 2008). By focusing on the grand and global scale of the Monument designation process, the US government may have missed out on an opportunity to collaborate with the CNMI government to develop a CNMI-led MPA in the area that produced less conflict, reflected local values, and was more attuned to conservation needs such as enforcement.

Second, international MPA developers need to more carefully consider equity issues in both the siting and regulation of MPAs. MPAs that prohibit all kinds of fishing could inadvertently cut local people off from access to the areas if fishing is their primary vehicle for visiting those places. Also, care must be taken in the development of fishing regulations such that they are reflective of the complex realities of fishing in a given area. In different cultures and places, fishing activities may not always fit neatly with standard regulatory categories. Additionally, if advocates seek global percentages of MPA coverage, they must also consider equity in the siting of MPAs such that any negative impacts from their implementation — such as loss of fishing revenue or access to culturally important places — are distributed equally across the globe. The location of large-scale MPAs in the waters surrounding US territories in the Western Pacific may mean that these island communities bear a disproportionately high burden in order to achieve US and global marine conservation goals. Without better understanding of the communities adjacent to proposed MPAs and better
consideration of these equity concerns, well-meaning efforts to conserve and sustain the world’s marine resources may end up exacerbating existing global inequities based on class, ethnicity, and geopolitical position.

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