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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 CMNI 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 km^2 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

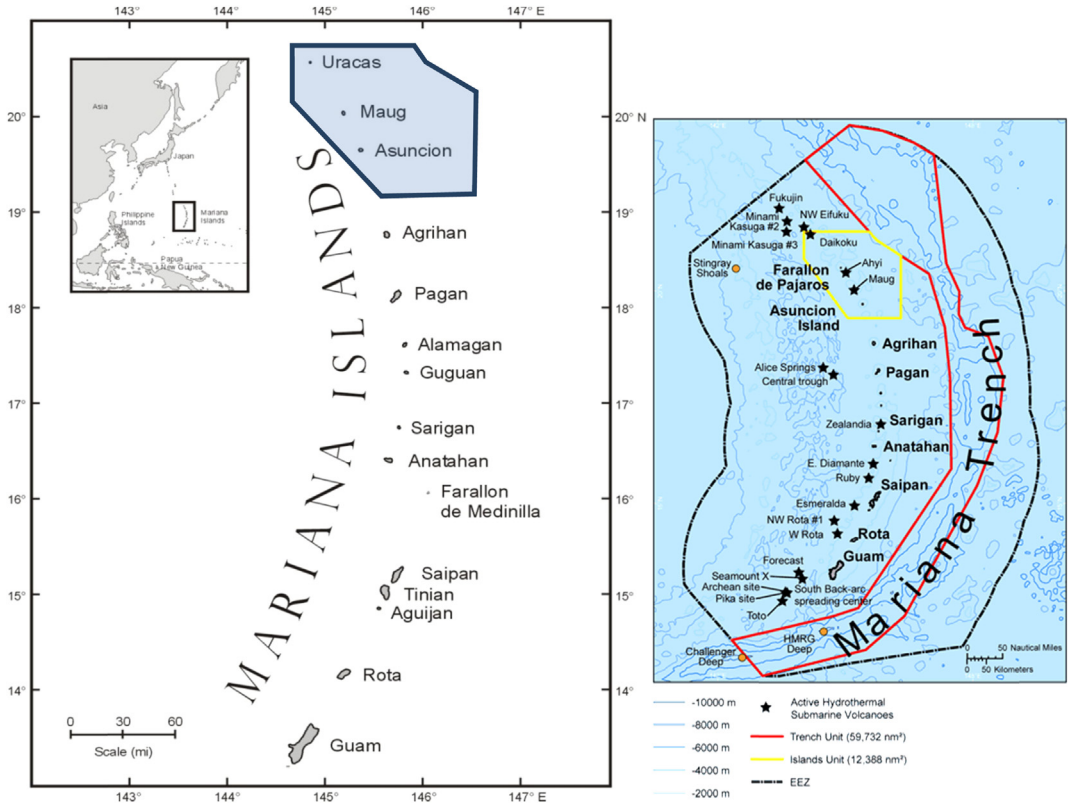

Fig. 1. Maps of the boundaries of the Marianas Trench Marine National Monument. Map to the right is the official Department of Fish and Wildlife Map depicting the Trench (red), Islands (yellow), and Volcanic (stars) Units. The map to the left shows the location of the Islands Unit of the monument in 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.