Disavowing the Doctrine of Discovery: Indigenous Healing, Decolonization, and Implications for Environmental Justice in the Pacific Remote Islands Area

Keywords: Micronesia, ocean conservation, marine protected area, Indigenous consultations, decolonization, Pacific Remote Islands

Abstract

Anti-Micronesian bias and colonialism are harming efforts to protect and manage waters surrounding U.S. overseas territories in the Pacific Islands. The Biden administration's proposal to designate a national marine sanctuary in the Pacific Remote Islands Area (PRIA) would potentially create the largest non-contiguous protected area on the planet. However, the proposal is problematic because it has failed to meaningfully include the Indigenous peoples who live closest to the region and who have the strongest historical and cultural ties to the islands - Micronesians and Samoans. The paper reviews the history and context of the PRIA, **who bears the costs and receives the benefits of conservation there**, and analyzes the perspectives and concerns of the political and community leaders in the U.S. Pacific territories, who have expressed near universal opposition to the plan. The paper concludes with some recommendations for improving the equity and justice of the proposal, such as engaging in meaningful dialogue, respecting the rights and interests of the Indigenous peoples, and ensuring their input and consultation in the decision-making process and management of the PRIA.

Introduction

President Joe Biden of the United States has issued an ambitious call to action through **his** "America the Beautiful" initiative to conserve, connect, and restore 30 percent of U.S. lands and waters by 2030¹ (sometimes referred to as 30x30). In terms of the ocean, this means delivering conservation within the United States' exclusive economic zones (EEZ)—the ocean area that extends 200 miles beyond American coastlines.

The 11.4 million square kilometers of ocean controlled by the United States is vast. The U.S. territories in the Pacific in particular have some of the largest EEZs in the country, making this region critical for delivering conservation and climate goals on the ocean. The U.S. Pacific territories are also the traditional lands and waters of Indigenous Micronesians, Chamorros, Refaluwasch, and Samoans. The combined ocean surrounding the U.S. Pacific territories is 3.3 million square kilometers—nearly twice the land area of Alaska—accounting for 29 percent of the total EEZ of the entire United States².

¹ "America the Beautiful: Spotlighting the work to restore, connect, and conserve 30 percent of lands and waters by 2030," US Department of Interior, accessed August 30, 2023, https://www.doi.gov/priorities/america-the-beautiful.

² "U.S. Maritime Limits & Boundaries," NOAA Office of Coast Survey, accessed August 30, 2023, <u>https://sanctuaries.noaa.gov/pacific-remote-islands/</u>.

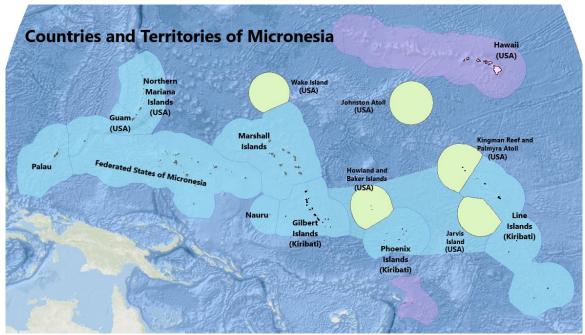


Figure 1: The region of Micronesia stretches from Palau in the west to the Line Islands of Kiribati in the east (highlighted in blue). Six of the seven islands within the Pacific Remote Islands Marine National Monument (Wake, Howland, Baker, Jarvis, Kingman, and Palmyra) lie within Micronesia. Johnston lies between Micronesia and Hawai'i.

The Pacific Remote Island Area (PRIA) consists of seven, mostly uninhabited islands in the western and central Pacific Ocean claimed by the United States. During the 20th Century these islands were mostly used for military purposes despite being designated as national wildlife refuges³. In 2009, President George W. Bush used the Antiquities Act to designate 50 miles of waters surrounding each island as the Pacific Remote Islands Marine National Monument. The marine monument was expanded in 2014 by President Barack Obama and is under consideration for further expansion by President Joe Biden.

On March 24, 2023, President Biden directed the Secretary of Commerce to consider initiating the designation process for a proposed national marine sanctuary in the PRIA⁴, which would augment protections for the existing marine monument. The proposed sanctuary would expand protections to currently unprotected submerged lands and waters to the full extent of the U.S. EEZ, growing the protected area from 1.3 million sq km to nearly 2 million sq miles⁵, potentially making it the largest non-contiguous protected area on the planet. The Biden administration has

³ Dan O'Donnell, "The Pacific Guano Islands: The Stirring of American Empire in the Pacific Ocean," *Pacific Studies*, 16 (1993): 17-17.

⁴ "Memorandum on Conserving the Natural and Cultural Heritage of the Pacific Remote Islands," The White House, accessed January 26, 2024, <u>https://www.whitehouse.gov/briefing-room/presidential-actions/2023/03/24/memorandum-on-conserving-the-natural-and-cultural-heritage-of-the-pacific-remote-islands/</u>.

⁵ [°]Proposed Designation of Pacific Remote Islands National Marine Sanctuary," National Oceanographic and Atmospheric Administration, accessed August 30 2023, <u>https://sanctuaries.noaa.gov/pacific-remote-islands/</u>.

suggested that this action would achieve 30x30 on the ocean for the United States⁶. The decision was celebrated by leaders in Hawaii⁷.

Disconcertingly, the current campaign to expand and designate the sanctuary in the Pacific Remote Islands has failed to meaningfully include the Indigenous peoples who live closest to the region and who have the strongest historical and cultural ties to the islands - Micronesians and Samoans. **Furthermore, while the** conservation burden of fishing restrictions is carried by the U.S. Pacific territories⁸, most of the social and economic benefits have accrued to Hawai'i and the continental United States in the form of conservation prestige, jobs, research, and funding⁹. **This is not an equitable sharing of the costs and benefits of marine protection, and leads to "parachute science and conservation¹⁰" in the territories.**

The Biden administration defines "environmental justice¹¹" as "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people: (i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and (ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices." The people living in the US Pacific territories, many of whom are Indigenous, did not have meaningful involvement in the sanctuary designation process prior to its announcement in March 2023.

⁶ "FACT SHEET: Biden-Harris Administration Takes New Action to Conserve and Restore America's Lands and Waters," The White House, accessed August 30, 2023, <u>https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/21/fact-sheet-biden-harris-administration-takes-new-action-to-conserve-and-restore-americas-lands-and-waters/</u>.

⁷ "Press Release: Case Applauds President Biden's Commencement of Marine Sanctuary Designation Process for U.S. Pacific Remote Islands Waters," Office of Representative Ed Case, accessed September 18, 2023, <u>https://case.house.gov/news/documentsingle.aspx?DocumentID=2098</u>.

⁸ Sullivan-Stack, Jenna, Octavio Aburto-Oropeza, Cassandra M. Brooks, Reniel B. Cabral, Jennifer E. Caselle, Francis Chan, J. Emmett Duffy et al. "A scientific synthesis of marine protected areas in the United States: status and recommendations." *Frontiers in Marine Science* 9 (2022): 849927.

⁹ Angelo Villagomez. "U.S. Pacific Territories and the America the Beautiful Initiative Can Deliver Ocean Climate Solutions," *Center for American Progress*, November 28, 2022,

https://www.americanprogress.org/article/u-s-pacific-territories-and-the-america-the-beautiful-initiativecan-deliver-ocean-climate-solutions/

 ¹⁰ Ahmadia, Gabby N., Samantha H. Cheng, Dominic A. Andradi-Brown, Stacy K. Baez, Megan D. Barnes, Nathan J. Bennett, Stuart J. Campbell et al. "Limited progress in improving gender and geographic representation in coral reef science." *Frontiers in Marine Science* 8 (2021): 731037.
¹¹ Executive Order 14096, *The White House*, accessed January 27, 2024,

https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all

As a result, political and community leaders in the U.S. Pacific territories have proclaimed near universal opposition to the plan^{12,13}. American Samoa Governor Lemanu Peleti Mauga said of the proposal, "The misinformation that has been circulated by the proponents of this sanctuary is insulting and misconstrues the reality of the importance of these waters to our territory¹⁴." A letter co-signed by Northern Mariana Islands Governor Arnold I. Palacios, Guam Governor Lourdes Leon Guerrero, and governor Lemanu read, "Our already disadvantaged and marginalized communities carry a disproportionate burden for meeting national conservation goals¹⁵."

This course of action is neither equitable nor just, and antithetical to the America the Beautiful Initiative¹⁶ and the UN Declaration on the Rights of Indigenous People's principle of Free, Prior, and Informed Consent¹⁷. For example, **no government representatives from the territories** were invited to participate in the March 24, 2023 White House event where the proposed sanctuary was announced¹⁸, nor were they informed ahead of time that a sanctuary announcement was taking place¹⁹, nor were they involved in designing the first public comment period²⁰, or organizing federal public hearings on their own islands²¹. Months later, in September 2023, a sanctuary designation workshop co-hosted by NOAA and the American Samoa government was held, but issues of consent had not been yet addressed as Governor Lemanu issued a memorandum directing participating

¹² Joyetter Feagaimaali'I, "Public Hearing in American Samoa Underscores Opposition to Marine Sanctuary Plan," *Benar New*, June 2, 2023, <u>https://www.benarnews.org/english/news/pacific/pacific-marine-sanctuary-samoa-06022023013620.html</u>.

¹³ Chrystal Marino, "Pacific Voices Being Disrespected; Process is Not Pacific Way," *Saipan Tribune*, May 22, 2023, <u>https://www.saipantribune.com/news/local/pacific-voices-being-disrespected-process-is-not-pacific-way/article_ba94c5f2-4f12-5f22-8114-bf0813215cee.html</u>.

¹⁴ "Pacific Islands Fishery News," Western Pacific Regional Fisheries Management Council, accessed September 5, 2023, <u>https://www.wpcouncil.org/wp-content/uploads/2023/09/1-Council-and-AS-Leaders-Frustrated.pdf.</u>

¹⁵ Emmanuel T. Erediano, "Marine sanctuary expansion alarms Pacific governors," *Marianas Variety*, May 13, 2023, https://www.mvariety.com/news/marine-sanctuary-expansion-alarms-pacific-governors/article_123e3826-e810-11ed-b65a-23fa87eef83d.html.

¹⁶ "America the Beautiful: Spotlighting the work to restore, connect, and conserve 30 percent of lands and waters by 2030," US Department of Interior, accessed on August 30, 2023, https://www.doi.gov/priorities/america-the-beautiful.

¹⁷ "United Nations Declaration on the Rights of Indigenous Peoples," UN General Assembly, accessed on September 18, 2023, <u>https://www.refworld.org/docid/471355a82.html</u>.

¹⁸ Mar-Vic Cagurangan, "The Burden of Territorial Status," *The Pacific Island Times*, May 2, 2023, https://www.pacificislandtimes.com/post/the-burden-of-territorial-status.

¹⁹ Derrick Malama, "Concern Raised Over Biden's Marine Sanctuary Initiative," *Hawai'i Public Radio*, March 27, 2023, https://www.hawaiipublicradio.org/pacific-news-minute/2023-03-27/pacific-news-minute-concern-raised-over-bidens-marine-sanctuary-initiative.

²⁰ Emmanuel T. Erediano, "Governor Urges NOAA to Meaningfully Engage with Marianas Community," *Marianas Variety*, June 1, 2023, <u>https://www.mvariety.com/news/governor-urges-noaa-to-meaningfully-engage-with-marianas-community/article_f16a79b4-ffb8-11ed-9667-532d5d183d84.html</u>.

²¹ Jolene Toves, "Guam Residents Can Provide Input on Proposed National Marine Sanctuary," *The Guam Daily Post*, May 15, 2023, <u>https://www.postguam.com/news/local/guam-residents-can-provide-input-on-proposed-national-marine-sanctuary/article_1fac92c4-f1c4-11ed-8e72-b782c1fee5f7.html</u>.

government staff to support "the Governor's staunch opposition to the marine sanctuary designation²²." Micronesians, Chamorros, Refaluwasch, and Samoans should have input and consultation in **every step of** the decision-making process and management of the Pacific Remote Islands, and any proposals to change them, **not after announcements are made**.

The United States needs to do a better job of engaging with Indigenous people in the U.S. Pacific territories, and backing their ideas to manage their waters, rather than forcing ideas on them^{23,24}. Ultimately, these may be the same ideas, but the process and the people involved matter.

The Biden administration must reassess the proposed plan as it was developed without input from the Indigenous peoples living in the U.S. territories. Without meaningful dialogue, a designation has the potential to violate many of the conservation commitments the administration has made towards Native peoples and will ultimately harm conservation efforts in the region in the long term. Understanding the history, culture, and context of these islands and surrounding waters is critical for developing conservation policies that benefit local people, and this is missing from the existing proposal. This essay examines some of that context and offers a pathway towards Indigenous led conservation that truly engages the Native people who have lived in the Pacific for millennia, heals contemporary intra-Pasifika harm, and concludes with the goal of decolonizing conservation in the Pacific Remote Islands Marine National Monument.

Understanding Place and People in Historical Context

The specifics of how the Pacific Ocean basin, which occupies a third of the earth's surface, was populated have been lost in time, but cultural and linguistic studies have pieced together how voyagers over centuries traversed thousands of kilometers of open ocean in dugout canoes using only the stars, waves, and biological cues as their guides²⁵. Recent Archaeological²⁶ and paleoenvironmental²⁷ evidence suggests humans reached the Mariana Islands, the first islands to be populated, about 3,500-4,300 years ago, and from there populations spread eastward across the Pacific. Traditionally, the

²² "General Memorandum No. 223-23," Governor of American Samoa, September 8, 2023, <u>https://www.americansamoa.gov/_files/ugd/4bfff9_54b682741e8540d1b6f4dfe7fd01cadb.pdf</u>.

²³ Laurie Richmond and Dawn Kotowicz. "Equity and access in marine protected areas: The history and future of 'traditional indigenous fishing' in the Marianas Trench Marine National Monument." *Applied Geography* 59 (2015): 117-124.

 ²⁴ Leonard, Kelsey, Pier Luigi Buttigieg, Maui Hudson, Kenneth Paul, Jay Pearlman, and S. Kim Juniper.
"Two-eyed seeing: Embracing the power of Indigenous knowledge for a healthy and sustainable
Ocean." *Plos Biology* 20, no. 10 (2022): e3001876.

 ²⁵ David Lewis, *We, the Navigators* (Honolulu: The University Press of Hawaii, 1972), 15-41.
²⁶ Irina Pugach, Alexander Hübner, Hsiao-chun Hung, Matthias Meyer, Mike T. Carson, and Mark Stoneking, "Ancient DNA from Guam and the peopling of the Pacific." *Proceedings of the National Academy of Sciences* 118, no. 1 (2021): e2022112118.

²⁷ Stephen J Athens, Michael F. Dega, and Jerome V. Ward, "Austronesian colonization of the Mariana Islands: the paleoenvironmental evidence," *Bulletin of the Indo-Pacific Prehistory Association* 24 (2004): 21-21.

lines between Micronesia, Melanesia, and Polynesia never existed²⁸, as territories, cultures, and trade overlapped over distances of thousands of kilometers²⁹.

Over the last few centuries political borders in the Pacific Islands were repeatedly redrawn and geographies renamed as the islands were colonized, dominated, and ruled by foreign, often Western, countries. Colonization goes back more than 500 years to when Magellan visited the Marianas and committed the first act of European genocide in the Pacific³⁰. Colonial rule of the region existed under Spanish, German, Dutch, Japanese, British, and American empires. In 1893, the U.S. government backed and supported an illegal overthrow and annexation of the Kingdom of Hawaii. Following World War II, many of the islands in Micronesia were part of the Trust Territory of the Pacific Islands, a United Nations trust territory administered by the United States. Today, politically, Micronesia is politically organized as a constellation of sovereign countries and U.S. territories. Some islands were taken as a spoil of war or broke off from the Trust Territory of the Pacific Islands to become what they are today. **The Republic of Palau**, the Federated States of Micronesia, Republic of the Marshall Islands, Commonwealth of the Northern Mariana Islands, the Territory of Guam, and several of the PRIA islands (described in detail in the following paragraphs) are either owned by or have compacts of free association³¹ with the United States; They all use US postal system and the US dollar as their currency. Republic of Nauru and Republic of Kiribati have closer political and economic ties with Australia. Guam is the largest and most developed island in the region. All the islands in Micronesia have their own unique cultures and history of colonization, with at least 20 Indigenous languages still spoken across the region.

The Pacific Remote Islands, specifically, are all part of the American empire as a result of a midnineteenth century law called the Guano Islands Act of 1856³², which was passed to help meet America's demand for fertilizer to feed its growing population. The Guano Island Act allowed that, "Whenever any citizen of the United States discovers a deposit of guano on any island, rock, or key, not within the lawful jurisdiction of any other government, and not occupied by the citizens of any other government, and takes peaceable possession thereof, and occupies the same, such island, rock, or key may, at the discretion of the President, be considered as appertaining to the United States."

²⁸ Adam Keawe Manalo-Camp, "There Are Many Ties Between Hawaiians and Micronesians," *Honolulu Civil Beat,* September 28, 2018, <u>https://www.civilbeat.org/2018/09/there-are-many-ties-between-hawaiians-and-micronesians/</u>.

²⁹ Aymeric Hermann, Pamela Gutiérrez, Catherine Chauvel, René Maury, Céline Liorzou, Edson Willie, Iarawai Phillip, Robert Forkel, Christoph Rzymski, and Stuart Bedford, "Artifact geochemistry demonstrates long-distance voyaging in the Polynesian Outliers," *Science Advances* 9, no. 16 (2023): eadf4487.

³⁰ Don A. Farrell, *History of the Mariana Islands to Partition* (Public School System, Commonwealth of the Northern Mariana Islands, 2011), 119-122.

³¹ "Compacts of Free Association," Department of Interior, accessed on January 22, 2024, <u>https://www.doi.gov/oia/compacts-of-free-association</u>.

³² Andrew Thaler, "How Millard Fillmore Reshaped the Oceans in a Quest for Guano," *Southern Fried Science*, January 10, 2017, <u>https://www.southernfriedscience.com/how-millard-fillmore-reshaped-the-oceans-in-a-quest-for-guano/</u>.

Geographically, Wake Island lies northwest of what is today the Republic of the Marshall Islands. Howland and Baker border the Phoenix Islands archipelago, while Kingman Atoll, Palmyra Atoll, and Jarvis Island are part of the Line Islands. These political lines and place names are all modern inventions; they have changed in recent history and may change again. Midway Atoll, for example, was first claimed by the United States using the Guano Islands Act, was considered part of the PRIA for many years, but is now considered part of the Northwest Hawaiian Islands.

Another example is Palmyra in the Line Islands, which was claimed by the U.S. in 1859, but was later given up when no guano was found. The island was later claimed by the Kingdom of Hawai'i in 1862. When the US illegally overthrew the Kingdom of Hawai'i in 1893, Palmyra became part of the Republic of Hawai'i, and then the Territory of Hawai'i in 1898. But when Hawai'i became a state in 1959, Palmyra remained a territory, which is why it is the only incorporated U.S. Pacific territory, meaning it is part of the United States; as opposed to the other territories, which are all owned by, but not part of, the United States. The Nature Conservancy purchased the island from the Fullard-Leo family in 2000 for \$37 million³³.

The United States and the Republic of the Marshall Islands both claim Wake Island. In 2016, the Marshalls made their claim formal when they filed maritime coordinates with the United Nations³⁴. The Marshallese people have ancient cultural ties to the island. UN Ambassador Doreen de Brum once told this author the story of how her ancestors named the island Enen-Kio – the island of the orange flower.

With the 1979 Treaty of Tarawa, the US gave up claim to several islands which today are part of the Republic of Kiribati. While this treaty recognized Kiribati's sovereignty over 8 Phoenix Islands and 6 Line Islands, the US held on to the five nearby Pacific Remote Islands, so that they could continue to be used for national defense purposes. Four years later, in 1983, President Reagan claimed the US exclusive economic zone, and the 200-mile ocean area surrounding each island came under control of the US government, as well.

Except for Johnston Atoll, absent this history of colonization all of the islands within the Pacific Remote Islands Marine National Monument would today be a part of sovereign Micronesian nations. From the perspective of the United States, these were unknown, unowned islands, but this narrative of pristine, unpeopled lands is but an extension of Manifest Destiny to the Pacific. Even the Catholic Church has disavowed the legal and political Doctrine of Discovery, as it fails

³³ Colin Woodard, "Sold! An Entire Pacific Ecosystem," *The Christian Science Monitor*, May 4, 2000, <u>https://www.csmonitor.com/2000/0504/p1s2.html</u>.

³⁴ "Republic of the Marshall Islands: Archipelagic and other Maritime Claims and Boundaries," United States Department of State, Bureau of Ocean and International Environmental and Scientific Affairs, accessed on September 18, 2023, <u>https://www.state.gov/wp-content/uploads/2020/02/LIS-145-Marshall-Islands.pdf</u>.

to "recognize the inherent human rights of Indigenous peoples.³⁵" The Native people who owned and used these islands survive today, living in the surrounding archipelagos.

Speaking at the *Tales with Futuran I Tasi: Finding Our Voices* symposium in December 2023, Saipan resident and Ocean Elder Ignacio V. Cabrera said, "The ocean is our heritage. It's ours by culture, (even if) it's not ours by law³⁶." Guam resident and activist Dakota Camacho attended a May 2023 sanctuary public hearing said, "I've heard stories that in the old days, our navigators would go and meet in all of these islands and have ceremonies. We're not allowed to do that anymore. Because the federal government is making the rules about what we've supposed to be doing in our waters³⁷."

The islands comprising the Pacific Remote Islands Marine National Monument *are* Micronesian islands³⁸. The Micronesia region stretches from Palau in the west to Kiribati in the east (Fig. 1). Six of the seven islands within the monument's non-contiguous borders abut Micronesian archipelagos, including the Marshall Islands, Phoenix Islands, and Line Islands. The seventh island, Johnston Atoll, is in an area between Micronesia and Hawai'i.

Understanding Pacific Islander identity can be complicated. The great Pacific scholar Epeli Hau'ofa was perhaps a bit idealistic when he wrote, "anyone who has lived in our region and is committed to Oceania is an Oceanian," but he was correct in observing, "our present regionalism is a direct creation of colonialism," and that "we have not been able to define our world and ourselves without direct and often heavy external influences³⁹."

Colonialism has historically pitted Indigenous peoples against one another, and to avoid this today, when we explore our shared *Pasifiku* histories, cultures, and identities, we must do so in a respectful and intentional manner to ensure pluralistic advocacy encompassing multiple perspectives. The value of the proposed sanctuary can and should be interpreted through its connection to Hawai'i, but it must center its connection to Micronesia.

In a letter to President Biden dated October 31, 2022, Hawaii Representative Ed Case echoed the importance of including Native Pacific voices beyond those in Hawai'i:

³⁵ Hannah Brockhaus, "Vatican: 'Doctrine of Discovery' is not Catholic Teaching," *Catholic News Agency*, March 20, 2023, <u>https://www.catholicnewsagency.com/news/253977/vatican-doctrine-of-discovery-is-not-catholic-teaching</u>.

 ³⁶ Island Tide Records, "*Tales from Futuran I Tasi: Finding Our Voice & Defining Our Future*,"
Facebook video, January 22, 2024, https://www.facebook.com/watch?v=1121007952378318
³⁷ Joe Taitano II, "A marine sanctuary proposal raises concern from residents, " *Guam Daily Post*, May 19, 2023, https://www.postguam.com/news/local/a-marine-sanctuary-proposal-raises-concern-from-residents/article_65f100c0-f526-11ed-8bc6-ff9cab553539.html.

³⁸ Angelo Villagomez, "Connecting Conservation and Culture in Oceania," *Angelo Villagomez.com*, January 10, 2018, <u>https://www.angelovillagomez.com/2022/09/connecting-conservation-and-culture-in.html</u>.

³⁹ Epeli Hau'ofa, *We Are the Ocean: Selected Works*, (Honolulu, University of Hawai'i Press, 2008), 46-51.

"Some stakeholders have expressed hesitancy with what has been to this point a primarily Native Hawaiian-driven effort to protect the cultural heritage of the PRIMNM expansion zone. To address the concerns voiced by stakeholders throughout the Pacific, I especially encourage you to continue to engage with all indigenous communities tied to the PRIs throughout the renaming process so that the importance of this unique ecosystem place can be articulated and deeper connections to this place can be forged.

While many of the most active voices in protecting the cultural seascape of the PRIs are Native Hawaiian, protection of these islands must be inclusive of Micronesian and Polynesian indigenous communities, including American Samoans, Chamorros and Native Hawaiians. The expanded monument's proposed boundaries contain key areas in which the diverse indigenous peoples of the Pacific can connect with their shared culture and history. We must consider its cherished cultural history along with its ecological importance and scientific value."