

Seeing the Sun: Nuclear (in)visibility in the Mariana Islands of Guam & Tinian

Sylvia C Frain with Fiona Amundsen

Introduction

Everyday experiences from Oceanic environments, impacted by fifty years of nuclear weapons testing, are omitted from settler state narratives and archives. Until recently, Indigenous Pacific communities' histories have been rendered invisible. Simultaneously, these islands are locales of expanding militarisation in preparation for contemporary nuclear war.¹

As Pākehā (white settler) researchers in Aotearoa New Zealand, working in Micronesia, we offer critical reflections on creative practice(s), grounded in our settler responsibilities. We seek to develop ethical methods for visualising these stories of transgenerational knowledge to promote nuclear justice and contribute to nuclear disarmament.²

We begin by prioritising knowledge and lived experiences from Oceania in an overlooked and problematic chapter of United States (US) history in a locality many may have never heard of or have seen – the Mariana Islands in Micronesia. Further, we seek to contribute to the visualisation of the local resistance to expanding militarisation and to amplify Indigenous stories, experiences, and visions for a future devoid of colonisation and nuclearisation.³

The goal is to develop photographic methods that not only help in visualisation but are also reparative and can be used to raise political awareness to create policy change. For many, the understanding of the contemporary role the Mariana Islands play within US military strategy remains on the periphery, yet it offers valuable lessons for disarmament to policymakers. Simultaneously, it is a unique location to develop new visual methodologies that support community-centred participatory action research.

1 Mark Rabago, "US to Spend Billions on Northern Marianas Island to Boost Military Power," *Radio New Zealand*, April 12, 2023, <https://www.rnz.co.nz/international/pacific-news/487773/us-to-spend-billions-on-northern-marianas-island-to-boost-military-power>; See also, Julian Aguon, "In Guam, Even the Dead are Dying: the US Military is Building on the Graves of our Ancestors," *The Guardian*, September 16, 2022, <https://www.theguardian.com/world/2022/sep/17/in-guam-even-the-dead-are-dying-the-us-military-is-building-on-the-graves-of-our-ancestors>

2 Sylvia C Frain and Fiona Amundsen, "A Second Sun: The Legacies of Nuclear Imperialisms across Oceania," *Women Talking Politics*, 2020-2021 issue, (2022): 43, [https://nzpsa.co.nz/resources/Documents/Women%20Talking%20Politics%202020-21%20\(1\).pdf](https://nzpsa.co.nz/resources/Documents/Women%20Talking%20Politics%202020-21%20(1).pdf)

3 Fiona Amundsen and Sylvia C Frain, "The Politics of Invisibility: Visualizing Legacies of Nuclear Imperialisms," *The Journal of Transnational American Studies*, Special Issue: *Transnational Nuclear Imperialisms*, vol 11, no. 2 (2020): 125–151, <https://escholarship.org/uc/item/6zs4q1hv>.

We begin by offering a brief historical context of the US nuclear impact on the Mariana Islands of Tinian, used as the launch pad of atomic warfare during World War II (WWII), and of the residents of Guam located downwind of the US nuclear testing of the 1950s and 1960s.⁴

The Mariana Islands

The island of Guam (Guåhan) is a non-self-governing territory of the United States, while the island of Tinian is politically separate as part of the Commonwealth of Northern Mariana Islands (CNMI). This unique political status, as Insular Areas, means the islands belong to but are not fully part of the United States. The US Constitution does not apply to them, and the island residents who are US citizens do not have voting representation in any branch of the US government; in fact, they cannot vote for the US President either.

World War II & American Atomic Impacts

While American WWII historians overemphasise the story of the US victory in the Pacific, the Indigenous Chamorro people of Guam and the CNMI continue to live in the aftermath of the war. The tidy narrative of American troops as “saviors” and “liberators” is biased.⁵ If the Pacific experience is included in historical documents, it is a superficial story that presents the residents of the Mariana Islands as “patriotic” and “loyal” to the United States. It celebrates the islands’ contribution to atomic warfare in the name of (US) national security and not through monuments or monetary compensation. Current raw realities include subpar medical services – even for local veterans serving in the US Armed Forces at the highest rates per capita in the United States, and the refusal to return ancestral Chamorro land (tåno’).

Pacific Association for Radiation Survivors (PARS)

In the aftermath of WWII and during the Cold War era, the United States used the Pacific region as an experimental site. In the 1940s and 1950s, during the US nuclear testing program in the Marshall Islands, radiation exposure and radioactive fallout travelled more than a thousand miles to the Marianas Archipelago. While the US Congress is tasked with supporting “nuclear downwinders,” the US government continues to deny compensation for the Indigenous Chamorros of the Marianas Islands. The Pacific Association for Radiation Survivors (PARS) continues to advocate the inclusion in the Radiation Exposure Compensation Act (RECA) of Congress, but currently, only on-site military participants are recognised in the compensation category.⁶ The invisibility and continued denial of the Indigenous Pacific experience and the imperial control of eligibility for compensation are directly connected to US colonial power and expanding militarisation across the Indo-Pacific.⁷

4 “Appendix C: Radioactivity in Guam After Nuclear-Weapons Testing in the Pacific,” Assessment of the Scientific Information for the Radiation Exposure Screening and Education Program, National Research Council, Washington, DC: The National Academies Press, 2005. <https://nap.nationalacademies.org/read/11279/chapter/17>

5 Sylvia C Frain, “Images of Empire and Visualizing Resistance in Guam (Guåhan),” in *Imperial Islands: Art, Architecture, and Visual Experience in the US Insular Empire after 1898*, ed. Joseph Hartman (Honolulu, HI: University of Hawaii Press, 2022). <https://uhpress.hawaii.edu/title/imperial-islands-art-architecture-and-visual-experience-in-the-us-insular-empire-after-1898/>

6 Robert N. Celestial, Sgt. U.S. Army Retired, “Nuclear Fallout/Nuclear Decontamination of Naval Vessels on Guam,” *Teaching Ethics*, Spring (2003): 83-87.

7 See the website for the Pacific Center for Island Security, “an action-oriented research institute that aims to anchor this island and islander perspective” based in Guam: <https://pacificcenterforislandsecurity.com>

Moving beyond the recognisable image of the military-captured mushroom cloud, the photographic artworks used in this paper were taken by Fiona Amundsen in June and July of 2023 on the islands of Guam and Tinian and have the ability to (re)visualise the lasting impacts of nuclear war and preparation.

These photographic artworks explore the histories and ongoing impact of nuclear weapons. They explore how to pull focus on that which has been made invisible, namely the racist-imperialist ideologies that drive militarisation, as well as that which has no literal image, meaning radiation. The photographs' focus on ideas of visibility and invisibility are explored by experimenting with how the material and indexical properties of film may be utilised to visualise the invisible properties of radiation poisoning.⁸ These photographs use film's indexical qualities to work with something as abstract and pervasive as radiation.

For example, black and white exposed film has been processed onsite using water sourced from Merizo Pier. This water has a trace residue of radiation which has effectively fogged the light-sensitive film. In addition, during the film development, chemiluminescence has been added, which further impacts the image embedded in the film's light-sensitive emulsion. Chemiluminescence is a chemical process used in "Western Blot" DNA testing.⁹ In this context, chemiluminescence damages the film by creating white spots of fogging that prevent visibility of the initial photographed image. This process is akin to how radiation resides in the body's DNA, damaging it over time.¹⁰

The photographic artworks were taken at locations linked to the first use of atomic weapons in warfare, and also at those connected to Cold War-era nuclear testing. Specifically, the photographs are of Runway Able where the Enola Gay departed from to drop atomic bombs on Hiroshima – the foliage near where the atomic bombs were stored, specifically, the bamboo and palm trees in an area of Southern Guam close to Merizo (Melesso') Pier. These WWII sites and hardware rusting in the jungle and oxidizing in the lagoons is the exact tãno' (land) and the location where contemporary US militarisation is expanding across the Mariana Islands through the US' "Pivot to the Pacific" military strategy. The photographic artworks were taken at locations linked to the first use of atomic weapons in warfare, and also at those connected to Cold War-era nuclear testing. Specifically, the photographs are of Runway Able where the Enola Gay departed from to drop atomic bombs on Hiroshima – the foliage near where the atomic bombs were stored, specifically, the bamboo and palm trees in an area of Southern Guam close to Merizo (Melesso') Pier. These WWII sites and hardware rusting in the jungle and oxidizing in the lagoons is the exact tãno' (land) and the location where contemporary US militarisation is expanding across the Mariana Islands through the US' "Pivot to the Pacific" military strategy.¹¹

8 Robert Jacobs, "The Radiation That Makes People Invisible: A Global Hibakusha Perspective," *The Asia-Pacific Journal*, vol 12, issue 31, no. 1 (July 2014), <https://apjif.org/2014/12/31/Robert-Jacobs/4157/article.html>

9 Thermo Fisher Scientific, Inc., "Chemiluminescence western blotting technical guide and protocols," 2018, <https://assets.thermofisher.com/TFS-Assets/BID/Application-Notes/TR0067-Chemi-Western-guide.pdf>

10 Fiona Amundsen, personal communication with cancer scientists in preparation for, "Blowing in the Wind, 'Artist Statement'," *International Festival of Photography*, Australia, curated by Elias Redstone, Brendan McCleary and Pippa Milne, 2024.

11 Sarah A. Topol, "The America That Americans Forgot," *The New York Times Magazine*, July 7, 2023, <https://www.nytimes.com/2023/07/07/magazine/guam-american-military.html>; See also, Glenna Gordon, "In Guam, the U.S. Military Presence Is in Full View," *The New York Times*, July 12, 2023, <https://www.nytimes.com/2023/07/08/insider/pictures-guam-military.html>



Artwork 1: Fiona Amundsen, Runway Abel, *Tinian Island (66,000 instant deaths)*, Inkjet Photographic Print, 3000 x 2650mm, 2023

Tinian Island

Tinian served as the final preparatory location of the Manhattan Project – the launchpad of US atomic warfare. On July 24, 1944, the 4th US Marine Division took the forty-square-mile island of Tinian from Japanese Imperial Forces after forty-three consecutive days of US bombardment, including the first use of napalm bombs during warfare. Previously covered in green jungle, fruit trees, cattle, and sugarcane, Tinian was transformed by the 107th US Naval Construction Brigade into a strategic military base. The northern part of the island was converted into the largest operational airbase in the world for Empire Runs to bomb Japan. Tinian became the “Home of the B-29 Superfortress” and served as the launch pad of US atomic warfare – the final preparatory location of the Manhattan Project.¹²

¹² Don A Farrell, *Tinian and the Bomb: Project Alberta and Operation Centerboard*, (Guam: Micronesia Productions in partnership with University of Guam Press, 2018). Also see Don A Farrell, *Atomic Bomb Island: Tinian, the Last Stage of the Manhattan Project, and the Dropping of the Atomic Bombs on Japan in World War II*, (Stackpole Books, 2021).

Tinian had more than one hundred and fifty thousand US military personnel tasked with the assembly, loading, and launching of the first and only two atomic bombs ever used during combat. Once the Manhattan Project was deemed successful, the local Chamorro residents, confined to US military-controlled camps on the neighbouring island of Saipan, believed their island would be returned. However, two-thirds remain as US military-controlled property to this day.

The people of the Marianas Archipelago, impacted by nuclear testing, also remain absent from US National Park Service World War II national commendations and narratives. Despite this historic and tragic role, Tinian remains without formal US federal recognition. Today, the B-29 runways are mostly overgrown by invasive weeds, with several of the atomic bomb loading pits filled with soil and planted with coconut and plumeria trees as “symbols of peace.” A modest plaque designates the atomic bomb loading pits, stating, “The island of Tinian is inseparably linked in human history with the end of the war in the Pacific ... this small island of beauty, a small island of history.”¹³



Artwork 2: Fiona Amundsen, *Tree Roots near the Bomb Storage Facility, Tinian Island (2,121 Mushroom Stems)*, Inkjet Photographic Print, 3000 x 2650mm, 2023

¹³ Sylvia C Frain, personal documentation, Tinian, 9 August 2023.

Local political leaders of the Tinian community believe that inclusion within the US National Park System could provide leverage to preserve Tinian's Indigenous, Japanese, and WWII historic sites. This denial of recognition reveals which stories, people, and events are worthy of commemoration according to the United States, and which ones remain invisible. Therefore, efforts to create a peace monument locally continue to gain traction. Tinian's former mayor expressed the desire to build a peace monument on Tinian's North Field, explaining "a peace memorial that spans three locales that are tied together by their WWII experiences."¹⁴

While there are job openings for Field Archaeologist for the "Adaptive Rehabilitation of North Field Historic District (Nfhd) Runways," the local community has not been part of this process and it is not clear what this US federal project is exactly about.¹⁵



Artwork 3: Fiona Amundsen, *Tree Roots Near the Bomb Storage Facility, Tinian Island (2,121 burning spirits)*, Inkjet Photographic Print, 3000 x 2650mm, 2023

14 Joshua Santos, "Tinian, New Mexico, Japan Could Work Together on a Peace Memorial – Aldan," *Saipan Tribune*, July 5, 2021, <https://www.saipantribune.com/index.php/tinian-new-mexico-japan-could-work-together-on-a-peace-memorial-aldan/>

15 Joseph Larfa, "WE ARE HIRING," Facebook, October 11, 2023, <https://www.facebook.com/photo/?fbid=249708784697070&set=gm.6524723994321549&idortv=527102320750443>



Artwork 4: Fiona Amundsen, *Broken Bamboo near Merizo Pier, Guam (2,121 limbs)*, Inkjet Photographic Print, 3000 x 2650mm, 2023

The lack of nuclear memory and exclusion enables contemporary militarisation. The failure to include Tinian's significant role in WWII within the Manhattan Project National Park system occurs as the US Department of Defense (DoD) simultaneously argues that maintaining possession of Tinian Island is necessary for US national security.

Guam's "Downwinders"

Areas of southern Guam were poisoned from radiation that was carried downwind during US testing in the Marshall Islands. As a result of this testing, radioactive military hardware was taken to Cocos Lagoon for decontamination. Cocos can be clearly seen from Merizo (Melesso') Pier, located in southern Guam; it is only a short boat ride away.



Artwork 5: Fiona Amundsen, *Palm Tree near Merizo Pier, Guam (2,121 stomachs)*, Inkjet Photographic Print, 3000 x 2650mm, 2023

As Chamorro scholars Lisa Linda Natividad and Victoria-Lola Leon Guerrero write, "while the Pacific Association for Radiation Survivors (PARS) continues to advocate inclusion of Guåhan on the Radiation Exposure Compensation Act (RECA) of Congress as down winders, the island is only recognized in the compensation category of on-site participants. This means that only those connected to military service on the island qualify, not the total exposed population of the island as in the case of down winders' [sic] compensation."¹⁶

¹⁶ Lisa Linda Natividad and Victoria-Lola Leon Guerrero, "The Explosive Growth of U.S. Military Power on Guam Confronts People Power: Experience of an Island People under Spanish, Japanese and American Colonial Rule," *The Asia-Pacific Journal*, vol 8, issue 49, no. 3 (December 2010), <https://apjif.org/-/LisaLinda-Natividad/3454/article.html>

Today, they continue to assert their claims under the RECA Amendment of 2019.¹⁷ While the RECA program was due to expire in 2022 and the US government has stopped accepting applications, the efforts continue. The US Senate did make progress in 2023 through the national defense budget, which would extend the compensation to survivors of Guam under RECA, after being denied for decades.¹⁸

Conclusion

While Congressional pressure is one avenue, without full representation, all forms of resistance and recognition are needed – artistic, creative, digital, legal, and political. How does the visualisation of this important locale better serve the community? How can we, as academics, resist the narrative of the nuclear legacy presented in historical and sterile terms? We invite others to think critically and creatively about the complex histories.

We believe that by highlighting these issues through artistic terms – as opposed to reports and news articles – we can support self-determination and the returning of tåno' (land) for Indigenous Chamorros. By amplifying the local storytelling and creating photographic artworks, while pressuring Congress through RECA and supporting the community to create a historical monument on Tinian, justice is possible.¹⁹

17 Mar-Vic Cagurangan, "Guam Included in RECA Expansion Bill," *Pacific News Center*, March 30, 2019, <https://www.pncguam.com/guam-included-in-reca-expansion-bill/>

18 Joe Taitano, "Radiation Survivors, Delegate Push for Federal Compensation for Guam: 'We are Very, Very Close to the Finish Line,'" *Pacific Daily News*, October 3, 2023, https://www.guampdn.com/news/radiation-survivors-delegate-push-for-federal-compensation-for-guam-we-are-very-very-close-to/article_f829e4d0-618b-11ee-9c5d-0fb0ef2194e9.html

19 Julianne Hernandez, "'Making Waves: For Peace and Climate Justice in the Pacific' Summit Starts Friday," *KUAM NEWS*, October 19, 2023, <https://www.kuam.com/story/49859077/making-waves-for-peace-and-climate-justice-in-the-pacific-summit-starts-friday>. See also, artwork created by Kill Joy @kill.joy.land for the Mariana Islands at <https://www.instagram.com/kill.joy.land/?hl=en> <https://www.instagram.com/p/CyjOSd-Ah9P/?hl=en> https://www.instagram.com/p/CigTi2qL3Ui/?hl=en&img_index=1

About the Authors

Dr Sylvia C Frain is co-founder of the non-profit, Fåha' Digital Media on Saipan in the Commonwealth of the Northern Mariana Islands. Fåha's mission is to support Indigenous storytellers while developing an equitable film industry in the Mariana Islands. She earned her PhD in Peace & Conflict Studies at The National Centre for Peace and Conflict Studies | Te Ao O Rongomaraeroa at the University of Otago | Te Whare Wānanga Otāgo in Ōtepoti | Dunedin, Aotearoa New Zealand and a Master's in International Studies in the field of Peace & Conflict Resolution at the School of Political Science and International Studies at the University of Queensland in Brisbane, Australia. In 2018, she was the inaugural postdoctoral research fellow at the Pacific Media Centre, and in 2021 was awarded a Whitinga Research Fellowship in Visual Arts | Toi Whakatu in the School of Art + Design | Te Kura Toi a Hoahoa at Auckland University of Technology | Te Wānanga Aronui o Tāmaki Makaurau, Aotearoa New Zealand. Currently, she is a 2024 Indo-Pacific Leadership Lab fellow with the East-West Center, Honolulu, Hawai'i with support from the Japan Foundation, Tokyo.

Dr Fiona Amundsen is an artist and writer who has exhibited widely throughout the Asia Pacific region, United States and Europe. She is an Associate Professor at the School of Art and Design (AUT University) and recently completed her PhD (Monash University) which explored alternative modalities for memorialising stories and experiences associated with the Asia-Pacific War (WWII). The exhibition that resulted from this research—A Body that Lives (2018)—has been nominated for the 2020 'Walters Prize', Aotearoa New Zealand's most prestigious art award. In 2019, she was awarded a Fulbright New Zealand Scholar Award which enabled her to begin the initial research for Coming back to Life (2019), a photo- filmic-writing project that explores relationships between Cold War military nuclear technologies, military-capitalism, nuclear environmental destruction and spirituality. Currently, Fiona is finalising, Blowing in the Wind for PHOTO 2024 International Festival of Photography, Australia, curated by Elias Redstone, Brendan McCleary and Pippa Milne.

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