

Guåhan: “Where America’s Day Begins!”

The Impact of US Militarization on Guam’s Environment and Indigenous Chamorro population

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Master Thesis

MSc Human Geography

Europe: Borders, Identities, and Governance

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Human Geography

June 25, 2025

Word count: 25.045



Radboud Universiteit

Preface

Firstly, I am grateful for my time at Radboud University, as my Bachelor's in American Studies introduced me to the case of this thesis, and my premaster and Master in Human Geography have exposed me to the devastating effects of colonialism and climate change. Specifically, I would like to thank my supervisor, Dr. Noura Alkhalili, for guiding and helping me throughout the research process, providing valuable information and sources, and especially for pushing me to aim for the first deadline.

I want to thank EJAtlas for granting me an internship position, for which I was able to continue my research on Guam and publish my own cases for the platform. I especially want to thank Eleonora Fanari, who provided me with critical feedback and to always dig deeper into the environmental conflict. This experience was very valuable to me.

I want to thank those who participated in the interviews, as these were extremely valuable to me and this research: Siobhan McManus, Byron Aguon, Laura Souder, Robert Underwood, Moneaka Flores, Victoria-Lola Leon Guerrero, and Michael Bevacqua. Without them, this research would not have been possible, and the scope of interviewees would have been smaller.

Lastly, I want to thank my family and friends for continuously supporting me throughout the research process and being a distraction when I needed it. I want to thank my friend, Lin Acampo, for helping me with the transcription process, and I want to thank my fellow thesis students for helping me and each other, which made the process a less lonely one.

I truly hope my research can contribute to Guam and put the continued conflict and marginalization of the Chamorro people on the map. I hope it raises awareness about not just the island, but about the US militarization and the effects of colonialism on Indigenous communities around the world. I hope this thesis showcases how these communities are more severely impacted by climate change as well.

Abstract

The effects of climate change are felt globally, but unequally, as the effects are felt more immediately and severely in the Global South than the Global North. Colonialism is a huge reason behind this phenomenon, which is mainly seen in the marginalization of Indigenous people who suffer most from colonialism and climate change. Therefore, this research will apply the theory of climate coloniality to Guam, an unincorporated territory of the United States, to understand this relationship and examine how it impacts the environment and indigenous Chamorro population. Guam is a Pacific island and thus more vulnerable to climate change. Moreover, its status as an unincorporated territory makes it one of the last 17 territories that still need to gain sovereignty (UN), i.e., the last existing colonies. The US makes its colonial power apparent by using Guam as a US military base and extracting the land from the Chamorro people, thereby appropriating both land and culture. I argue that Guam is both a military colony and imperial territory of the US. Therefore, I have related militarization and imperialism to climate coloniality through this case study to prove how devastating the short and long-term effects of militarization can be on local communities, especially when a lack of sovereignty leaves them with little means to counteract it. The theoretical framework delves into the underlying themes that surface in this research and how they are entangled in the case of Guam. This thesis employed a case study approach, a document analysis, and interviewed 7 experts and Chamorros from Guam to examine the effects of US militarization on Guam's environment and Chamorro population. The discussion of results shows that the Chamorros experience a multitude of socio-cultural, economic, environmental, and climate change effects due to militarization and colonization. These effects could be (partially) restored if Guam were to gain sovereignty and independence from the United States.

Keywords: capitalism, climate change, climate coloniality, colonialism, Indigenous people, militarization, territoriality, US imperialism

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List of Abbreviations

AFB - Air Force Base

CNMI - Commonwealth of the Northern Mariana Islands

COD - Commission on Decolonization

DEIS - Draft Environmental Impact Statement

DOD - Department of Defense

EPA - Environmental Protection Agency

GOG - Government of Guam

OB/OD - Open Burning and Open Detonation

OHA - Overseas Housing Allowance

PCAP - Priority Climate Action Plan

UN - United Nations

UOG - University of Guam

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1. Introduction

We are currently unofficially living in the geological epoch of the Anthropocene: the age of man. This age is defined by human impacts on the environment and is the epoch some geologists prefer to use for the time we live in by arguing that humans have become geological agents (Davis et al., 2019). In the Anthropocene, human activity has become a force of nature that is radically altering the earth we inhabit (Adams, 2021). However, some scientists prefer to refer to this epoch as the Holocene, as humanity evolved before the start of the Holocene, and therefore mark the Anthropocene to be a deceiving concept. It becomes challenging to determine a date when humans became an irrevocable geological force (Davis et al., 2019), i.e., when to mark the start of the Anthropocene. Moreover, Anthropocene thinkers often see humans as separate from nature, but humans are a ‘geophysical force’ that exists within nature (Moore, 2017), so this line of thinking becomes problematic. The Anthropocene is, therefore, a rather controversial and contested concept in academic debates. However, we can undoubtedly view this time as the expanding ecological footprint of humanity. The growing human ecological footprint has led to one of the most pressing matters Earth is facing today: climate change.

Climate change is an issue that has always concerned me severely. It is one of the only problems that affects every human and non-human on Earth. It is a global problem that affects not only the poor but also the rich. Because where does money get you when Earth becomes inhabitable due to our negligence of it? We have not colonized Mars yet. Chakrabarty states that climate change affects us all, the rich and the poor (2017), which is also my point of view. This is not to say that we are equally affected by this problem. Even more so, this is only the case when we leave climate change unmitigated as we are doing now. Because, for now and the near future, we are not experiencing the full effects of climate change, which means that the effects are now more severely felt in the Global South than in the Global North¹. This is in large part due to colonialism and capitalism. This research will thus not use the term postcolonialism as colonialism is still very much present today, and its injustices become more visible as climate change worsens. Therefore, I prefer to refer to it as colonial continuities. The Global North is the biggest emitter of greenhouse gas emissions, but unfortunately, the consequences of their actions are felt in the Global South. Nations in the Global South are often

¹ I refer to the Global North and Global South to highlight the global economic, social, and political differences in wealth and development. These terms are very broad, but I use them to highlight these global disparities. The Global North I consider Western nations who are more advanced and industrialized compared to the less privileged and advanced Global South.

located in climates that are more sensitive to rapid-onset environmental disasters, for example, the regular flooding in Bangladesh. As the emissions of poor and less privileged countries are relatively low compared to those of richer and more privileged countries, it seems unfair that they should experience the immediate effects of the global climate change problem.

According to Montón-Subías & Boyd, “early modern cultural globalization was the first producer of marginality and cultural erasure on a world scale” (2021, p.419). Colonialism is such a large part of our history that has caused the erasure of so many people and cultures. Today, that erasure is felt among many Indigenous peoples. This research will focus on the relationship between colonialism and climate change to explain why colonized countries and their people are more severely impacted by climate change. It will do so by zooming in on one particular country that is still being colonized by a Western nation: Guam. Guam is an unincorporated territory of the US that has an Indigenous population called the Chamorro. As it is a Pacific island, it is also extremely vulnerable to the risks of climate change. This research will also apply militarization as a form of colonization, as this is the case in Guam. The case will be further explained and contextualized later in this research.

1.1 Societal Relevance

The main societal relevance of studying this topic is the urgency of the problem. Climate change is a problem that needs a lot of attention as it is worsening and affecting the world at large. Even more worrisome is that 2024 was the warmest year in global temperature records and the first year we broke the limit of 1.5°C increase compared to pre-industrial levels that were set in the Paris Agreement (Copernicus, 2025). This target of 1.5°C reflects the scientific consensus on a threshold of when Anthropogenic climate change would endanger species survival (Davis et al., 2019). Moreover, the world today is dealing with increasingly poor leadership and climate change denialism and skepticism (Dunlap, 2013). Trump, as the newly inaugurated president of the US, is an example of both who has signed the executive order to step out of the Paris Agreement for the second time, as he does not believe climate change is a real problem. Even though there is enough scientific data that confirms climate change, there are many, especially in the American public, who are skeptical of science, and this skepticism is only being fed by conservative media (Dunlap, 2013). Unfortunately, climate change is real, and its effects are felt unequally.

As Sultana argues, the damage of climate change is disproportionately falling on (formerly) colonized and racialized communities in the Global South (2022). Therefore, this

thesis will research the climate problem in relation to colonialism to explain how and why the effects are felt differently in the Global South as opposed to the Global North. We see a form of extractive capitalism and colonialism happening where there is “ongoing colonial plunder of resources and labor from the Global South to the Global North” (Sultana, 2022). This results in an ecologically unequal exchange whereby the Global North is profiting from the extraction, and accompanying damage, they leave behind in the Global South (Dorninger et al., 2021; Hickel et al., 2022). This means that the Global South has to export way more units of resources and labor than it imports, thereby also worsening the already existing economic inequality (Dorninger et al., 2021; Hicket et al., 2022). As argued in the introduction, the Global North needs to become more aware of its damaging role in the climate change problem, as they are affecting populations in the Global South that do not have the same access to resources as we do. They also have more resources to tackle the problem. Moreover, they need to become aware that they will feel the consequences of their actions when climate change remains unmitigated, and will result in a global climate catastrophe. Therefore, the rich need to become aware that they will become future victims of the climate change problem, so they can act in their self-interest to improve this crisis in solidarity with everyone, and not just the poor (Chakrabarty, 2017). This research aims to provide more awareness of this problem, especially by zooming in on a case that is not widely known and is officially a Western nation, as it is part of the US on paper. This research will also take a unique angle as it will apply militarization to climate coloniality by focusing on Guam.

1.2 Scientific relevance

The scientific relevance lies exactly in the unknown status of the case. Guam is a very unknown island, while it is still one of the last 17 ‘non-self-governing territories’ (United Nations, n.d.). These are territories that have yet to complete the decolonization process as defined by the United Nations. According to Montón-Subías & Boyd (2021), Guam has a geostrategic value to its imperial colonizers, but because of its unknown status beyond Micronesia, they refer to Guam as a ‘no-place’. As this term has some colonial connotations by implying it is an empty place, it will not be used in reference to Guam. However, it is true that Guam still maintains an unknown status in the world. Furthermore, many Americans do not even know of the island’s existence (Louie, 2021). Therefore, US imperialism is relatively invisible to Americans living on the mainland (Steinmetz, 2005). This marginalization has allowed America to continue exerting its colonial power on Guam and its people (Louie, 2021). Therefore, this research

seeks to bring this forgotten place to the forefront through its struggle for self-determination and liberation, and, with the pressing climate chaos and ecological breakdown, through its struggle to achieve climate and environmental justice.

As this research is focused on the relationship between colonialism and climate change, it is important to discuss Farhana Sultana's research. She coined the term Climate Coloniality to establish this relationship (2022). However, there have been more academics in this field who have discussed this relationship (Mercer & Simpson, 2023; Reibold, 2023) and addressed the role of capitalism as a result of colonialism and its effects on our climate (Moore, 2017; Chakrabarty, 2017; Crook et al, 2018). These academics often discuss and critique the Anthropocene and the human-nature relationship to explain humanity's role in nature and its influence on it (Chakrabarty, 2017; Moore, 2017; Crook et al, 2018; Davis et al., 2019; Adams, 2021). The discussion of their research will highlight how climate coloniality affects Indigenous people, especially. My research will join in and build on this academic debate.

As this thesis will situate Guam in this debate, it will apply US imperialism and militarization. Imperialism (Harvey, 2005; Robinson, 2006; Usmani & Jamil, 2015) and US imperialism (Bello, 1998; Rowe, 2004; Steinmetz, 2005) have been extensively covered in academic debates, and this thesis will discuss it as Guam became victim to this (Bello, 1998; Rowe, 2004; Steinmetz, 2005). There has been a field of research on Guam. However, it often just discusses Guam in a (de)colonial context (Pöllath, 2018; Bevacqua & Cruz, 2020; Delgado, 2022), therefore not explicitly applying it to climate coloniality, or focusing on the militarization of the island (Natividad & Kirk; 2010; Marler & Moore, 2011; Alexander, 2015; Mar, 2024), which is a consequence of colonization. Other research focuses on the effects on Chamorro culture and identity (Montón-Subías & Boyd, 2021; Louie, 2021; Taitano Lowe, 2023). Lastly, some research solely focuses on the environmental impacts or climate change effects in Guam due to military activities on the island (Zyzanska et al., 2023; Mar, 2024). This research will, therefore, build on existing research on Guam through the theories of US imperialism, militarization (Marler, 2013; Alvarez et al., 2021; Akhundov, 2024), and climate coloniality.

1.3 Research problem

The thesis aims to apply the concept of climate coloniality to the case of Guam as a US unincorporated territory. As Guam is a colonized island, the main themes of this research will come together in the case of Guam. Therefore, the objective is to research how the US militarization of Guam affects the environment and the Indigenous Chamorro population

through an imperial and colonial lens. It will also be interesting to find out how Guam experiences the effects of climate change and how much of it can be related to its colonial status. This research, therefore, focuses on how climate coloniality affects both land and people. To tackle these themes and related concepts, this thesis proposes the following research question:

“How does US militarization of colonized land affect the environment and its indigenous population in the case of Guam and the Chamorro population?”

The main research question will be answered through the following sub-questions:

- How is this related to climate change?
- How does US militarization affect the environment and the Chamorros' relationship with the environment?
- How does US colonization through militarization affect Guam's population, specifically the Chamorro people and their culture?

The research is structured as follows. Chapter 2 will discuss the theoretical framework of climate coloniality through climate change, colonialism, and capitalism. Within this framework, I will discuss US imperialism, territoriality, and militarization. Chapter 3 will discuss how these theories are entangled in the case of Guam through historical and contemporary contextualization. In Chapter 4, I discuss the methodology, which is divided into a case study approach; data collection, which is subdivided into semi-structured expert interviews and document analysis; data analysis; and I end with a twofold section on limitations and challenges, as well as positionality and reflexivity. Chapter 5 is a discussion of the results from the interviews and documents in relation to the theoretical framework. The discussion is divided into Guam's lack of sovereignty due to its colonial status; the socio-cultural and economic impact of US colonization and militarization on the Chamorro population; and lastly, the environmental and climate change effects that are felt in Guam. The discussion will also analyze the impact on the mental and physical health of Guam's population, specifically the Chamorro population. In this way, all the sub-questions will be answered to answer the main research question. This thesis ends with a conclusion to summarize the findings and suggest improvements for further research.

2. Theoretical Framework

I will use the related concepts of climate coloniality, as established by Farhana Sultana, climate change, and colonialism in this thesis as the basis for my theoretical framework. I will explain the meaning of these concepts and how they are connected. Other important related concepts that will be established are US imperialism, territoriality, militarization, and capitalism. These concepts will then be linked back to the main framework, to each other, and, most importantly, to the case of Guam. I will do so in Chapter 3 to illuminate how all these concepts become entangled in the case of Guam after having defined them in this chapter.

2.1 Climate Coloniality: climate change, colonialism, and capitalism

It is important to understand climate change and its relation to coloniality, i.e., climate coloniality, as it is the basis of the theoretical framework. Therefore, this part will first explain the concepts of climate change, colonialism, and capitalism before linking them all together in the concept of climate coloniality. This thesis will adhere to the United Nations' definition of climate change: "Climate change refers to long-term shifts in temperatures and weather patterns." These long-term shifts can be both natural and human-induced. Climate change can reveal itself in several ways, for example, through global warming as global temperatures are continuously increasing. More examples are the rising sea levels, the shrinking of glaciers, drought, and floods ("Climate change impacts," 2024). These changes can affect the things humans depend upon, like water, energy, agriculture, ecosystems, and human health (2024).

Before we establish the meaning of climate coloniality, it is important to grasp the meaning of capitalism, as it is derived from colonialism and is a damaging system for the environment. Therefore, climate change, colonialism, and capitalism are all inextricably linked. Jason W. Moore argues that we do not even live in the Anthropocene, as mentioned in the introduction, but in the 'Capitalocene': the age of capital (2017). He even goes as far as to say that we live not just in the Capitalocene, but also in the Necrocene - a system that not only accumulates capital but also drives extinction (Moore, 2017). Capitalism as a system has directed violence towards human and non-human life (2017). Chakrabarty argues that the Anthropocene now refers more to the human-driven changes to the Earth and less to humans' moral liability in causing them (2017). Both authors seek importance in defining their perception of the current Epoch we live in to situate capitalism in the problem of climate change. Moore argues that capitalism is premised on the false notion of the separation of humanity and nature to justify human expulsion from humanity/society (2017). Therefore, marginalized people, like women and people of color, have experienced a long history of

exclusion from membership in society. Moreover, as capitalism views nature as external (Moore, 2017), nature has been commodified, which leads to an undervaluation of nature's wealth creation (Crook et al., 2018). Capitalism can, therefore, be seen as a way of organizing nature that relies on the unpaid or cheap labor of women, nature, and colonies (Moore, 2017). However, this capitalist view is very dangerous as we, humanity, are not separate from nature, and nature is not external to us; rather, humanity exists within nature. As capitalism rejects this human/nature relationship, we live in a world organized to mistreat the nature of which we are part.

Within Moore's definition of the Capitalocene, capitalism is not just an economic system, but a situated and multispecies world-ecology of capital, power, and production (2017). Moore marks the conquests of the New World as the beginning of capitalism (2017). In other words, capitalism appeared during European imperialism. European imperialists appropriated people for labor to transform into capital. During the middle of the 18th century, productivity growth stalled and exports collapsed. This was a capitalist problem of humans interfering labor with the earth (Moore, 2017). Chakrabarty attests to this by stating that the human ecological footprint has ratcheted up over the last 500 years with European colonial expansion and industrial civilization (2017). As becomes clear, capitalism is an outcome of European imperialism and colonialism that is now using the Earth as a form of accumulation. However, as Crook et al. argued, the natural world and its resources are finite, and capitalism is, therefore, an inherently unsustainable system (2018).

As Chakrabarty explains, the climate change problem is not a problem to be studied in isolation (2017) as it is inextricably linked with other problems. This research will look at two main ways that climate change and colonialism are related, as we have now established capitalism's role in this. The first is that the effects of climate change are felt more severely in the Global South, which are often (de)colonized countries, than in the Global North, even though the Global North is the bigger emitter and contributor to climate change. Therefore, its effects are felt unequally. As Sultana argues, the disproportionate burden of climate change is falling on (previously) colonized communities (2022). Moreover, Sultana argues that we are being colonized by climate change, the development industry, and globalization (2022). Climate change makes colonialism of the past and present visible, as she eloquently writes: "Climate coloniality reproduces the hauntings of colonialism and imperialism through climate impacts in the post-colony," (Sultana, 2022, p.3). These are mostly located in the tropics where climate-induced disasters are more prevalent. Guam is one of such tropical colonies that feels the impacts of climate change more severely. Climate coloniality is then perpetuated by, for

example, land grabs, deforestation, rare earth mineral mining, and so forth (Sultana, 2022). These colonial acts are worsening climate change, and especially negatively impacting the impoverished (post-)colonized communities. Capitalism is also a system that aligns with these inequalities of climate change. Just like the poor fall victim to the capitalist system, so do they fall victim to the effects of climate change. Sultana argues that we are being colonized by globalization (2022), while Chakrabarty argues that not all global issues are global (2017). He explains that scientists of developed nations, who have played massive roles in precipitating global warming through their high emissions, have distributed their knowledge on global warming very unequally (2017). These scientists wanted to inform the public about this global matter but did not succeed in explaining it to the general reader, and emerging economies like China and India remained confined to their areas of research (2017). While the climate change problem has now worsened and is a known problem globally, this proves my point further that Western countries put their own interests first. Their actions cause global warming, whose effects are felt in Global South countries. The people living in these countries are then helpless to the effects of climate change as money, capital, and information are unequally distributed.

A second way that climate change and colonialism are related is that climate change can make colonial injustices more visible. These colonial injustices are often felt most severely among Indigenous peoples. According to Reibold (2023), “climate change poses a serious obstacle to current decolonization efforts that seek to rectify colonial injustices and revive Indigenous self-governance as long as they are embedded in the framework of a Western settler ethnogeography” (p.624). She also argues that decolonization is not just about restoring rights to property or the value of lost land; it is also about allowing Indigenous people to rebuild relations with species and ecosystems (Reibold, 2023). It is very important to highlight here that Indigenous people have a relationship and inseparability with their land, which is unlike the Western relationship (Crook et al., 2018). Therefore, Indigenous people often feel a stronger tie to their land and ecosystems than settlers do. This relationship to the land, which is often a significant part of Indigenous cultures, can be disrupted by colonial violence (Alvarez et al., 2021). This is because colonialism is a practice of extending control over peripheral areas through economic exploitation and political subordination (van de Grift, 2015). This land occupation by colonizers leads to land dispossession for the colonized. Climate change can also disrupt the ecosystems of Indigenous lands and can, therefore, prevent decolonization for colonized people as the land they are tied to slowly disappears and/or changes. Furthermore, Crook et al. (2018) argue that the theft of nature, the exploitation of land and water, and the violation between peoples, cultures, and lands have not just genocidal, but ecocidal,

consequences for Indigenous people who are materially and spiritually attached to the environments that are endangered by climate change. Therefore, climate change endangers the lands that Indigenous people are tied to, which are often colonized lands. This is important to understand as this research will focus on Guam and its indigenous population's land is occupied by the US.

It is also important to mention the value of Indigenous climate-related knowledge, also referred to as Traditional Ecological Knowledge (TEK), which is grounded in generations of place-based knowledge and experience with the land (Mercer & Simpson, 2023). Mercer and Simpson point out how European imperialists and colonial powers used to be reliant on this local knowledge to understand climatic change, but that this has largely gone unacknowledged (2023). Moreover, they actively erased or devalued the important contributions of Indigenous and local knowledge as it did not fit with their ideologies (2023). Therefore, the same talking heads from the Global North keep dominating climate change knowledge production and dismissing place-based knowledge (Sultana, 2024). This goes to show that Indigenous people have historically endured erasure in so many aspects due to colonialism and capitalism, that it has even undervalued their knowledge of climate change, which is affecting them now more severely than their colonizers.

This is why climate coloniality will be applied to Guam as it is a colonized island inhabited by Indigenous people who have an intrinsic relationship to their land. Both US colonization and militarization and climate change are affecting and disrupting Guam's environment, and, therefore, the Chamorro's relationship to the environment.

2.1.1 US Imperialism & territoriality

It is also important to distinguish colonialism from imperialism. The US is often argued to be an empire, and so it becomes important to define what US imperialism looks like, especially as it affects this thesis' case. However, I will first establish what imperialism means before defining US imperialism. Steinmetz (2005) argues that imperialism can be distinguished from colonialism as imperialism is a nonterritorial form of empire, and colonialism is a territorial one (2005). Therefore, both colonialism and imperialism can be seen as expressions of empire but can be distinguished by territoriality. Empire is the political domination by a core over a periphery (Gravier, 2015). Steinmetz (2005) defines territorial imperial practices as (1) classical land-based empires; (2) expansionist nation-states; (3) early-modern colonialism; and (4) modern colonialism. The goal of the modern nonterritorial empire, i.e., imperialism, is to control the world or a region for economic means, or reasons of security, glory, and order

(Steinmetz, 2005). Mercer and Simpson (2023) argue that imperialism is a broader concept than colonialism, as “it is about the effort of one group of people to assert control over another whether through direct or indirect forms of rule” (p. 2). All empires have operated differently, some of which have asserted imperial power through colonialism (2023). Steinmetz (2005) agrees with this sentiment that imperialism and colonialism are related concepts and cannot be distinguished by their motives. He argues that the difference between the two lies in the character of the foreigner’s activity (2005). Compared to colonial powers, imperialists recede more into the background and leave behind a military base, a new constitution, or replace local leaders, only intervening when necessary (2005). Therefore, colonialism can be seen as the acquisition of territory, and imperialism as the political ordering of space, the latter meaning extending a state’s political power outside of its national boundaries (2005).

In the case of the US, both are true. The US has exerted territorial and non-territorial imperialist power in Guam. That is why it is important to also understand how territoriality and imperialism are connected notions. Usmani and Jamil (2015) argue that these notions are intertwined through the context of ‘state of mind’, meaning that territoriality no longer remained confined to imperialist ambitions, but also became ingrained in the mindset of inhabitants of imperial powers (Usmani & Jamil, 2015). Through propaganda, acculturation through education, and orientalist construction, they started eulogizing imperial thought instead of resisting it (2015). Therefore, conquering territory is part of imperialist ambitions, along with occupying the minds of its inhabitants. However, as it is argued that we have experienced the end of empire and formal imperialism, academic writings have introduced the term new imperialism to give rise to the modern form of imperialism (Usmani & Jamil, 2015; Robinson, 2006). New imperialism is more structural and economic in character than formal imperialism that was more regional and political (2015). Imperialism has now become defined by Western cultural intrusion and capitalist expansion worldwide (2015). Colonized and decolonized societies still remain economically dependent on the Western world (2015). Therefore, it seems that informal capitalist imperialism has swallowed up empire (2015), and this dominance of world powers enables them to impose their territorial ambitions through the logic of accumulation over the world (Robinson, 2006). According to David Harvey (2005), who coined the term dispossession by accumulation, this is capitalist imperialism characterized by a contradictory fusion of territorial logic and capitalist logic where state power becomes fused with market-driven processes of accumulation.

The US is at the forefront of this new imperialism, but it is first important to understand how the US has behaved on a domestic and international level historically. US imperialism has

exhibited explicit signs of territoriality even before it trod the path of imperial acquisition (Usmani & Jamil, 2015). The United States was founded as a settler colony, whereby they eliminated and erased the Native Americans from society to make place for this new nation (Mamdani, 2015). The US itself emerged from a self-perceived anti-colonial birth after the war against Great Britain, as Americans were colonized by the British before the Declaration of Independence, its ideology and practice of imperialism would become defined by this (Bello, 1998). This was followed by a belief called Manifest Destiny which meant that the US believed it was destined to spread its democracy, capitalism, and gospel across the continent, and ultimately across the world (Usmani & Jamil, 2015). Manifest destiny is, therefore, also a great example of how territoriality can become a state of mind. When Manifest Destiny reached America's frontier, US imperialism expanded its power worldwide. Usmani and Jamil (2015) refer to the period between 1898 and WWI as Jingoistic imperialism, as US policy became defined by expansion through the acquisition of overseas colonies characterized by extreme patriotism.

Guam was one of these overseas colonies, part of US imperialism in the Asia-Pacific. During the late 19th century, America was concerned with securing safe passage for military and trade vessels all the way across the Pacific to Japan (Mercer & Simpson, 2023). 1898 marks the year of the Treaty of Paris after the Spanish-American War, which ceded multiple Spanish territories (mostly in the Asia-Pacific) to the US. Puerto Rico was among these, where the US initially exercised colonial control but became less territorial when it granted US citizenship (1917) and the right to elect their own governors by popular vote (1947) (Steinmetz, 2005). US imperialism has shown territorial and nonterritorial approaches abroad. Some examples of these approaches by the US include setting conditions for loans and investments, denying trade, training (foreign) military forces, and denying recognition of indigenous people (2005). These approaches are largely defined by economic expansion, but Bello argues that US imperialism in the Asia-Pacific was different (1998). This distinction is important to highlight as Guam, this thesis's case, is part of US imperialism in the Asia-Pacific. The US was, and still is, largely interested in this region for strategic reasons, as it would reach its sphere of influence across the Pacific (Bello, 1998). Trade was often a second need as strategic value came first. The US Navy played a huge part in this by acquiring bases in the far reaches of the Pacific (1998). Guam and the Philippines, both acquired in 1898, were delineated as stepping stones to China (1998). Their geographical locations were of great strategic value to the US. Generally, US imperialism is driven by a mixture of strategic extension, economic expansion, and ideology

(missionary democracy) (Bello, 1998). Lastly, US imperialism can also be considered through a sociocultural angle, i.e., the Americanization on a worldwide scale (Rowe, 2004).

A last key characteristic of US imperialism is its significant military power over the world. The US has over 2 millions military and civilian Department of Defense (DOD) personnel, along with 2 millions of their dependents, deployed worldwide (Steinmetz, 2005). The US empire has, therefore, also been referred to as an “empire of bases” (2005). They have an extensive web of US military installations in more than 140 countries (2005), of which more than 300 military bases are located in the Asia-Pacific territory alone (Bello, 1998). By setting up military bases in the Asia-Pacific, they are exerting even more power and influence on the Asia mainland (1998). According to Steinmetz, the military gap between the United States and its contenders is unprecedented, meaning that they possess military hegemony over the world (Steinmetz, 2005). Not since the British Empire has there been such an undisguised rule by military power (Rowe, 2004). The military is also one of the largest employers in the United States (Alvarez et al., 2021). Therefore, militarization is often employed as a means of imperialism, as is the case in Guam.

2.1.2 Militarization & environmental injustice

That is why it is important to establish the definition of militarization to later illustrate what this means in the case of Guam. The US largely imposes its influence on Guam and the Chamorro through militarization as they occupy a third of the island’s landmass through military bases (Natividad & Kirk, 2010) (Figure 1). According to Akhundov, military bases are military establishments that serve to house military equipment and troops, as well as for training and tactical operations (2016). The militarized power structures that are imposed under colonization affect the construction of citizenship, security, and nationality (Alexander, 2016). According to Alexander (2016), “Militarization is a process of normalization and self-discipline where military ideas, behaviors, language, and objects enter into the intellectual, emotional, and physical lives of people, invading what are believed to be non-military spaces and/or aspects of their lives” (p.871). This means that for militarized populations, like Guamanians, the absurd can seem normal so living between military bases becomes normalized. Furthermore, it can provide them with a sense of national security. For others, the presence of nuclear weapons on these US military bases made them feel unsafe (Alexander, 2016). Therefore, militarization is not completely normalized on the island of Guam, as some

Military Bases in Guam

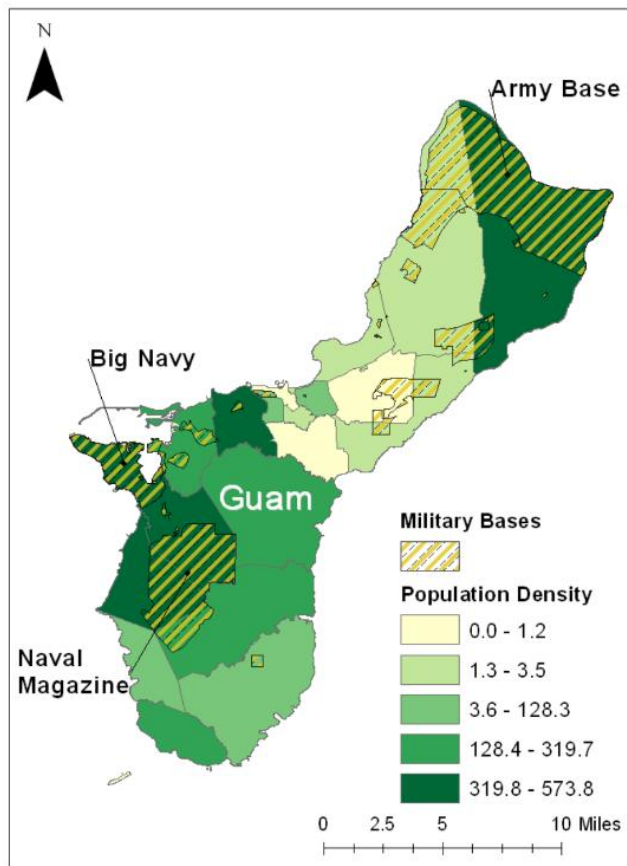


Figure 1. “Map of military bases in Guam created with ArcGIS” (Guest) (Menegus, 2019) (National Centers for Coastal Ocean Science, 2018). Reproduced from Zyzanska et al, 2023.

feel more unsafe living between military bases. It shows that there is a dichotomy between feeling targeted and protected by military power. Moreover, it shows that Indigenous communities often become victims of military action (Alvarez et al., 2021).

Militarization and colonization not only affect Indigenous people, but they can also affect the environment. The sub-discipline of military ecology refers to research topics addressing the ecological consequences of military operations (Marler, 2013). According to Akhundov (2016), spaces where military operations are conducted are often called “terrain” in military terminology, which shows that natural landscapes are considered from the point of man, and not the environment. This often leads to the neglect of the environment. Alvarez et al (2021) argue that there is a temporary trend in which the environmental risk of military activity is transferred from active combat zones to civilian communities. This environmental injustice is known as risk-transfer militarism, which implies the transfer of risk away from the battlefield toward civilian zones where secondary military activity is taking place (Alvarez et

al., 2021). Therefore, in contemporary society, civilians have become more at risk of the environmental harms of militarization through, for example, contamination from aerial activity from afar, toxic dump sites, and the use of aerial herbicides (2021). This is especially true in the case of Guam which is not located in a war or combat zone but does feel the powerful military presence through all the bases located on the island.

The environmental impact of military activities can be felt in multiple ways. Aviation activities are a big contributor to noise pollution, which can be harmful to wildlife (Akhundov, 2016). Moreover, air warfare significantly impacted population dynamics as it led to increased wildlife mortality and the destruction of their natural habitat (2016). Military conflicts at sea affect the marine ecosystem. Akhundov gives an example from Guam, where the brown tree snake was introduced in 1949, as it most likely got there as a stowaway on ships rescued from New Guinea (2016). This new species invaded all terrestrial ecological systems in Guam (2016). Marine life can also be disrupted by the use of explosives and sonar during warfare (2016). Furthermore, land-based military operations have a significant impact on the environment. These operations often involve heavy machinery and equipment, which can lead to environmental issues like deforestation, soil erosion, and habitat destruction (2016). Moreover, “the use of weapons and explosives could lead to environmental pollution, contamination of soil and water sources, and disruption of ecosystems” (Akhundov, 2016). What is also important to mention, as it relates to the overarching theme of this thesis, is that military activities can contribute to climate change through the emission of greenhouse gases such as carbon dioxide and methane, thereby causing severe damage to ecological systems in the biosphere (Akhundov, 2016). Lastly, the article by Akhundov mentioned the environmental impacts of military training bases. Live firing at such military bases can cause constant environmental degradation and pollution, and the weathering and oxidation phenomenon of lead bullets can lead to contamination of soil, groundwater, and surface water (2016). As Guam falls victim to US military activities on its island, it can experience a number of these environmental impacts.

3. Contextualizing Guam

This chapter will contextualize Guam within the theories of climate coloniality, imperialism, and militarization. It will do so by giving the historical and contemporary context of Guam to better understand how all these theories and concepts become entangled in this case. Guam experiences colonialism, militarization, and US imperialism by being a US unincorporated territory, and climate change by being a Pacific island, which specifically affects the Indigenous Chamorro population.

3.1 Historical context

Guam's indigenous population, the Chamorro, first arrived around 2,000 BC (Natividad & Kirk, 2010), which means they have been here for over 4,000 years. The Chamorro are descendants of Austronesian people originating from Southeast Asia and developed a complex class-based system (Dardani, 2024). Guam has an extensive colonial history beginning with the arrival of Ferdinand Magellan in 1521, which is where the erasure of the Chamorro began (Natividad & Kirk, 2010; Bevacqua & Cruz, 2020). Spain's claim on the island resulted in violence and epidemics of diseases that wiped out most of the local population (Natividad & Kirk, 2010). Guam was officially colonized by Spain in 1668 (Bevacqua & Cruz, 2020), and this colonization period was mainly centered around enforced Catholicism (Alexander, 2015). Furthermore, Spain's solution to Guam's decimated population was to import workers from its colonies to serve the purpose of labor and repopulation (2015). Therefore, Spanish colonization introduced small-scale farming, which would become central to Chamorro culture (Dardani, 2024). This would set up future disputes with the US government over naval use of the land (2024). In 1898, Guam was ceded to the US at the end of the Spanish-American War (2015) under the Treaty of Paris (Natividad & Kirk, 2010). Spain ceded the other Mariana Islands (Guam being the southernmost island) to Germany, meaning that Guam became separated from its neighboring islands (2010), now known as the Commonwealth of the Northern Mariana Islands (CNMI). The US Supreme Court created the status of 'unincorporated territory' in the Insular Cases in 1901 for all the acquired territories of 1898 (Commission on Decolonization, 2021). The Insular Cases left unclear whether US citizenship extended to people living in the unincorporated territories or if that would require congressional action (Dardani, 2024). Ultimately, Congress was left with significant power to determine the constitutional status of the territories (2024).

For Guam, its location in the western Pacific was immediately seen as strategically valuable and came under US Navy administration (Commission on Decolonization, 2021). The United States made its colonial power clear by reversing Spain's Catholicism into the establishment of the separation of church and state, banning fiestas, and expelling Catholic priests (Louie, 2021), thereby forcing American ideals onto the Chamorro. The US Navy administration also institutionalized marriage and a patriarchal separation of work and home (Alexander, 2015). As white Americans practiced good hygiene, spoke the English language, and were not bound by spiritual values, which Chamorros are, the same was demanded of the Chamorro population (ibid). Moreover, the US Navy viewed its role as one of beneficent paternalism to Guamanians (Dardani, 2024). They strengthened their rule over the island, making the citizens compliant laborers, and tried to 'civilize' them (2024). This is a great example of Manifest Destiny and US exceptionalism, which often surfaced as paternalism by 'civilizing' the inferior population. Furthermore, the Chamorros were separated from their land, which meant they were unable to practice cultural traditions, such as dance, language, and healing (Alexander, 2015). Instead, they had to follow the US education system that was taught in English through a lens that idealized the US while not teaching them anything about their native culture (Louie, 2021). Chamorros are thereby forced to follow a curriculum that teaches them about geographies, histories, and a language that does not belong to them. In other words, the American colonizers were, and still are, forcing the native population of Guam to assimilate into American culture and life. This shows that Guam became subjected to US territorial imperialism and colonization.

There is a three-year intermission of US control due to the Japanese occupation of the island during WWII. This part of Guam's history is important to know as it plays a big role in its contemporary perception of the US. In 1941, Guam was invaded by Japan on the same day as Pearl Harbor (Natividad & Kirk, 2010) and endured three years of brutalization. This also emphasizes Guam's unknown status as Pearl Harbor is a well-known event in WWII, but who knows Guam was a victim of the Japanese bombings that same day? As Guam was under US Navy jurisdiction, Japan bombed the US military installations on the island and subjected the people of Guam to many atrocities, such as incarceration in concentration camps, executions, and rape (2010). Moreover, the bombings of World War II ruined the island (2010). Understandably so, Guam feels grateful to the US for liberating them from Japan in 1944. The United States has taken on the role of 'liberator,' which only feeds its superiority complex and reinforces the Chamorros' feeling of inferiority. It has since been caught in a cycle of paying

back the US for its liberation, which explains why Guam is not resisting American colonization as much as you would expect (Alexander, 2015).

On the other hand, the end of the war became an incentive for the Chamorros to fight for US citizenship and civil government (Cruz, 2015). The people were frustrated with limited local leadership under the US Navy, a lack of civil rights, and the increased military appropriation of their land (Hattori, 1995). This led to the infamous ‘walkout’ of 1949 of the local assemblymen, which gave this political inequality national publicity (Commission on Decolonization, 2021; Hattori, 1995). When the Organic Act of Guam was finally passed in 1950, Congress transferred control from the Naval administration, who ruled Guam for 52 years, to a local government (2021). The Guam Congress Walkout was not the sole reason for the passing of the Act. The United States also recognized the propaganda value of extending citizenship to Guamanians in the ideological struggle of Cold War politics (Dardani, 2024) and during the era of worldwide decolonization efforts (Hattori, 1995). As this Act finally granted Guam’s inhabitants US citizenship, it did not grant them full voting rights. The Act was, unfortunately, not negotiated between Guam and the United States (2021). Therefore, Guam is governed under an act that does not provide full self-governance, thus leaving Guam in territorial limbo (2021). Conflictingly, a lot of Chamorros serve in the military as there is a lack of alternative employment (Natividad & Kirk, 2010), and are thereby serving a nation of which they are not completely part. Therefore, Guam’s colonial history is the cause of a slow cultural erasure of the Chamorro people.

3.2 Contemporary context in relation to climate change

As Guam is a Pacific island in Micronesia, it faces the dangers of climate change critically. Pacific islands experience disproportionate effects of climate change compared to what these islands emit (Zyzanska et al., 2023). More specifically, the Pacific islands only produce less than 0.03% of the world’s total emissions (2023). Just imagine what little percentage Guam alone emits. The consequences of climate change that Guam could experience are increasing air temperatures, stronger tropical storms and typhoons, declining rainfall, coral reef bleaching and loss, sea level rise, risks to fresh water, drought, and overall risks to human health and ecosystem diversity (2023). The sea level rise has already averaged 3.4mm per year since 1993 (2023). The culture of the Chamorro is also strongly tied to the island (2023), which means the aforementioned effects could be disastrous for them. Unfortunately, environmental problems are only worsened by the US military presence on the island.

Natividad and Kirk (2010) emphasize the negative impact of the US military on Guam's population and environment. The military has exposed the Chamorro to radiation, contaminated and toxic sites, curbed traditional practices such as fishing, and took up a lot of their land (2010). Guam experiences a long history of US militarization affecting its population's health. In 1954, the island was affected by toxic contamination following the "Bravo" hydrogen bomb test in the Marshall Islands (2010). Now, the Anderson Air Force Base proves to be a site of toxic contamination (2010). More specifically, a live firing range complex and an open burning and detonation zone are located on the island of Guam (Mar, 2024). The lead from these bullets being fired in the range can accumulate in the soil and eventually contaminate the aquifer located below, which will damage 80% of clean drinking water (2024). These environmental impacts are in line with Akhundov's. Moreover, the US military presence is not only an environmental issue but also a threat to the Chamorro way of life as the military takes up space from the Chamorro (Alexander, 2016). Thereby taking away their land, water, and cultural practices (2016). Still, the Chamorro join the army or take up occupations within the military, as previously mentioned, as it is the island's main source of income, and there is a lack of alternative employment. This is colloquially known as the poverty draft, which is the military's history of targeting minority and poor individuals for recruitment (Alvarez et al., 2021). As is becoming increasingly evident, US militarization is so deeply seeped into Guam's way of life that the Chamorro have even become dependent on the US military.

Another concerning issue that is extremely current is the military build-up. This was proposed under the United States-Japan Roadmap for Realignment Implementation - a bilateral agreement to relocate a major contingent of the U.S. Marine Corps from Okinawa (Japan) to Guam (Marler & Moore, 2011). The construction of Camp Blaz is already finished to accommodate the Marines, which has become part of Anderson Air Force Base (Mar, 2024). This construction, including the construction of a live firing range, mandated the removal of Chamorros from their homelands (Zyzanska et al., 2023) and the destruction of over 1,000 acres of limestone forest (2024). The first logistics personnel will relocate throughout 2025 (Kyodo News, 2024). This chapter has shown that Guam's colonial history has disadvantaged them politically, which has led to the disruption of Chamorro culture and environment through climate change and militarization. The discussion in Chapter 5 will critically examine how these effects have been felt.

4. Methodology

This research follows a qualitative case study approach, based on semi-structured interviews with experts and Chamorros from Guam, and relevant primary documents. This chapter will provide the research approach, the methods of data collection, the methods of data analysis, and conclude with a section on limitations and challenges, positionality, and reflexivity.

4.1 Case study approach

This research is qualitative and it employed a case study approach. According to Cousin, “case study research aims to explore and depict a setting with a view to advancing understanding of it” (2005, p. 422). The choice to do a case study, especially in the context of climate coloniality, is to develop high-level research skills and gain in-depth knowledge and experiences on the case. It created the opportunity to have expert knowledge on a case, instead of context-independent knowledge that leaves you at a beginner’s level in the learning process (Flyvbjerg, 2006). The knowledge gained from this one case study might not be formally generalizable (2006), but it can still be accumulated in the current existing academic knowledge on climate coloniality and contribute to existing research on Guam from a different perspective. However, the strategic selection of a case can increase generalizability, and atypical or extreme cases can provide more information (2006). Guam is certainly not a typical case as it is relatively unknown. Moreover, Guam is generally not a typical case in the academic discussion of climate coloniality, but it is very much an extreme case. It has endured hundreds of years of colonization and militarization. Moreover, it has an indigenous population that is a victim of this. Guam is also very different from the US Virgin Islands, another US unincorporated territory, as they already gained full American citizenship in 1927 after having been acquired from the Danish in 1917 (Hattori, 1995) and is not a military colony. That is why Guam is an instrumental case study, as it is chosen as a case to shed light on the effects of colonization on the environment and climate change in general (Cousin, 2005). This thesis is not just trying to understand the case at hand, i.e., intrinsic case study research, but exploring the case to better understand the larger framework of climate coloniality (2005). I do want to clarify that case study research falls within the interpretivist tradition, which means subjective bias is a given (2005). However, this is rather the foundation of qualitative research that assumes that reality is socially constructed, which means objectivity does not exist (Hesse-Biber, 2010). This means I need to be reflective about my own position and possible bias, which will be discussed in chapter 4.4.

The choice to do a case study on Guam has several reasons. Due to my previous studies - a BA in American Studies - this island grasped my interest earlier, and I chose to further delve into it through this research. As becomes clear in the previous chapter, all theories and related concepts are entangled in the case of Guam. As they are being colonized by the US, it made for an interesting case, especially as I already have a lot of knowledge on the US due to my BA. Moreover, Guam is a Pacific island that is at risk of the effects of climate change. These climate change impacts are only being worsened by the US military's activity on the island. Therefore, all my personal interests and academic knowledge come together in this case. Moreover, because it so obviously applies to this thesis's main theoretical framework, I consider this one case to be very favorable for this research. I would also argue that this case is extremely exemplary of the current geopolitical tensions in the world, even though it is so small and relatively unknown globally. Guam's geographical location can produce the constant fear of becoming caught in the crossfire between empires. That is why I believe this island deserves more attention in the academic, but also socio-political, world.

4.2 Data Collection

The approach I employed to answer my research question is a triangulation of two qualitative methods. I used Kimberley Peter's book *Your Human Geography Dissertation: Designing, Doing, Delivering* for choosing a research method. Peter described triangulation as "a process of using multiple research methods to cement the reliability or credibility of your findings" (2017). When findings from different data align, it strengthens the confidence and accuracy of your findings (Allen et al., 2016). Triangulation can also minimize 'narrative fraud' (e.g., ignoring local effects, cherry-picking data, overstating from insubstantial evidence) by strengthening the evidence from diverse sources (Cousin, 2005). Triangulation, therefore, increases the trustworthiness and consistency of the findings of my research (Morgan, 2021). I decided to do qualitative research because it uncovers multiple perspectives and effects (Peter, 2017). For this thesis, I used triangulation of pre-existing data with the creation of new data. Therefore, this subchapter will explain the two methods chosen for data collection, those being document analysis and expert interviews.

4.2.1 Document Analysis

When answering my research question, I need to become aware of and research Guam's colonial history and relationship with the US. In order to do this, I decided to do a document

analysis of primary documents such as legislative and policy documents. According to Morgan (2021), document analysis is a method that consists of analyzing various documents such as books, newspaper articles, reports, and academic journal articles. However, I consider some of these, especially journal articles, to be secondary sources, and my document analysis is focused on the analysis of primary documents. I refer to these documents as primary documents because they are written by people who are active participants in the process they describe, instead of an interpretation of already existing literature, which I classify as secondary material (Karppinen & Moe, 2012). This does not mean, however, that primary documents are completely objective, which means I have to remain aware of the possible author's bias of the analyzed documents (2012). Moreover, all types of documents are influenced by the conditions of their production (2012), meaning that they cannot be looked at as products of themselves and as inconsequential. It is, therefore, important to be aware of the historical and social context of the documents at the time of publication to fully grasp their meaning (2012). By analyzing documents, I want to uncover the political motivations behind the policies and documents of the authors (2012). For this thesis, this method will rely on a textual study of policies and documents that established Guam as a colony and its overall colonial history. There have also been more recent documents regarding the environmental impacts of US militarization and climate change. The documents that have been analyzed are the Treaty of Paris Between the United States and Spain of 1898, the Organic Act of the Territorial Government of Guam of 1950, the United States-Japan Roadmap for Realignment Implementation of 2006, and Guam's Priority Climate Action Plan of 2024. These documents have all been accessed online, mostly through government websites.

The Treaty of Peace is what ceded Guam from Spain to the US. The Organic Act, as aforementioned, made Guamanians citizens of the US. The Roadmap for Realignment was a bilateral agreement that initiated a plan to move a major U.S. Marine Corps from Okinawa to Guam (Marler & Moore, 2011). Initially, I wanted to analyze the Draft Environmental Impact Statement (hereafter: DEIS) of 2009, and the U.S. Environmental Protection Agency's (hereafter: EPA) review of the DEIS of 2010, as these assessed and critiqued the environmental and social impact of the proposed military build-up of 2006. However, both documents are extremely lengthy in size, so I chose to analyze parts of them. For the DEIS, I read "Appendix F - Socioeconomic Assessment Impact Study" to get an understanding of the document. For the EPA's review, I have analyzed the email in the document that contained a summary of the EPA's comments on the DEIS. Lastly, Guam's Priority Climate Action Plan (hereafter: PCAP) was analyzed to better understand the effects of colonization on Guam's environment and

climate change. It also clarified what the biggest climate change dangers are for Guam and how they are trying to reduce them. The analysis of these primary documents gave me a great foundation and understanding, which will be complemented by the conducted interviews.

4.2.2 Semi-structured expert interviews

The aforementioned primary documents provided me with the necessary background information and contextualization, which led me to formalize the themes for the interview guides. I conducted a total of seven semi-structured interviews with experts from Guam. The interviews provided me with information that cannot be found in literature and primary data, as these participants provided me with their individual experiences and perspectives of living on an island that experiences constant US militarization and colonization. It is important to note that all participants are Chamorros and, thus, were also able to provide me with information on Chamorro culture and how US colonization and militarization affected them specifically.

The choice to conduct semi-structured interviews is that I wanted to control the direction in order to answer the research question, but I also wanted some flexibility in the interviews to allow room for personal stories and the ability to go in-depth (Ruslin et al., 2022). As Ruslin et al. (2022) explain in their article, interviews can be regarded as conversations between two or more people to unfold the meaning of the research subjects' experience. What was the most important aspect of conducting interviews for my thesis was the gathering and understanding of Chamorros' lived experiences. Then, the choice to conduct interviews with experts had to do with the great distance from Guam and, thus, the inability to interview locals (this will be elaborated on in 4.4), and the efficiency of interviewing experts (Bogner et al., 2009). Interviewing experts gave me the assurance that they would have knowledge and insider experience on my research topic, and it is an effective way of obtaining data and results quickly (2009). I adapted my interview guide, mainly the introductory questions, based on the expert I was interviewing, as they all have different expertise. However, the body of my questions remained unchanged, as I wanted to see how different or similar their answers and, thus, lived experiences would be.

In the sampling of participants for the semi-structured expert interviews, I reached out to experts and organizations I was familiar with from my previous literary research. This first round of sampling led me to my first and only interview. From then on, I relied on the snowballing method to gain more interviewees from previous participants (Miles and Huberman, 1994). This method proved most effective in gaining participants and a broad range

of perspectives for this thesis. As I was limited in my interviewing process due to the physical distance from Guam, this proved to be the most effective way of gaining participants. Luckily, all interviews could be conducted online, even with the great time difference. However, the limitations of the interviews will be elaborated on in Chapter 4.4. With the permission of the interviewees, the interviews lasted around an hour and were audio-recorded. Thereafter, all interviews have been transcribed and further analyzed through coding in Atlas.ti. This process of data analysis will be further elaborated on in section 4.3.

Table 1. Overview of Interviewees

Ref.	Date	Located in	Name Organisation	Name interviewee	Role
i1	19 March 2025	Guam	Nihi Indigenous Media & Protect Guam Water	Siobhan Rumrang McManus	Lead for the Organization Protect Guam Water. She is also the program coördinator for Nihi Indigenous Media.
i2	16 April 2025	Guam	GOG - COD	Byron Aguon	Staff assistant for the Commission of Decolonization of the Government of Guam.
i3	29 April 2025	Guam	Guam Indigenous Heritage Alliance & Kumisión i Fino' CHamoru	Laura Torres Souder	Chairwoman of Guam Indigenous Heritage Alliance and Kumisión i Fino' CHamoru, for which she is leading many revitalization projects.
i4	5 May 2025	Guam		Robert Underwood	Ex nonvoting delegate of Guam to the US House of Representatives, and ex-president of the University of Guam.
i5	6 May 2025	Guam	Prutehi Guåhan	Monaeka Flores	Member of the direct action group Prutehi Guåhan, formerly known as Prutehi Litekyan. They are currently in court, represented by Earthjustice, against the US Air Force.
i6	8 May 2025	Guam	UOG Press, Independent Guåhan & COD	Victoria-Lola Leon Guerrero	Director of publishing at the University of Guam Press, and co-chair of the Independence taskforce of Guam's Commission on

					Decolonization. She is also co-chair of the organization Independent Guåhan.
i7	21 May 2025	Guam	Guam Museum, COD, The Guam Bus & Independent Guåhan	Michael Bevacqua	He is the curator for the Guam Museum and co-chair of the Independence task force. Additionally, he runs the Guam Bus, which is a creative collection that publishes Chamorro language books, comics, and learning materials. Lastly, he is co-chair of the organization Independent Guåhan.

Here, I will elaborate on Table 1 to introduce each interviewee briefly. Siobhan McManus [i1] was my first interviewee, and I came in contact with her after emailing the organization Protect Guam Water, for which she works. It is an activist organization that is mainly occupied and concerned with the potential contamination of the island’s freshwater aquifer due to the military activity happening above it. She is also the program coordinator for Nihi Indigenous Media, which is an Indigenous-led organization dedicated to strengthening Indigenous power across Micronesia, mostly through storytelling. Both organizations are based in Guam. She familiarized me with the Commission on Decolonization (hereafter: COD) of the Government of Guam (hereafter: GOG), which led me to my second interview.

Byron Aguon [i2] is a staff assistant for the COD. Last minute, I conducted the interview with him instead of his executive director, but it remained a resourceful interview. The purpose of the COD is to educate the public on the political status options that are available to them. These options are statehood, free association, and independence, and so for each, they have a task force available to further the educational purpose. Byron was a key part of the sampling of new participants as he granted me a list of people of interest for my thesis in an email. The next interviews were mostly set up through his contact list.

Laura Torres Souder [i3] was the first person I conducted an interview with through Byron’s contact list. As she works for Guam Indigenous Heritage Alliance & Kumisión i Fino’ CHamoru, she is mainly engaged in revitalization work, primarily of the Chamorro language. She was the only participant who wanted me to provide her with the interview guide beforehand, from which she answered the questions in the document. Therefore, this interview was the shortest, but it gave me the chance to ask questions that went in-depth on topics of interest.

Robert Underwood [i4] was the delegate to the US House of Representatives for Guam for 10 years. He is also the ex-president of the University of Guam (hereafter: UOG), so his political and work experience was very useful for my research. Both Robert [i4] and Laura [i3] were in their seventies, which means they both enlightened me with personal experiences from Guam in the post-World War II era.

Then, I interviewed Monaeka Flores [i5] in the same week. I came in contact with her myself as I really wanted to interview someone from Prutehi Guåhan, formerly known as Prutehi Litekyan. It is a direct action group mostly known for its win in the 9th Circuit Court against the US Air Force's OB/OD operations, represented by Earthjustice (a non-profit public interest law organization). They are also in court against the Marines for the construction of the live-firing training complex in violation of the Endangered Species Act with the Center for Biological Diversity. Therefore, she was able to inform me on the multitude of ways they are resisting the US military presence and colonial status.

Victoria-Lola Leon Guerrero [i6] is the director of publishing at UOG Press. They produce a lot of literature, for both children and adults, in Chamorro to revitalize the language. She is also co-chair of the Independence task force of the COD and Independent Guåhan with Michael Bevacqua [i7]. Independent Guåhan is a Guam-based organization that strives for sovereignty from the US.

I first reached out to Michael [i7] through Independent Guåhan as the organization seemed very much of interest to my thesis. Then, Byron [i2] provided me with his personal email, which made it easier to set up an interview between us. Besides his role as co-chair of both Independent Guåhan and the Independence taskforce at the COD with Victoria [i6], he is mainly known for his work as curator for the Guam Museum and the Guam Bus. The Guam Museum is the oldest museum in the Western Pacific. The museum's main goal is to hold artifacts of historical importance for the Chamorro people. Michael's role as curator is to take care of the museum's collection and work on exhibits. The Guam Bus is a creative collective owned by his brother with the goal of revitalizing the Chamorro language and empowering the people, for example, through the publishing of Chamorro children's books. Even though this interview was conducted relatively late in the research process, it seemed too important to pass up as he is active in so many organizations. He is also an academic whose literature has been used for this thesis.

4.3 Data analysis

When all the data was collected and transcribed, the data from the interviews and documents could be analyzed. I used the software called Atlas.ti to code all the data. I employed thematic analysis as a qualitative data analysis approach as it is a method to describe data, but also an interpretation in the process of selecting codes and constructing themes (Kiger & Varpio, 2020). This method allows to identify repeated patterns and thus resulting themes (Kiger & Varpio, 2020; Naeem et al., 2023). Naeem et al, however, do underscore the importance of not letting your own preconceptions interfere and influence the selection of themes (2023). Therefore, I went into the data analysis process without preconceived themes in mind and just started interpreting the data. The first round of analysis consisted of highlighting quotations and keywords I considered the most important and useful for answering my research question. In the second round of analysis, I started coding the data. First, I defined the practical information, such as age, name, ethnicity, and occupation, so that the data remained organized. Then, I started to build codes based on the interviews and documents themselves. I organized the codes by assigning the same color to similar themes and patterns. The third round of analysis consisted of going through all the final codes and grouping them. This left me with 11 code groups from which I was able to construct themes that strongly link to answering my research question. This gave a clear overview of which codes were the most prevalent and which codes seemed redundant. This process of data reduction helped me to select, simplify, and transform the data (Alhojailan, 2012; Miles and Huberman, 1994). The process of coding was challenging at times, as it can be difficult to interpret another person's experiences and give a name to them. Nevertheless, when the coding of the data was finished, these are the overarching themes that emerged:

1. Environmental, climate change, and health impacts
2. Socio-cultural and economic impacts
3. US colonization and militarization
4. Chamorro culture and values
5. Feelings

Theme 5 was created as a code group because the interviewees shared personal experiences with me, which led to many feelings surfacing in the interviews. I found it important to group them in a theme, as their descriptions of their feelings are a great indicator of how they are

affected by US colonization and militarization. Examples of such codes are ‘feeling of oppression’, ‘feeling of shock’, and ‘feeling of realization.’ I also created a code group “Chamorro activism” as this was a talking point in all conducted interviews. That data was largely relevant for my internship at EJAtlas, but as that has no relation to my research question, I did not include it in the creation of themes.

4.4 Limitations and challenges, positionality and reflexivity

Throughout this research, I encountered many challenges and ways in which my research was limited. Those limitations and challenges will be discussed in this chapter, as well as my positionality as the researcher and a reflection for improvements.

4.4.1 Limitations and challenges

This research process was not one without limitations and challenges. The main way in which my research process was limited was the physical distance from Guam, which resulted in other limitations and challenges. My research centers around Guam, especially in the process of data collection, as I wanted to conduct interviews with Chamorros and people living on the island. Guam, as a territory of the US, is a very expensive island to live in and travel to. Therefore, I was financially unable to travel there to conduct fieldwork and physical interviews. As previously mentioned, it was relatively easy to conduct online interviews, even with the 8-hour time difference. However, I found that due to my lack of physical proximity, I was left with a limited scope and variety of participants. I was immediately limited to conducting interviews with experts. These interviews were highly valuable, but my research lacked interviews with other types of people with opposing views.

Firstly, I reached out to both Anderson Air Force Base and US Naval Base Guam as I was very interested to hear how the other side viewed and experienced the colonization and militarization of Guam. Unfortunately, neither replied to my request for conducting an interview with them. I assume it would have been less challenging if I were physically present, as there are so many people from the military living in Guam. Furthermore, experts mostly shared a similar view towards the military, which makes the data quite biased against the military. Therefore, opposing views would have been very interesting. And maybe the military shared a similar view to the experts, but for this research, I do not have the answers to that. A second group that I would have liked to interview, but was unable to reach due to the physical distance, are the non-expert Chamorros. These are the Chamorros who are occupied in the

military, the locals, and the people who might have a different view. According to Michael Bevacqua [i7], there are a lot of people living in Guam who are not that active in pursuing decolonization and resisting the US military presence. For a large group of people on Guam, militarization has become normalized and those people might have told me that nothing is happening. If I were able to immerse myself in the community, attend demonstrations and conferences, and speak to people on the street, the scope of participants would have looked very different. Their personal experiences would have been intriguing and valuable. Therefore, the biggest limitation of my research was the lack of fieldwork, which resulted in a limited scope of participants. The biggest challenge, then, was finding enough experts to participate from afar to gather as much data and experiences as possible. Lastly, I think as a researcher, you will always experience insufficient time, as more time could have resulted in more participants. I also found it quite challenging to position myself in the research, but this will be discussed in the next section.

4.4.2 Positionality and reflexivity

Positionality simply describes “a researcher’s worldview and standpoint when conducting research” (Yip, 2023, p.223). It is also about the way the researcher’s position can influence what they choose to investigate and how they conduct research (2023). Moreover, my positionality is also shaped by various characteristics, such as race, gender, personal values, etc (2023). As I am white and from the Netherlands - a Western nation like the United States - I am simultaneously in a privileged position and an outsider position in relation to Guam. I conducted interviews with indigenous Chamorro people from Guam who experience colonial oppression, so I want to address and acknowledge my privileged position in these conversations. Furthermore, I come from a country that has a rich and grave colonial history itself. So I am interviewing colonized people about the experience of colonization, while I am from a country that colonized and oppressed others. Moreover, I benefit from the system of capitalism, whereas the interviewees are the ones who are hurt by it the most.

Lastly, I found it difficult to position myself as I was not physically there, which complicated my ability to understand the interviewees’ experiences, as I have not seen the constant militarization and colonization through my own eyes. However, I am aware that I can never completely understand the perspective and experience of another person, especially in this case. I have not lived their lives and experienced what it is like to be on the other side of colonialism. By critically reflecting on the way I have influenced the research process, I have tried to increase the trustworthiness and credibility of the research findings (Yip, 2023). For

further research, I will continue to improve myself and my role as a researcher by asking better questions, listening more carefully, and learning from the people I am in conversation with, and taking responsibility and accountability where I can.

5. Discussion

In this chapter, I analyze and discuss the results gathered from the interviews and documents. I will relate the results to the theoretical framework in order to answer the research question of whether US militarization has an impact on Guam's environment and Indigenous Chamorro population. First, I explain how Guam's colonial history and status as an unincorporated territory has affected the Chamorro population politically. The second section will then analyze the ways in which this colonial subjection has affected the Chamorros socially, culturally, and economically. To understand these impacts better, I first explain Chamorro culture and what it means to the interviewees. The last section will cover the last part of the research question, that being the environmental impact of US militarization. It will also analyze the impact it has on the physical health of Guam's population and the effects of climate change.

5.1 Guam's lack of sovereignty

Guam was ceded by Spain to the United States under Article II of the Treaty of Paris, which states that "Spain cedes to the United States the island of Porto Rico and other islands now under Spanish sovereignty in the West Indies, and the island of Guam in the Marianas or Ladrones" (Treaty of Paris between the United States of America and the Kingdom of Spain, 1898). Article IX is what determined the rights and sovereignty of Guam. It states that "the civil rights and political status of the native inhabitants of the territories hereby ceded to the United States shall be determined by the Congress" (Treaty of Paris between the United States of America and the Kingdom of Spain, 1898). Therefore, from here on out, Guam fell under US congressional jurisdiction. According to Magallona, the Treaty became an integral part of the international legal regime of the time, where the great powers (re)devised the world into colonies based on their interests (2000). These great powers saw themselves as 'civilized states' and the territories they ceded and occupied as 'uncivilized' (2000). These colonial powers abused law to justify the conquest of territories and the subjugation of the native populations inhabiting them. Moreover, the international community of civilized states did not recognize the uncivilized peoples as persons in law (Magallona, 2000). She argues that a territory inhabited by a native population that was seized retained its *terra nullius* status, which is a territory legally deemed uninhabited, meaning that it was open for discovery and occupation by civilized powers (2000).

An aspect of this occupation was often the Christianization of the subjugated population (2000). Even though the free exercise of religion was promised under Article X of the Treaty

(1898), the Chamorro population of Guam had Catholicism forced upon them under Spanish rule. The US promised them freedom of religion through a separation of church and state. The Organic Act of Guam of 1950 established a similar right, namely under section 5 that “no law shall be enacted in Guam respecting an establishment of religion or prohibiting the free exercise thereof ” (United States Congress). The United States continuously seems to emphasize the importance of secularization and freedom, as it is stated in both documents. Paradoxically, the Organic Act also established under section 14 that every member of Guam’s legislature shall take the following oath:

I solemnly swear (or affirm) in the presence of Almighty God that I will well and faithfully support the Constitution of the United States, the laws of the United States applicable to Guam and the laws of Guam, and that I will conscientiously and impartially discharge my duties as a member of the Guam Legislature (or as an officer of the Government of Guam) (United States Congress, 1950).

This oath both contradicts freedom of religion and perpetuates Guam’s legal colonial status. They are obligated to take an oath in the ‘presence of Almighty God,’ which seems inappropriate when you are propagandizing freedom of religion. Moreover, this oath is an oath of faith for the United States that further attests to Guam’s colonial subjugation. The Organic Act seems to impose US legislation upon Guam, thereby further amplifying Guam’s role as chess piece in America’s foreign policy.

What is also established in the Organic Act of Guam is its status as an unincorporated territory of the United States (United States Congress, 1950, sec.2). As aforementioned, the creation of unincorporated territories happened under the Insular Cases that enabled Congress to choose what happened to these territories, especially concerning citizenship (Dardani, 2024). According to Dardani, US politicians believed that nonwhite people living in Guam and the other territories were racially and culturally inferior to them and, therefore, not entitled to any form of self-government (2024). Most interviewees also referred to their status as unincorporated territory to emphasize their lack of proper representation. Byron Aguon mentioned how they cannot properly represent themselves in regional or international forums [i2, 16 April 2025]. Victoria-Lola Leon Guerrero explained that because they are an unincorporated territory, the US does not have to ask for permission and, therefore, does not have to tell them what they do or often have done [i6, 8 May 2025]. Michael Bevacqua explained what this relationship to the US feels like for Guam:

Because Guam is territory of the United States, which means that its relationship to the United States can be determined on a daily basis as being inside of the United States or outside of the

United States. And then that determination can be made by just about anybody. The President of the United States can determine that Guam is America one day and it is not America the next day [i7, 21 May 2025].

This means that Guam is always completely dependent on the US for anything, and can be made to feel included or excluded at any time due to its territorial status. Cruz names this the insider/outsider dichotomy, which has been a continued discussion in Guam since the end of WWII (2015).

5.1.1 Lack of voting rights

The last thing established in the Organic Act that severely affects Guam's population is its lack of voting rights. So, while the Act granted them US citizenship, it did not grant them the right to vote. The Act states that "only an amendment to the United States Constitution can give to the people of Guam the right to vote for President and Vice President. There is no existing constitutional right requiring such a vote" (U.S. Code Annotated, 2004b). So far, such an amendment has not been made. Moreover, Guam is represented in the United States Congress by a non-voting Delegate to the House of Representatives (U.S. Code Annotated, 2004b). This allows them representation in the US House of Representatives (a role fulfilled by Robert Underwood [i4]), but they still lack the right to vote, and, thereby, lack a seat at the table. Bevacqua explained how their lack of voting rights resulted in them having a president, Trump, who was not elected by anyone in Guam [i7, 21 May 2025]. According to him, it does not matter whether Guam is a red or blue territory; they do not participate in the voting process [i7]. They get the president that the United States voted for. Guam is, therefore, never truly democratically represented in politics. Robert Underwood, as ex-delegate to the House of Representatives, described his experience as one of enjoyment, but also as a constant reminder of your status [i4, 5 May 2025]. He could do anything any other member of Congress could do, like request information and vote in committee, except vote on the final passage of a bill [i4 & i7]. This makes it seem like Guam has representation in US politics, but their lack of sovereignty quickly shows when they cannot vote with the rest of Congress and other US citizens. Guam's lack of sovereignty implies that they are subject to the authority of outside powers who continuously make decisions that are not in the best interest of the island (Commission on Decolonization, 2021). These bad decisions are largely prevalent through the militarization of the island.

5.1.2 Lack of consent and information

Besides a lack of sovereignty, Guam experiences a lack of consent and information. The military activities performed on the island are often not consented to by Guam, which means they often find out after the fact. According to Byron Aguon, Guam lacks ultimate consent [i2]. So when it came to the transfer of the Okinawa military corps, Guam was an easy solution. The Philippines, Hawaii, and California have what Guam does not, and that is ultimate consent and sovereignty [i2]. So, as aforementioned, the military build-up of Guam, including the transfer of Marines from Okinawa, is happening now. Moneaka Flores argues that the increased militarization violates prior informed consent [i5, 6 May 2025]. Byron also explained how the public is often not notified of activities the military is conducting on the island [i2]. An example is the flight test where they are shooting a missile to intercept another projectile. The public was not notified of the first flight test. Another example was given by Moneaka that proves Guam's lack of information when it comes to the US military. She said that a lot of the contamination from the war games remained classified and that the US does not share information about how many jets and troops are coming, which means there is a complete lack of transparency [i5]. Moreover, a lot of the EISs are heavily redacted and not easily accessible [i5]. Laura Souder finds that the US has to ask Guam to be a partner at the table, so they can give their perspectives and help mitigate the dangers of these military activities [i3, 29 April 2025]. Guam's lack of sovereignty already makes it extremely difficult to have some say in what happens to the island, but when they are not informed, there is nothing to contest when it has already happened without their consent. Therefore, by law, Chamorros are US citizens but they are US citizens with limited rights (Cruz, 2015).

5.1.3 The strategic value of Guam

The main reason why the US was and remains interested in Guam as an unincorporated territory is its strategic value to the US. The strategic value of Guam was also mentioned in most interviews. Byron Aguon argues that the United States has a concerted effort in Guam as a military base as its geographic location in the Asia-Pacific, that being close to China, is advantageous [i2]. Robert Underwood concurs that the US projects "its power into this part of the world either for economic purposes or for strategic purposes" [i4]. Moreover, Byron Aguon, Robert Underwood, and Moneaka Flores referred to Guam as 'Tip of the Spear,' which is a known metaphor for Guam. Bevacqua and Cruz argue that the metaphor propagandizes the island both internally and externally as being on the front lines of democracy, liberty, and freedom (2020). This, however, also means that Guam is on the front lines of US military

strategy in the Asia-Pacific. As Byron explains, the US has the ‘three island chain strategy’ in place since the Cold War, where Guam is part of the second chain that will take on the brunt of attack before anything happens on America’s homeland [i2]. Guam, being the tip of America’s spear, also means knowing that you are used as a place for war. Therefore, Moneaka explains that this strategic value that has been assigned to Guam also means that “we’re a place for war, that we’re a place to defend the United States, that we’re the tip of the spear” [i5]. This is very noticeable by the enormous presence of the US military and its arsenal as the Air Force Base has the single largest weapons capacity and fuel storage of any Air Force Base in the world [i4]. Robert Underwood, however, also argues that, even though the US has projected its power close to Asia, the Marines will still be far away from actual conflict, which denotes the whole notion of American strength [i4]. The Marines could arrive at the scene too late to influence the situation, especially with them being relocated from Japan to Guam, leaving them further away from potential conflict (Eldridge, 2007). It is very worrisome that the US continues to use Guam as a projection of their military power, but is also quickly undercut when you argue that they are still too far away from conflict to be useful. Rather, it makes Guam a target for war instead of a tool for war. Therefore, the extension of US citizenship to Guam, as established in the Organic Act, which they fought for themselves, did not give them the sovereignty they need and still preserves US imperialism in the Pacific (Dardani, 2024).

5.2 Socio-cultural and economic impacts of US colonization and militarization

This subchapter will discuss the socio-cultural and economic impacts that are felt by Guam’s population, especially the Chamorros, as a consequence of constant US colonization and militarization. The interviews and literary research made clear that Chamorro culture has been disrupted tremendously by the US, so this section will explain in what ways and aspects those effects have been felt. Moreover, colonization also impacted the Chamorro population on an economic level. Therefore, it is important to first understand what Chamorro culture and their relationship with the land means before explaining how it is disrupted by colonization and militarization.

5.2.1 Chamorro culture

One characteristic of Chamorro culture that immediately emerged from the interviews is their sense of community and collectivism. Siobhan McManus described community caretaking as the essence of Chamorro culture [i1, 19 March 2025]. “So much of being a Chamorro is tracing

your lineage...trying to maintain as much connection to your clan as possible” [i1]. So it is a big sense of community where everyone takes care of each other and their elders [i6]. Siobhan introduced me to the term ‘Inafa’ maolek’, which is a Chamorro word for their ethos of reciprocity [i1], which gives a sense of how much they value collective care. According to DeLisle, the word means “to make good” by treating people well and describes hospitality as a key Chamorro value (2016). Laura Souder is from an older generation of Chamorros, and she describes this same sense of community but also explains how it used to be different in her time [i3]. Back then, everybody knew each other, and everybody that she bumped into was either a relative or a clan member [i3]. Moreover, Chamorro culture is a very other-centered culture where it is even rare to refer to oneself, according to Laura [i3]. This is in clear contrast to the very individualist culture of the US. Now, Guam has become much more diverse due to the increase in the military population and tourism. However, Guam’s demographics will be discussed further in section 5.2.2.2.

Laura Souder and Robert Underwood explained to me how they call themselves ‘Taotao Tåno,’ meaning people of the land [i3 & i4]. This Chamorro word perfectly describes their relationship to the environment and why it is so sacred to them. Therefore, they not only emphasize caretaking of their people but also of their environment. Robert Underwood further explains the meaning of the original name of their island - Guåhan - as Guaha means to have, which is the root word of the Island’s name [i4] (Zyzanska et al., 2023). The US has, therefore, already disrupted Chamorro culture by changing the island’s name to Guam, as established in section 2 of the Organic Act of Guam:

The territory ceded to the United States in accordance with the provisions of the Treaty of Peace between the United States and Spain, signed at Paris, December 10, 1898, and proclaimed April 11 1899, and known as the island of Guam in the Mariana Islands, shall continue to be known as Guam (United States Congress, 1950).

The Chamorros continue to refer to the island as Guåhan because it is important to recognize their sense of respect for the land and ocean. As Victoria explained, they consider the island to be abundant and life-giving [i6]. Moreover, it is believed that the siblings Puntan and Fu’ana, the first Chamorro ancestors, became the land, the ocean, and the people [i6]. This creation story elucidates how the Chamorro view and feel connected to the land. Therefore, a lot of cultural and agricultural practices are tied to the natural rhythm of things [i4]. Robert highlights the importance of their history, as they are the first Pacific Islands people to migrate over the open ocean [i4]. This is very important to Chamorro culture as it is also predicated on the idea that Chamorros have always been there [i4]. Understanding the importance of collectivism and

caretaking as intrinsic values of Chamorro culture makes it easier to grasp how US colonization and militarization disrupted their world.

Another important characteristic of Chamorro culture is subsistence culture. This subsistence culture consists of fishing, farming or ranching, hunting, and weaving, as described by the interviewees. Most of them refer to these practices in the past tense but mention that there is still a lot of respect for it, and many are still trying to embrace it [i1 & i2]. A way of showing this respect and attachment to cultural practices is that many still buy their fish at the fisherman's co-op and their meat from hunters [i1]. As both Laura and Robert are from a different and older generation, they have an interesting take on this. Robert mentioned how people used to ranch a lot, collect water, and slaughtered pigs and chickens, and that people still enjoy these practices, but not on the scale they used to [i4]. These family ranches were used to raise cattle and meat where they farmed in mass amounts [i6]. Now, rural properties owned by extended families are used for farming and family celebrations, which are called *lãnchos* (Montón-Subías & Dixon, 2021). Laura said that she and her generation still choose local whenever they can [i3]. Victoria explained that Guam has very fertile land, which makes it easier to be self-sufficient and rely on what the island's resources have to offer [i6]. Such resources are avocados, coconuts, fruits, etc [i2 & i6]. Another Chamorro practice is that of traditional healing [i5]. Guam's traditional healers are called *Yo'ãnte's*, and they are traditional medicine women who rely on foraging grounds for their practices [i1]. However, the decrease in cultural practices can be ascribed to the end of World War II. Both Victoria and Michael explained how Guam was very self-sufficient before World War II, but quickly became Americanized post-World War II. When Guam was still colonized by Spain, they encouraged the Chamorro to farm [i7]. The United States saw this Chamorro way of living, i.e., farming and hunting, as primitive and uncivilized [i7], and introduced the capitalist commodification of land, the import of food, and commercialization. This Americanization of Guam will be expanded upon in the next section.

Chamorros on Guam used to live in villages that were structured by stone sets that once supported A-frame habitations (characterized by triangular shapes) (Montón-Subías & Dixon, 2021) (Figure 2). These pre-colonial societies are now known as Latte societies (2021), which are characterized by the aforementioned subsistence culture. Figure 2 shows the Latte stones, which are these stone pillars and capstones that represent ancient house supports (Hunter-Anderson, 2025). The capstones, or the top portion of the Latte, are known as *tãsa* (DeLisle,



Figure 2. Latte stones at Senator Angel Leon Guerrero Santos Latte Stone Memorial Park, Guam (Hunter-Anderson, 2025)

2015). Latte stones can be found at ancient sites in two parallel rows, as is visible in Figure 2 (Hunter-Anderson, 2025). Robert referred to the development of the Latte period and the Latte stone in the interview, as it was an important change in Chamorro society, as it created a social environment [i4]. According to Montón-Subías and Dixon, “Latte societies were lineage ranked societies characterized by no clear social stratification” (2021, p.422). Nowadays, these Latte sites are important in Chamorro cultural preservation and revitalization. Victoria explained how the Chamorro Latte sites, as they are artifacts of ancient Chamorro homes, are sacred and respected [i6]. Their belief is that before you enter those spaces (Latte sites or the jungle), you have to ask permission from their ancestors, as they believe their spirits are still present [i6 & i7]. It comes from a belief “that these spaces, the resources, they’re not mine” [i7]. Victoria teaches her children to do the same, which shows how vital these sites and their connection to their ancestry are to Chamorro culture and identity.

The last thing that has proven to be characteristic of Chamorro culture is the Chamorro language. Robert said that “the strength of Chamorro culture for all these millennia was the continuation of the language itself” [i4]. He thinks language is a great measure of continuity of culture because it has ancient roots, which is why speaking the language is so important [i4]. He grew up speaking Chamorro with everyone. Unfortunately, due to US colonization, the use of the language has seen a decrease. This also became apparent from the interviews, as the youngest interviewees were the least fluent in Chamorro. Fortunately, there are many efforts

to revitalize the language. These efforts have mainly been explained to me by Laura and Victoria as they work on the revitalization of the Chamorro language at Guam Indigenous Heritage Alliance and UOG Press [i3 & i6]. Laura has made it her life's work to ensure the continuity of the Chamorro language [i3]. Examples of efforts to revitalize the language are immersion schools and classes [i1 & i3], eg, Hurao Academy [i2], the revitalization of Chamorro naming [i3], the production of children and adult Chamorro literature and scholarly manuscripts [i3 & i6], government translation [i3], and creative writing workshops [i6]. The Guam Bus, an initiative of Michael Bevacqua's brother, also publishes Chamorro children's books to help revitalize the language among the younger generation [i7]. That is why Victoria also mentioned her prioritizing her children to learn Chamorro [i6]. To conclude, Chamorros believe they are directly connected to the land on which they are born, and connected through a shared ancient history, culture, and language Cruz, 2015), which results in a collectivist culture of caretaking.

5.2.2 Americanization of Guam

Now that we have grasped the essence of Chamorro culture and its intrinsic values, we can examine how US colonization and militarization have affected it. The Americanization of Guam is very noticeable at first glance through all the symbols of Americanism [i3]. All the American fast food chains are present on the island, such as McDonald's, KFC, Jack-in-the-Box, etc [i3]. As explained in the previous section, most Chamorros eat local as a result of their subsistence culture, so the heavy overlay of fast food chains makes this more difficult. The Americanisms are also visible in other ways, such as grocery stores, the use of American dollars, and one of the official languages being English [i3]. Chamorros' medicinal practices were even affected by the establishment of Westernized healthcare (Louie, 2021). However, Americanization is not just limited to surface-level American symbolism. Americanization has seeped into every layer of life on Guam, even below the surface. American popular culture has also been forced upon Guam's population through media and technology [i1]. An intrinsic part of American culture is also its individualism, which is in stark contrast with the collective Chamorro identity. Siobhan explained how people on the island have bought into this Westernization and idea of only taking care of yourself and your immediate family, i.e., the nuclear family [i1], while Chamorro culture highlights the importance of extended family and heritage. This is a key aspect of American exceptionalism and myth-making. They are extremely good at selling the idea of a place and detaching it from reality [i1]. Therefore, it is

not just the export of American products, but the export of American exceptionalism [i1]. This causes citizens to believe the idea that being American is a privilege, thereby not questioning their colonial status. They have managed to make many Guamanians American patriots, while they are not even fully incorporated citizens. According to Robert, people act as if they live closer to the US than the Commonwealth of the Northern Mariana Islands, arguing that they psychologically feel part of the American phenomenon [i4]. “Guam: where America’s day begins” is a phrase repetitively applied to Guam, especially to attract tourists, which only feeds into this myth-making. In reality, the American dream is not attainable to Chamorros. Therefore, the Americanization of Guam has meant that their traditional culture has been connected to that of America, causing their values to erode and alter.

5.2.2.1 Land alienation and cultural disruption

The disruption of cultural values has mainly been felt in the loss of their ancestral lands at the hands of the US military. As aforementioned, Guam was under Naval rule from 1898 until 1950 - from the Treaty of Paris to the Organic Act of Guam - with an interval of Japanese occupation during WWII. After WWII, the US military extracted a large portion of Guam’s arable, most fertile land (equivalent to 50% of the island’s landmass) to build military bases and installations (Natividad & Kirk, 2010) [i6]. The reoccupation era was defined by long dispossession, land displacement, and land takings from the Chamorro [i2]. Military occupation of the land has now been reduced to roughly one-third of the island, but the land they took was one of the most fertile and close to the fishing grounds (2010). As a consequence, people were separated from the land, and cultural practices that were tied to the land were increasingly lost (Alexander, 2015). The village of Sumay illustrates how the reoccupation era affected villagers who were removed from their ancestral lands [i1 & i2]. Sumay used to be a thriving Chamorro village [i1], but they were not allowed to reclaim their land (as they fled from the Japanese during WWII) because the US needed the property for US Naval Base, Guam (Babauta, 2024). The former residents were relocated to a newly created village called Sânta Rita-Sumai (2024) [i2]. People worry that the same will happen for the village of Litekyan, which is where Anderson AFB is located, due to the military build-up. Laura argues that medicinal clans who are endemic to that area of land will be removed as well if the land is destroyed [i3]. The loss of this ancestral land is a huge threat to their cultural heritage. As Chamorros are so tied to their land, the loss and forced removal have been extremely hurtful and caused a disconnection from their culture [i5]. This land alienation, therefore, has caused cultural alienation. An example was given by Michael that some still do not know anything

about the plants they are trying to protect, while a hundred years ago the Chamorro could name the majority of plant species [i7]. Therefore, colonization and militarization have caused a disconnection from culture for many Chamorros. However, according to all interviewees, there are many efforts to not only revitalize the language but to revitalize the culture. Chamorro activists do this through art, dance, and music to reclaim pride in their culture, as well as sovereignty over themselves and their spaces (Alexander, 2015). Therefore, cultural continuity and resurgence can be a form of decolonization for Indigenous communities.

5.2.2.2 Education, language, and demographics

Lastly, it is important to explain the impact that education has had on the Chamorro. As aforementioned, Guam became subject to a US education system and curriculum to promote assimilation (Louie, 2021). The interviewees told me about their experiences getting educated at school in Guam. Byron explained that their education system mirrors the US standard [i2]. He argued that Guam was treated as ‘a glorified footnote’ and American history was central in school, even though Guam is an intrinsic part of American history [i2]. Moreover, everything they learned in public school had nothing to do with Guam and was completely centralized around the US, even though their history and geography are part of Micronesia and the larger Pacific [i1 & i6]. Children spend their entire student time learning about America, while not learning anything about Guam [i7]. Michael gave the example that still frustrates him extremely, that they learn the traditional four seasons in school, while Guam only has two seasons: dry and wet [i7]. Siobhan explained that if you did want to learn regional history and the Chamorro language, you had to take optional classes [i1]. Because the entire curriculum was taught in English. Moreover, students have to say the Pledge of Allegiance in the morning, which is a pledge of allegiance to the United States [i4]. Even some of the public schools were named after American historical figures, such as J. F. Kennedy (Figure 3) and George Washington [i4]. This shows that they are teaching children to become geographically, historically, politically, and culturally aligned with the United States, when they are not. Therefore, the education system is another example of how deeply colonized and Americanized Guam is. The English US education system is also a leading cause for the decrease in Chamorro speakers. Moneaka talked about the ban on the Chamorro language in public education, and we now know that there was only an optional class, and that the policing of the language extended into other public spaces [i5]. She said that the language survived much more during Spanish colonization than US colonization [i5]. Laura attests to this by the fact that the effects



Figure 3. John F. Kennedy High School, Tamuning, Guam (Toves, 2023).

of colonialism are evident in the decreasing numbers of Chamorro speakers [i3], and Robert admitted that their generation is probably the last that speaks Chamorro naturally [i4]. There is also a minority of Chamorros in Guam [i2 & i5], so there is not just a decrease in Chamorro speakers, but of Chamorros in general. According to the Statistics for Development Division, the current population of Guam is 168,399 as of 2025 (n.d.). As there is no data for the Chamorro population in 2025, I will use the data from the US Census of 2020. The total population was 153,836, and the Chamorro population in 2020 comprised 50,420 people (US Census Bureau, 2022). This is 40,97% of Guam's total population in 2020. According to Cruz, this is around a 90% decrease from before WWII (2015). Therefore, Chamorros are officially no longer a majority in their own land. This is also due to massive outmigration and diaspora [i2]. As of the latest census of 2010, the Chamorro population in the United States was estimated at 147,798 people, most of them being from Guam (others from the other Mariana Islands) (Bureau of Statistics and Plans, 2010). The diaspora community of Chamorros is higher than the local community [i2]. Most of the interviewees also moved to the United States to get their university degree, but they all came back to Guam. But it does show that, because of their US citizenship, migrating to the US is considered an available option for greater economic and social mobility.

5.2.3 Economic impact

In this section, I will discuss the economic impact of US colonization and militarization, and why some consider outmigration for upward mobility. It is then important to first understand that Guam's economy is completely geared to the military. This already starts in education, when military recruiters would come to Guam's public schools to make them take the ASVAB, which is an aptitude test for the military [i1]. They start to familiarize children with the prospect of military occupation, so when they get older, it is an option they consider. Because a lot of Chamorros choose to serve in the US military [i2]. "Guam has the highest per-capita enlistment in the US military, and 1 out of 8 Guamanians has served in the US Armed Forces" (Calvo, 2018) [i1 & i2]. The allure of the military is not just an attractive job opportunity due to few options for steady employment on the island, but it is also an opportunity for upward social mobility (Alexander, 2015). This is mentioned by most interviewees as well. If you do not have many economic opportunities, you join the military [i4]. Moneaka explains that the high enlistment rate is due to poverty [i5]. Guam's income below the poverty level was 20,2% in 2019, which is almost double the US average (US Census Bureau, 2023). This explains the need to serve a nation that does not grant them full citizenship or self-determination. Furthermore, military values are in opposition to Chamorro values of respect and reciprocity (Alexander, 2015). Some argue these numbers show how patriotic Chamorros are, but this just shows how dependent they have become on the US and its military presence. As Robert explained, "the political economy of Guam is tied in with the militarization of the island" [i4]. Therefore, the upcoming section will examine the effects of living in a military economy on Guam.

5.2.3.1 The Jones Act

As explained in 5.2.1, Chamorros used to be very self-sufficient due to their subsistence culture, so most of the food was provided by the local community [i6]. However, this changed when the US started charging land taxes, which led to the loss of farmers as they had to work to afford their land or chose to sell it [i6]. The US also encouraged the Chamorros to grow cash crops, thereby introducing the idea of making money from farming instead of growing it for yourself [i7]. Therefore, Guam's subsistence culture was disrupted by US capitalism and commercialization. Moreover, Guam has become dependent on the US as Guam imports around 90% of its food (Lei, 2023) [i1]. This is because the US military has extracted the most arable land for its bases, and the Jones Act of 1920 has increased the prices of food (2023). The Jones Act requires that only qualified ships are permitted to transport cargo between US ports,

including the unincorporated territories (Greco, 2024). According to Michael, this means that Guam cannot benefit from its proximity to Asia, which would grant them access to cheaper goods [i7]. The Jones Act, therefore, inflates the cost of living in Guam [i7]. Victoria chimes in by arguing that most of the world's food comes from the Asia-Pacific region, thereby making it all the more confusing to make Guam reliant on the US for the import of goods [i6]. It becomes even more difficult to grasp that when they import goods from Asia, they get shipped to the US before shipping it to Guam [i6]. Now, Guam is extremely vulnerable to inflation and supply chain disruptions (Lei, 2023). It is difficult to understand why the US would impose such an unnecessary and cumbersome law that made Guam almost completely dependent on American food and goods, while it had everything it needed on its island. Therefore, US colonization, along with capitalism, has impacted Guam's self-sufficiency and caused an increase in prices, which makes Guam an increasingly expensive place to live for the local population.

5.2.3.2 Housing crisis

This leads me to the second economic effect, as the increase in prices has been felt in the housing market. The housing crisis in Guam has been mentioned by every single interviewer, which highlights the severity of the problem caused by the US (military). The current military build-up, as proposed under the United States-Japan Roadmap for Realignment Implementation, has caused an increase in the military population [i2]. However, Eldridge argued that the original realignment plans of 2006 were a failure of US-Japan relationships (2007). The Realignment contained political, strategic, and military problems, as well as a lack of consideration for Okinawa and other communities that host US facilities (2007). Unsurprisingly, the Realignment was revised in 2012, which is what the current strategy is based on (CSR Reports, 2019). This revision proposed to relocate 5,000 Marines and 1,300 dependents from Okinawa to Guam, which is a decrease from the 2006 version (2019). Still, this is a huge military expansion on Guam. The housing market, therefore, had to cater itself to this.

They did this by introducing OHA - the Overseas Housing Allowance - which is an allowance for every military person who gets stationed in Guam [i1] and wants to live off-base [i6]. According to the Defense Travel Management Office (n.d.), the OHA is designated to offset housing costs. Moreover, supporters of the military build-up, like the Guam Chamber of Commerce, argued that it would provide economic growth (Natividad & Kirk, 2010). However, from the interviewee's experience, the housing costs have only increased dramatically. Siobhan

explained that they are charging a lot of money for one-bedroom apartments, because they know that Marines will be relocating to Guam with a housing allowance that can afford these increased prices [i1]. Victoria argues that these military allowances do not make sense as the military already gets paid well, as opposed to the local population, and on-base housing is covered [i6]. However, according to Robert, they do not build enough housing on base [i4]. So then, more military personnel have to live off-base, which causes the housing prices and rent to increase, which in turn makes it unaffordable to local people [i4]. There is now a shortage of 12,000 units for the number of people in Guam who are looking for housing compared to the number of affordable units available [i1]. Therefore, there is a lack of supply, but high demand [i2]. Now, more locals are living in multifamily and multi-generational households [i4]. Michael Bevacqua shared his personal experience:

Where I have lived in an apartment where and and it happens sometimes, where you're living in an apartment, the apartment is not in great shape. But once the landlord wants to upgrade it. To make way for military renters, then they jack up the rate. They increase it all of a sudden to get you out, so then they can fix it up, and then they can rent to military people. And so, it's a common story. It happened to me and to my family where suddenly. There was this expectation that I was gonna pay so much more for an apartment where so many things hadn't been fixed [i7].

This shows how the local population is being harmed by the housing crisis. Another consequence of this housing crisis is homelessness [i5]. The number increased from 1,075 in 2023 to 1,249 in 2024 based on the Point-in-Time Homeless Count (Sablan, 2024). Moneaka finds that the money being used for these allowances should be used to improve the social welfare of the local population [i5]. The military has promoted the military build-up as economically beneficial, as an investment, but it has been anything but that for the local population [i7]. This proves that Guam has a military economy that is only geared toward the military. In other words, Guam has fallen victim to the military industrial complex, which is the close working relationship between corporate elites, governmental officials, and the military hierarchy to fulfill its military mission while still serving the capitalist system and gaining political power (Alvarez et al., 2021). Moneaka concurs that the military industrial complex is just hoarding wealth for the few while exploiting the planet and people globally [i5]. This also justifies the high number of outmigration, as Guamanians are being forced from their homes through these policies that only favor the military population of Guam.

5.2.4 Mental health and identity

The constant colonization and militarization of the land, the insider/outsider relationship to the US, the total disruption of their culture through Americanization, and the increased prices of food, goods, and living have all had an impact on the Chamorros' mental health and sense of identity. Therefore, the last section of this chapter will examine the colonization of the mind.

US colonization has severely impacted the Chamorro sense of identity. As Laura explained, her generation was taught that being Chamorro was irrelevant and not a viable identity [i3]. She said that:

when identity has been pummeled out of you and the value of your language and your way of life has been diminished, and you've been told that that's archaic, that's not relevant, that's not going to get you anywhere, you can't make money that way. Uhm you know and that's a constant message in different ways and that your language is not important, forget your language, because you're never going to be able to speak English well if you speak your own language, then you know how much can a people take, generation after generation, of this kind of messaging before they begin to believe it [i3].

This quote shows how Chamorros have come to internalize their inferiority, propagandized by the US. She also explained that they are brainwashed to think that they are not a colonized people [i3]. This further explains why so many serve the US military, as it can also be seen as a way to prove their value to the US (Alexander, 2015) [i5]. This circles back to Michael's argument that for a large part of Chamorros, militarization has become normalized [i7] because that is how they have been living their whole lives [i4]. It will change the way you view and experience constant militarization. That is why Laura and Robert argue that the hardest fight is with their own people who still need to be convinced they can practice their own culture separate from the US, and not letting them define themselves by others [i3 &4].

However, their identity has not just been attacked through internalization and brainwashing. Their political status alone has already caused Chamorros to question their identity, as they are American through citizenship, but Chamorro at heart. They belong to America while being excluded from America at the same time [i5 & i7]. Chamorros are simultaneously governed by local and national laws that mirror the complex nature of these two dominant identities that they possess, being Chamorro and American (Cruz, 2015). Moneaka calls this second-class citizenship, which is a very dehumanizing experience [i5]. Moreover, there are Chamorros who also battle with their identity as they have both Indigenous Chamorro and white American genealogy (Taitano Lowe, 2023). Therefore, many Chamorros struggle with their biological Indigeneity, and some fear it has diluted over time due to

colonization (2023). It has also been severely impacted through displacement and cultural disconnection caused by colonization and militarization. The destruction of their land has been extremely violent and traumatizing as it attacks their peoplehood and identity, which is so strongly tied to the land [i5].

The Chamorros' distorted sense of identity caused by colonization has resulted in many mental health problems. The forced displacement, as we now understand their relationship to the land, has been very traumatizing. This intergenerational trauma shows in the high rates of addiction and suicide [i5]. Victoria also explained that she sees many people struggling with mental health issues that are connected to identity [i6]. A study by Smallwood et al. found that there is an “association between experiencing higher levels of racism and subsequent increases in anxiety, mental health issues, poor physical health, depression symptoms, and suicide risk” in young colonized Indigenous societies (2021, p.63). The suicide rate in Guam increased in 2023 compared to 2022 and is significantly higher than the US suicide rate (David, 2023). It is not just high rates of mental health issues, but also of sexual abuse, domestic violence, and rape [i5 &6]. Smallwood et al also found that risky behavior, such as substance abuse, gambling, and violence, can be an impact of trauma caused by colonization (2021). Already, 25.3% of youth in Guam report consuming alcohol, and 30% of adults experience depression (Hernandez, 2025). They also surpass the US average in binge drinking and smoking (cigarettes and marijuana) (2021). Moreover, according to Moneaka, Guam experienced a heroin epidemic during the Vietnam War as well as the largest number of people drafted and deaths per capita [i5]. So these mental health problems are not just surfacing now, but have been felt for a while. Therefore, Guam has suffered an extensive colonial history that has not just resulted in the loss of land and rights, but also the loss of people. Colonization not only affects the people’s land but also the people’s minds.

5.3 Environmental, climate, and health concerns and impacts

Now that we have discussed the ways colonization and militarization have impacted the Chamorro population socially, culturally, and economically, it is important to analyze and answer the second part of the research question, which is the way in which the environment and climate have been impacted by US militarization. This chapter will first discuss the environmental effects on Guam’s water, land, air, and biodiversity, before analyzing how these military activities have impacted the health of Guam’s population. Lastly, this chapter will

evaluate the effects of climate change on Guam through the interviewees' experiences, Guam's PCAP, and the way it is related to colonization and militarization.

5.3.1 Environmental impact

The environmental impact of US militarization will be divided into contamination of water, land, air and noise pollution, and habitat loss.

5.3.1.1 Water

As previously established, the military occupies one-third of Guam's landmass. The two largest military bases are Anderson Air Force Base, located north of the island (above the island's freshwater aquifer), and US Naval Base Guam in the South [i7] (Figure 1). Now, the base on the north has been expanded by the addition of Camp Blaz, the new Marine Base, to accommodate the incoming Marines from Okinawa [i6]. The United States-Japan Roadmap for Realignment also stated the funding necessary "to develop facilities and infrastructure on Guam to enable the III MEF relocation" (U.S. Department of State, 2006), MEF being the Marine Expeditionary Force. The base hosts a live firing range, taking up almost 4,000 acres of land, also constructed for training the Marines (Mar, 2024). As aforementioned, the lead from the bullets could accumulate in the soil and eventually contaminate the aquifer below, which could damage 80% of clean drinking water (2024) [i1 & i7]. That is why, according to Guam's PCAP, the Northern Lens Aquifer is at risk from hotter weather, drought, and population increase (Climate Change Resilience Commission et al., 2024). The US EPA's review of the DEIS, thereby of the proposed relocation, is concerned that the military alignment will result in a water supply shortfall, which will in turn result in long-term impacts, such as saltwater intrusion and a reduction in the overall yield of the aquifer (United States Environmental Protection Agency, 2010). Moreover, the groundwater in the aquifer can also become contaminated by heavy metals and PFAS (toxic 'forever' chemicals) [i4], due to the OB/OD site located above it as well (Mar, 2024). According to Alvarez et al (2021), PFAS (per- and polyfluoroalkyl substances) is suspected or confirmed to have polluted ground and tap water at nearly 700 US military bases. Other harmful substances include RDX, HMX, TNT, perchlorate, and dioxins, which are chemicals that can severely impact people's health (Earthjustice, 2025).

Most interviewees also expressed their concerns about the potential contamination of the aquifer due to military activities. Robert, for example, explained how aviation gas seeps into the waterlands, as the airport is located in the north because it is the flat part of the island

due to the limestone plateau [i4]. Laura also expressed her concern about the waterlands and other filtration systems due to toxic pollution from the firing range and weaponry [i3]. Victoria and Moneaka expressed their concern about ocean contamination due to militarization [i5 & i6]. Victoria explained that they see an increase in the dumping of trash, as people cannot afford collection services, which runs into the ocean [i6]. She was also concerned about what the military was dumping into the ocean [i6]. Moneaka concurs by saying that, because of the continued lack of information, they do not know about all the warcraft that is brought to the island [i5]. The US classifies that information, causing Guam to find out afterward how many explosives have been dropped in the ocean. This will be further discussed in 5.3.2, as this has impacted people's health. They are not crazy to be worried as a huge critique by the EPA of the DOD's DEIS was their inadequate characterization of coral reef impacts (United States Environmental Protection Agency, 2010). They found that the Carrier Vessel Nuclear (CVN) berth in outer Apra Harbor (near Naval Base, Guam) will affect over 71 acres of coral reefs, which is unprecedented (2010). It is known that these nuclear-powered vessels that have docked in Guam at various times between 1975 and 2014 have leaked coolant and radiation into the water (Lei, 2023). Therefore, the coral reefs in Guam's ocean are being affected by these nuclear-powered aircraft vessels. Lastly, the EPA was also concerned about wastewater, as the wastewater treatment plants were operating in non-compliance with the Clean Water Act, and the military realignment would increase sewage spills (2010).

5.3.1.2 Land

Militarization has had an impact on Guam's land, as well, in a multitude of ways. The first is the destruction of land. The most recent construction of Marine base Camp Blaz, including the live firing range (Figure 4), has led to the destruction of 1,000 acres of limestone forest (Mar, 2024) [i6]. Siobhan compared it to the bulldozing of around 100 football fields of limestone forests [i1]. Michael explained that when people drove by it, especially at the beginning of construction, they were appalled by how much jungle had been destroyed [i7]. Figure 5 shows the location of the Marine base in Red, and the already existing locations of the Air Force and Navy in Guam. This figure shows how much land, and where, they have taken up from the Chamorro population. Furthermore, Figure 4 shows how close the firing range is to an archeological site. According to Mar (2024), the firing range poses direct threats to the cultural

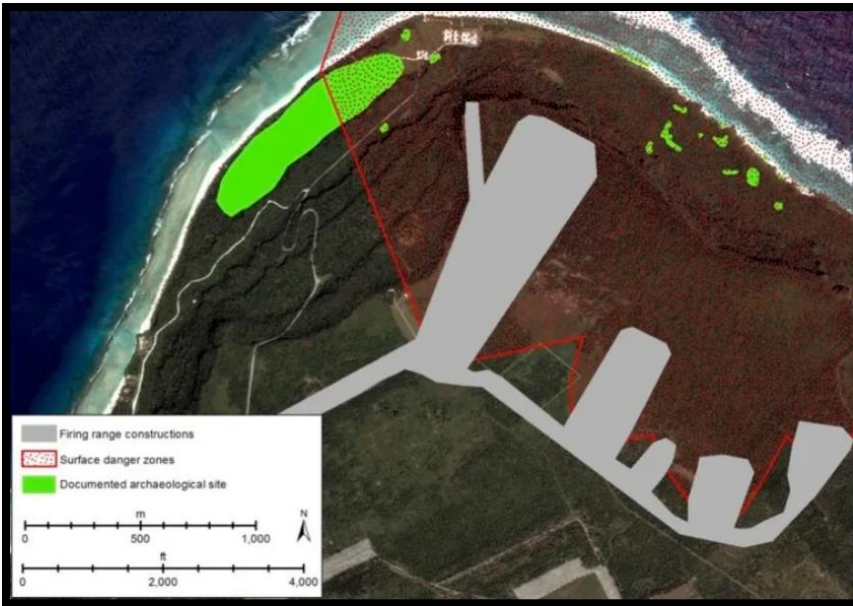


Figure 4. Construction of live firing range, Litekyan, Guam (*Litekyan (Ritidan), Live-Fire Training Range Complex (LFTRC)*, 2017)

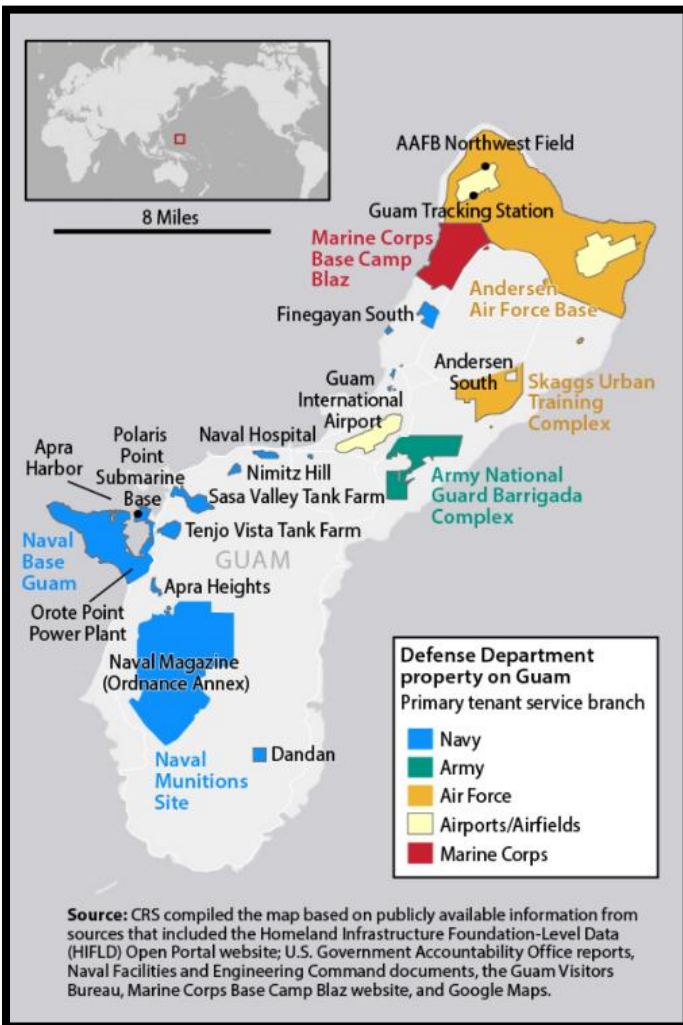


Figure 5. US military installation on Guam (Tilhman, A., & Congressional Research Service, 2023)

heritage of the Chamorro people, potentially affecting at least 20 archeological sites. Therefore, the US military has destroyed a lot of sacred land for military purposes or commercial development [i6].

Recently, the use of Agent Orange was declassified [i5]. According to Lei (2023), the US military utilized Guam to store chemical weapons, including huge amounts of defoliating herbicides Agent Orange and Agent Purple, its forerunner. Agent Orange has been known for its use during the Vietnam War, but now it has surfaced that other areas have been affected as well, as it has been stored in drums on the island of Guam (Natividad & Kirk, 2010). Robert explained that everything grows fast because it is a tropical island [i4]. So you can keep the vegetation down by cutting it or by using herbicides, which is the more affordable option [i4]. Therefore, veterans stationed on the island in the 1960s and 1970s admitted that they sprayed these herbicides to clear the airfields of vegetation (Lei, 2023). Now, they are not sure how much Agent Orange has been used, and the net effects remain unknown [i4]. Agent Orange, however, is not the only contamination buried in Guam's land. In 2017, Guam filed suit against the United States for cost recovery for the cleanup and closure of the Ordot Dump, which is a pre-World War II era landfill (Lei, 2023). The Navy used the landfill during the 1940s to dispose of munitions and toxic waste (including Agent Orange) and continued using it when Guam gained a civilian government in 1950 (2023). The landfill is situated near the Lonfit



Figure 6. Ordot Dump (Brown and Caldwell, 2019).

River, which means that the toxins from the dump discharge into the ocean (2023). The EPA sued Guam in 2002 to force closure of the Ordot Dump due to severe environmental concerns as stated in the Clean Water Act of 1972 (2023). Therefore, the buried contamination in landfills has had an environmental impact on both land and water. The PCAP “aims to reduce the flow of land-based pollutants through restoration of significant soil erosion currently impacting water quality and the marine coastal environment” (Climate Change Resilience Commission et al., 2024). Their project also acknowledges the solid waste emissions from these landfills and is therefore aiming to mitigate them by evaluating Layon Landfill and Ordot Dump (2024). Ordot Dump, unlike Layon Landfill, has a comprehensive landfill gas (LFG) collection system (2024). Ordot Dump has also been declared a Superfund site, along with Anderson AFB due to PFAS [i5], which are contaminated sites that demand cleanups (US EPA, 2024). These are the only two Superfund sites present in Guam, but according to Moneaka, there are many sites of military contamination in Guam [i5].

Victoria grew up on a dump site, which means her family’s property is located on a site where the military buried big drums of waste post-WWII [i6]. In 2008, the area was studied by the Army Corps, and the report showed that they found the presence of contaminants such as lead, arsenic, and PCBs buried in the land [i6]. The contamination was found to be so serious that excavation from the site was recommended [i6]. However, they never cleared all of it due to a lack of funding, which means that there is still buried contamination on-site [i6]. Most contaminated sites on the island have never been cleared. For example, there are still existing contaminated sites from OB/OD, and jet fuel leaks, which the population only heard over a year later [i5]. So not only has the US buried contamination in the soil, sand, and water [i7], they have often classified and kept this information from Guam’s population, even if it impacted them.

5.3.1.3 Habitat Loss

The destruction of land, specifically the limestone forests, and the contamination of water and land have led to habitat loss and endangered species [1]. According to Moneaka, Guam has lost most of its pollinators due to the introduction of invasive species [i5]. One of the invasive species is the brown tree snake, which was accidentally introduced to Guam in the 1940s, as explained in Chapter 2 [i5]. The other example she gave are rhino beetles, as their destructive feeding habits can negatively affect the ecosystem [i5]. Feral pigs are another example of invasive species in Guam that cause devastation to the environment, as they trample, root, and overgraze the land, thereby negatively impacting the soil, vegetation, and water [i3]. This also

jeopardizes food sustainability [i3 & i5]. Lastly, Laura expressed her concern about habitat loss, as Guam will lose a lot of birds and fish due to military contamination [i3]. Therefore, invasive species can affect biodiversity and food sustainability.

5.1.3.4 Air

Lastly, Guam experiences air and noise pollution due to excessive aviation from the US military. Siobhan explained that one of the most noticeable changes from the military build-up is the noise pollution due to an increase in jets [i1]. Byron concurs that there are always helicopters flying around, and even ordinances being fired from the bases [i2]. Siobhan has family living in the North who experience difficulty sleeping, working, and going about their days when it is so deafening to live close to the base [i1]. Victoria said that your time at the beach could be disrupted by a bomber loudly flying above [i6]. Moreover, her family lives in a village that is right in the flight path, causing them to be exposed to constant noise pollution from helicopters, bombers, and military aircraft [i6]. Noise pollution was one of the biggest complaints in Okinawa as well [i1]. The Roadmap for Realignment, therefore, aimed to reduce the burden on local communities in Okinawa (U.S. Department of State, 2006), but, contradictorily, just transferred the burden to the local community of Guam. According to Akhundov, aviation activities contribute significantly to noise pollution while simultaneously raising concern for wildlife (2024). Military aircraft noise impacts wildlife in diverse ways. They can occur in both acute and chronic forms, thereby causing lasting, and sometimes lethal, harm (2024). Guam's PCAP, therefore, aims to improve air quality by mitigating emissions in Guam (Climate Change Resilience Commission et al., 2024).

5.3.2 Health concerns

Now that we have discussed the environmental impact of US militarization on Guam, we can examine how all the contamination and pollution have affected the local population's health. The "Bravo" hydrogen bomb test in Bikini Atoll, the Marshall Islands, was the first hydrogen bomb tested by the US in 1954 (Natividad & Kirk, 2010; Steinmetz, 2005). The radiation from this explosion left the Atoll uninhabitable to its Indigenous population (Steinmetz), but the nuclear radiation has also affected Guam. During this time, Guam's Cocos Lagoon was used to wash down contaminated ships from the Marshall Islands (Natividad & Kirk). Guam's population also became exposed to nuclear radiation from the detonation, and the exposure to nuclear radiation has long-lasting health effects. Laura argued that the Bikini Atoll bombing caused all kinds of cancers in the Pacific [i3]. Moneaka again stresses that this nuclear fallout

was classified and withheld from Guam for a long time [i5]. Moreover, the buried contamination of toxic elements in the land has also caused physical health problems. An example of toxic hazards being introduced to Guam's environment by the US military is that solvent trichloroethylene was detected in Guam's drinking water supply at Anderson AFB in 1978 (Lei, 2023). The contamination was linked to the many abandoned dump sites present at the base or through the disposal of hazardous waste into the drainage system (2023). Tests showed that the TCE levels were up to six times the EPA's guideline (2023). TCE is carcinogenic and associated with excess incidences of liver cancer, kidney cancer, and non-Hodgkin lymphoma (2023). That is why Anderson AFB was added to the EPA's Superfund list in 1992, just like the Ordot Dump (2023). The EPA's review of the DEIS further argued that the military build-up will increase raw sewage spills and human exposure to pathogens through drinking water, ocean recreation, and shellfish consumption, which will affect public health (United States Environmental Protection Agency, 2010).

It was stressed during the interviews that Guam has high rates of cancer [i3 & i6] and increased numbers of babies being born with deformities [i3]. According to Victoria, Guam's leading cause of death is noncommunicable diseases, including cancer, and the cancer rates are highest near the bases [i6]. One person is diagnosed with cancer in Guam every day based on an age-adjusted rate for every 100,000 people, and one person dies of cancer every 2-3 days (Pacific Island News, 2022). Cancer remains, therefore, the second-highest cause of death next to cardiovascular diseases (2022), which are both noncommunicable. There has been increasingly more research conducted on the relationship between militarization and human health to better understand why these numbers are so high. A study by Broomandi et al found that human exposure to toxic elements can lead to detrimental effects, such as damage to vital organs, like the liver and kidneys (2020). For decades, military areas have remained widely contaminated with toxic compounds "containing harmful substances including but not limited to antimony (Sb), lead (Pb), uranium (U), 2, 4-dinitrotoluene (DNT), 2, 4, 6-trinitrotoluene (TNT), 1, 3, 5-trinitro-1, 3, 5-triazacyclohexane (RDX)" (2020, p.2). These compounds are most often not biodegradable and remain in the biosphere to continue harming humans and the environment (2020). It is no wonder that Guam's cancer rates and birth defects are increasingly high, as the presence of lead, Arsenic, PCBs, and TCE all cause this (Schettler, 1995). Lead is associated with stillbirth, preterm delivery, and low birth weight; TCE is associated with cardiac abnormalities, eye, ear, and oral clefts; and PCBs are associated with preterm delivery, low birth weight, reduced head circumference, and growth deficiencies (1995). In Victoria's

words: “It’s a slow death” [i6]. A slow death caused by US militarization as a consequence of colonization and territorial imperialism.

5.3.3 Climate Change

As this thesis is grounded in the theory of climate coloniality, it is important to examine the effects of climate change in Guam. One of the immediate effects of climate change is coral reef bleaching. As aforementioned, the corals are being affected by nuclear-powered vessels, but they will also experience bleaching due to increased heat stress (Zyzanska et al., 2023). According to Zyzanska et al., Guam already experienced a long-term bleaching event caused by increased heat stress between 2013 and 2017, which led to the bleaching of over a third of Guam’s shallow corals (2023) [i7]. Robert explained how the heat of the water is killing off coral, as coral needs a narrow temperature band to survive [i4]. So when the temperature rises due to climate change, certain species of coral will not survive [i4]. The ocean is dependent on having a healthy coral reef system, especially in the tropical zone [i4], which means that coral bleaching can massively upset oceanic ecosystems. Moreover, Guam’s PCAP predicts that an increased frequency of coral bleaching will impact Guam’s ecosystems (Climate Change Resilience Commission et al., 2024). Rising temperatures as a result of climate change can, therefore, heavily impact the ecosystems of tropical islands.

The disruption of ecosystems has led to the disruption of fish migration. According to Robert, they have noticed a change in the migration of fish over time, especially since the coral reefs have been impacted [i4]. Victoria also explains that a lot has changed, also as a consequence of tourism, which has disrupted the natural ways that fish migrate around the island [i6]. Overfishing has been another related problem, which has impacted the supply of fish [i6]. Laura also said that there were fewer fish due to rising temperatures [i3]. Therefore, according to Guam’s PCAP, “fisheries are at risk of a decline which supports the subsistence and dietary needs for many communities” (Climate Change Resilience Commission et al., 2024, p.9). As now established, Chamorro communities have a subsistence culture focused on fishing, so this impacts Chamorro culture and life as well.

As the temperatures are rising due to climate change, vulnerable populations will be affected (Zyzanska et al., 2023). This is because these populations will be exposed to increased extreme heat days, causing increased risk and harm to children, the elderly, and outdoor laborers (2023). Rising temperatures also cause weather changes. Guam already experiences a rainy and dry season, however, both will experience extreme changes. Guam will experience more drought and a decrease of 12% in rainfall during the rainy season in the next 50 years

(2023). A decrease in rainfall does not mean, however, a decrease in extreme rainfall. According to Zyzanska et al (2023), Guam is expected to experience a high frequency of extreme rainfall that can result in increased runoff, flooding, and erosion. An increase in extreme heat, drought, and flooding has been mentioned by the interviewees as well. Robert found that it was much hotter now than when he was younger [i4], and Michael found that the water temperature is rising. Byron explained that Guam is already experiencing more weeks of dry spells, which can cause issues of grass fires [i2]. Victoria explained that she sees more flooding during the rainy season than before and that the ocean is coming closer [i6]. However, it is not that extreme that it is flooding entire villages yet [i6]. According to the PCAP, the intensity and frequency such as flash flooding, drought, and wildfire could affect people's health and safety (Climate Change Resilience Commission et al., 2024).

As Guam is located in Typhoon Alley, the intensity and frequency of typhoons are also expected to change due to climate change. However, the interviewees did not agree on the way and degree it will change. According to Guam's PCAP, "stronger typhoons and storms will increase the potential for damage to infrastructure" (Climate Change Resilience Commission et al., 2024, p.10). This quote suggests that Guam will experience an increase in storms, which is agreed upon by Zyzanska et al (2023). They state that, as Guam lies in the most active



Figure 7. Destruction after Typhoon Mawar, Guam, 2023 (Aguon, 2023).

regions for tropical cyclones in the world, it is only expected to increase in severity and frequency due to climate change (2023). Most interviewees said that they are experiencing an increased intensity of typhoons [i1, i2, i3, i5]. According to Siobhan, the intensity and frequency of typhoons have increased compared to when she was young [i1]. Moreover, she argued that Guam gets more typhoons now than 20-30 years ago [i1]. Guam experienced a super typhoon just 2 years ago, namely Typhoon Mawar in 2023 [i1 & i2]. This happened less than 25 years after super typhoon Pongsona in 2002 [i2 & i6], and such destructive storms are labeled as 50-year storms [i2]. Therefore, according to Byron, Guam experiences another super typhoon in half the expected time, and he expects the magnitude of the disasters to increase [i2]. Victoria presents a contrary opinion as she explains that Guam historically experienced many typhoons, and then it stopped for 20 years until Typhoon Mawar [i6]. This meant the community was not as prepared (Figure 7) and found that she had not really seen an increase in typhoons [i6]. Robert agrees that tropical disturbances will come to a bigger point of magnitude, but he argues that it has been advantageous for Guam as they are experiencing less destructive storms [i4]. Michael has the most nuanced view on how climate change will impact typhoons in Guam [i7]. He explained that Guam had not experienced super typhoons for decades until 2023, but that meteorologists are anticipating more storms due to climate change [i7]. Apparently, Typhoons in Guam are experienced very differently, which I think is partly due to age, as some have experienced more typhoons than others. However, a conclusion that can be drawn from this is that the Pacific is anticipating an increase in typhoons, and whether Guam will become a victim of this remains to be seen.

The last effect of climate change is rising sea levels, which will not impact Guam as drastically as low-lying atolls in the Pacific. For Guam, as a high volcanic island, sea-level rise can lead to coastal flooding, erosion, and saltwater intrusion into coastal aquifers (Zyzanska et al., 2023). This will mainly harm those living along Guam's coast, which is about 9,000 people, as it can harm infrastructures and freshwater sources (2023). Moreover, the island is expected to experience an increased number of high-water days, leading to the erosion of buildings, roads, piers, and vegetation that local communities rely on (2023). Guam's PCAP agrees with this anticipated impact of sea-level rise, adding that it will impact cultural and historical resources along the coast (Climate Change Resilience Commission et al., 2024). Laura and Robert, however, both raised their concern for other low-lying islands in the Pacific that face the prospect of being wiped out by the rising sea levels [i3 & i4]. The disappearance of Guam is, thus, not anticipated, but all these effects of climate change are undoubtedly affecting Guam and its quality of life, and are only expected to worsen in the upcoming years.

The results show that Guam, but mainly its Chamorro population, has and is disproportionately burdened by climate change, as the ecological breakdown is caused by the US military, but it is the Chamorro population that is getting sick and experiencing a loss of connection to their land and culture. The aforementioned climate change effects are mainly caused by the Global North in general, but the US militarization, who is part of the Global North, is worsening the ecological breakdown of the island via militarization and colonization. Guam is, unfortunately, politically dependent on the US to tackle and mitigate these environmental problems. The US is a culprit to Guam's population which is increasingly getting affected by environmental problems, which result in health problems, that they did not even cause themselves. The US seems to completely disregard the Chamorro body and Guam's natural environment. Even worse, the Chamorro are subsequently dependent on the US to mitigate the effects of climate change and to compensate them for exposure to radiation. It is, therefore, critical to confront the global systems of climate coloniality that perpetuate and exacerbate impacts and suffering (Sultana, 2024), and imperative for Guam to decolonize.

6. Conclusion

This research aimed to investigate how US militarization affected Guam's environment and the Indigenous Chamorro population, as it is an unincorporated territory of the US. Guam is an island that has endured hundreds of years of colonization, with the last 127 years living under US jurisdiction. This has meant that the Chamorro population was subjected to 52 years of Naval rule and, since the Organic Act of Guam of 1950, has been living in a state of territorial limbo. One thing that remained unchanged is the continued militarization and US colonization since 1898. This has led to environmental destruction and cultural erasure. Moreover, Guam is vulnerable to climate change, being a Pacific island in Typhoon Alley, and these climate change effects are only being worsened by the US militarization of the island. Therefore, this research chose Guam as a case study to examine how climate coloniality and militarization are related and experienced by Indigenous communities. This research was successful in investigating all the ways that US colonization and militarization have impacted the people and environment of Guam.

The theoretical framework explained all the relevant theories and concepts that apply to the case of Guam, which impact Indigenous communities globally. By focusing on just one territory, this thesis was able to delve into all the ways a population can be affected by colonization, imperialism, and militarization. In the case of Guam, their lack of sovereignty severely impacted their lives, as they continue to be withheld from the decision-making process. Therefore, the decisions being made by the US, which are outside the population's control, are not beneficial and often destructive to the local community. They experience their lack of sovereignty by not being informed about important plans and not being able to consent or refuse. Sovereign nations do have these abilities. This makes Guam an easy target for US military power and expansion.

From the results, it became apparent that the Chamorro population has been impacted severely on a socio-cultural and economic level. I wanted to explain Chamorro culture, as it was explained to me by the interviewees, to prove how colonization erases and disrupts so much of what is intrinsic to Indigenous cultures. Chamorro culture proved to be a collectivist culture of caretaking, of both people and land, respect, an ethos of reciprocity, and subsistence. Their culture is, therefore, contrary to the US, which values individualism, materiality, and consumerism that are central to capitalism. This becomes apparent in the way the US, specifically the military, has treated the environment. The extraction of Guam's land for military purposes and commercial development meant the loss of ancestral lands for the

Chamorros. The Chamorros have a strong tie to their land, so the alienation from their land has resulted in a disruption of cultural practices. It has disrupted their subsistence culture of fishing, farming, hunting, and weaving, and disrupted their connection to their ancestors by destroying ancestral limestone forests and jungles.

Moreover, the Americanization of Guam has obligated Chamorros to conform to a cultural shift. They became subject to an American education system, thereby learning more about a country across the Pacific than their own in the Pacific. It has led to a decrease in Chamorro speakers as English has become a central language in politics and education. The island has also endured economic impacts. They have experienced an increase in prices, largely due to the Jones Act, which has made Guam reliant on foreign import, even though they have always been able to be self-sufficient before American subjugation. The impact of colonization and militarization has also been felt in the housing crisis, where housing has become unaffordable for the local population, whereas the military gets an allowance to live off-base among Guam's local population. All these effects have led to a lot of outmigration of Chamorros to the mainland, as it is one of the only advantages of US citizenship that could allow for upward social mobility. Lastly, US colonization has had a tremendous impact on the Chamorros' sense of identity and mental health. It makes them question who they identify with, Americans or Chamorros. That colonization has impacted them socially is extremely apparent in the high rates of mental health issues, like suicide, depression, and trauma. Chamorros are thereby experiencing both colonization of land and the mind.

US militarization has affected the environment in extreme ways as well. One of the biggest risks of militarization remains the potential contamination of Guam's sole freshwater aquifer due to the live firing range and OB/OD located above it. The lead could seep into the ground and contaminate 90% of drinking water. The island also has many buried contamination sites, most notably Anderson AFB and Ordot Dump, which are both Superfund sites. The buried contamination, leftover from the fifties, contains toxic materials that result in forced removal from the land and health problems for the local population. Guam's habitat has also been disrupted due to militarization and colonization. There are invasive species that cause damage to the environment and vegetation, but contamination from the military also causes the loss of species and biodiversity. Climate change is worsening the damage already done to Guam's environment as its effects include coral reef bleaching, the disruption of fish (migration), rising temperatures and sea levels, an increase in typhoons, flooding, and drought. Most of the aforementioned effects and impacts of US colonization and militarization would not have happened if Guam were a sovereign nation. Worst of all, the local population is getting

sick from decades of militarization and exposure to (nuclear) radiation, while not being able to prevent it from happening and getting compensated for it.

That is why pathways for decolonization are necessary to achieve climate justice and self-determination for Guam. As aforementioned, the Chamorros are showing decolonization efforts through cultural and language revitalization, as cultural continuity is a great form of self-determination. Moreover, Chamorros are looking to develop a future that privileges their own epistemologies, instead of returning to a precolonial past (Delgado, 2022). Moneaka Flores, who works for the direct action group Prutehi Guåhan, told me that one of the ways they show resistance is by connecting global issues of militarization to their struggles in Guam to nurture international solidarity [i5]. Moreover, they show solidarity with Palestine, as she argued that the genocide in Palestine is connected to Guam [i5]. This is because of the language used by Trump that he is going to build a Golden Dome for the Pacific, just like the Iron Dome in Israel [i5]. These are all forms of solidarity and collectivity, which are not just a means to achieve self-determination, but also pathways for decolonizing climate (Sultana, 2024). As Sultana argues, it is not just about recognizing the problems of climate coloniality, but working towards distributive justice, reparations, and restitution to achieve self-determination and climate justice (2024). Guam, therefore, needs to become sovereign first to then restructure its relationships to the ecology, ocean, land, and community that they are so connected to. This is how Sultana (2024) argues climate justice can be achieved on a global scale, as this needs to happen in solidarity with all vulnerable communities. In the current geopolitical climate, it becomes even more important for Guam to decolonize as they remain vulnerable to becoming a victim by being America's 'tip of the spear.' They only play a role in the geopolitical theatre by being of enormous military value to the US. Therefore, self-determination would mean freedom from US control and fear of becoming a military target in future conflicts.

6.1 Recommendations for further research

While my research has found a broad array of effects felt by the Chamorro population and their environment as a result of US militarization and colonization, there are still some gaps that could be expanded upon for future research. Firstly, future research should aim to interview the local population of Guam, which this research was not able to reach due to the absence of fieldwork. It became clear through the literature review and the expert interviews that there is a big group within the local Chamorro population who view the US and militarization very differently than the experts and activists do. For them, militarization and colonization have

become normalized. Therefore, it would be interesting to study their experiences, which could bring more depth and dimension to the socio-cultural impact.

What could have also brought more dimension to the results of this research is the view of the other side, i.e, the US military on Guam. Even though I have tried to reach out, this research was not successful in interviewing the colonizer, but only the colonized. It was not necessary in answering the research question, but it would have been valuable to know how the US military, or even the higher political powers, view Guam and the Chamorro population. It could bring more depth and understanding to this colonial relationship. This could answer questions such as: Why Guam? Why does Guam have such a strategic value to the US? Does the military want to be in Guam (being further away from potential conflict)? How do they view the Chamorro population?

Moreover, while Guam is an extreme case due to its colonial status, it is not that extreme regarding climate change. This is not to downplay the climate change effects already felt on the island, but since this research aimed to focus on one case to prove how climate change and colonialism are related concepts, it would be interesting to focus on another Pacific island that is a low-atoll. Many interviewees mentioned they were more worried about their neighboring low-lying atolls in the Pacific who fear being flooded due to climate change. Guam is a high volcanic island, and while experiencing many effects of climate change, it is not facing such extreme risks in the future. Most extreme environmental impacts are caused by militarization and are not always related to climate change. Therefore, future research could focus on a Pacific low-lying island to showcase the global problem of climate coloniality. Moreover, the more research being conducted on marginalized communities globally that are disproportionately burdened by climate change, the more likely that colonialism's role in this will be exposed to the world. Guam and its Chamorro population are just one case of many.

Lastly, I would like to recommend other academic fields of study to research Guam. For example, a psychology study on the Chamorro population would be interesting to learn more about the relationship between mental health and colonialism. Most of these studies have focused on the Indigenous populations in America and Canada, or traumatized survivors of World War II. Therefore, it has not exactly been studied how the mental health of Indigenous communities that have been both colonized and militarized have been affected. This is important as Guam has high rates of suicide and depression, so it is important to understand why and bring more awareness to this problem, as I am sure the same is true for many Indigenous and militarized communities globally. I have been able to bring some understanding to this phenomenon, but as this thesis is written from human geography, it deserves more in-

depth research from psychology. Guam would also be a case of interest to environmental science, political science, and economics to expand on the already existing literature.

References

- Adams, M. (2021). Indigenizing the Anthropocene? Specifying and situating multi-species encounters. *International Journal of Sociology and Social Policy*, 41(3-4), 282–297. <https://doi.org/10.1108/IJSSP-04-2019-0084>
- Aguon, J. (2023, June 14). *Hope Is a Ghost Island: Guam After Typhoon Mawar* / *The Nation*. The Nation. <https://www.thenation.com/article/environment/guam-mawar-hope/>
- Akhundov, R. G. (2024) THE ENVIRONMENTAL IMPACT OF MILITARY ACTIVITIES. *Vestnik*, 29(01).
- Alexander, R. (2015). Living with the fence: militarization and military spaces on Guahan/Guam. *Gender, Place & Culture*, 23(6), 869–882. <https://doi.org/10.1080/0966369X.2015.1073697>
- Alhojailan, M. I. (2012, October). Thematic analysis: a critical review of its process and evaluation. In *WEI international European academic conference proceedings, Zagreb, Croatia*.
- Allen, N. E., Walden, A. L., Dworkin, E. R., & Javdani, S. (2016). Mixed Methodology in Multilevel, Multisetting Inquiry. In L. A. Jason & D. S. Glenwick (Eds.), *Handbook of Methodological Approaches to Community-Based Research: Qualitative, Quantitative, and Mixed Methods* (pp. 335). Oxford University Press
- Alvarez, C. H., Theis, N. G., & Shtob, D. A. (2021). Military as an institution and militarization as a process: Theorizing the US military and environmental justice. *Environmental Justice*, 14(6), 426-434.
- Babauta, L. (2024, 28 juni). Sumai (Sumay) - Guampedia. *Guampedia - The Online Resource About Guam*. <https://www.guampedia.com/sumay-2/>
- Bello, W. (1998). US imperialism in the Asia-Pacific. *Peace review*, 10(3), 367-373.
- Bevacqua, M. L., & Cruz, M. L. (2020). The banality of American Empire: The curious case of Guam, USA. *Journal of Transnational American Studies*, 11(1), 127-149.
- Bogner, A., Littig, B., & Menz, W. (2009). Introduction: Expert interviews—An introduction to a new methodological debate. In *Interviewing experts* (pp. 1-13). London: Palgrave Macmillan UK.
- Broomandi, P., Guney, M., Kim, J. R., & Karaca, F. (2020). Soil contamination in areas impacted by military activities: a critical review. *Sustainability*, 12(21), 9002.
- Brown and Caldwell. (2019, November 25). *Ordot Landfill Closure - Brown and Caldwell*.

- <https://brownandcaldwell.com/project/ordot-landfill-closure/>
- Bureau of Statistics and Plans (2010). Chamorro Population of the United States. *Government of Guam*, https://bsp.guam.gov/wp-bsp-content/uploads/2016/10/ChamPopUS_20101.pdf
- Calvo, E. B. (2018, August 16). *A VETERAN A VOTE: An open letter to the nation from the Governor of Guam - Governor of Guam*. Governor Of Guam - Office Of The Governor. https://governor.guam.gov/press_release/a-veteran-a-vote-an-open-letter-to-the-nation-from-the-governor-of-guam/#:~:text=Guam%20has%20the%20highest%20per,in%20the%20U.S.%20Armed%20Forces
- Chakrabarty, D. (2017). The politics of climate change is more than the politics of capitalism. *Theory, Culture & Society*, 34(2-3), 25-37.
- “Climate change impacts.” (2024). *National Oceanic And Atmospheric Administration*, www.noaa.gov/education/resource-collections/climate/climate-change-impacts.
- Climate Change Resilience Commission, University of Guam Center for Island Sustainability and Sea Grant, National Renewable Energy Laboratory, Office Of The Governor Of Guam, Guam State Clearinghouse, Guam Department Of Administration, Guam Department Of Agriculture Forestry Division, Guam Power Authority, Guam Waterworks Authority, Guam Solid Waste Authority, Guam Environmental Protection Agency, Pacific Island Climate Adaptation Science Center, Guam Green Growth, UOG Western Pacific Tropical Research Center, UOG College of Natural and Applied Sciences, Guam Coral Reef Initiative, Northern Guam Soil and Water Conservation District, Guam Bureau of Statistics and Plans, Guam Department of Public Works, & Guam Regional Transit Authority. (2024). *Guam’s Priority Climate Action Plan*. United States Environmental protection Agency. <https://www.epa.gov/system/files/documents/2024-04/guam-pcap.pdf>
- Commission on Decolonization. (2021). *Guam: A territory Like No Other*.
- Copernicus. (2025). “Copernicus: 2024 is the first year to exceed 1.5°C above pre-industrial level”. *Copernicus*, copernicus.eu/copernicus-2024-first-year-exceed-15degc-above-pre-industrial-level#:~:text=2024%20is%20the%20first%20calendar,11%20months%20of%20the%20year.
- Cousin, G. (2005). Case Study Research. *Journal of Geography in Higher Education*, 29(3), 421–427. <https://doi.org/10.1080/03098260500290967>

- Crook, M., Short, D., & South, N. (2018). Ecocide, genocide, capitalism and colonialism: Consequences for indigenous peoples and glocal ecosystems environments. *Theoretical Criminology*, 22(3), 298-317.
- CRS Reports. (2019). *U.S. Military Presence on Okinawa and Realignment to Guam*. <https://crsreports.congress.gov>
- Cruz, M. T. F. (2015). Identity and Self-determination in Guam: A Chamorro Homeland-An American Colony. *Micronesian Educator*, 22, 79-99.
- Dardani, R. (2024). Popular Constitutionalism in the US Empire: The Legal History of US Citizenship in Guam. *Law & Social Inquiry*, 49(2), 1082-1106.
- David, A. M. (2023). Suicide in Guam, 2023. In *Guam State Epidemiological Outcomes Workgroup (SEOW)*.
- Davis, J., Moulton, A. A., Van Sant, L., and B. Williams, B. (2019). Anthropocene, capitalocene, ... plantationo- cene? A manifesto for ecological justice in an age of global crisis. *Geography Compass*, 13(5), 1-15.
- Delgado, F. (2022). Remade: Sovereign: Decolonizing Guam in the age of environmental anxiety. *Memory Studies*, 15(4), 682-694.
- Defense Travel Management Office. (n.d.). *Overseas Housing Allowance | OHA | Defense Travel Management Office*. <https://www.travel.dod.mil/Allowances/Overseas-Housing-Allowance/>
- Dorninger, C., Hornborg, A., Abson, D. J., Von Wehrden, H., Schaffartzik, A., Giljum, S., ... & Wieland, H. (2021). Global patterns of ecologically unequal exchange: Implications for sustainability in the 21st century. *Ecological economics*, 179, 106824, 1-14.
- Dunlap, R. E. (2013). Climate Change Skepticism and Denial: An Introduction. *American Behavioral Scientist*, 57(6), 691-698. <https://doi.org/10.1177/0002764213477097> (Original work published 2013)
- Earthjustice. (2025, February 24). *Federal Court Green Lights CHamoru Lawsuit to Protect Ancestral Lands, Guam Beach from Air Force's Open Detonation of Bombs - Earthjustice*. <https://earthjustice.org/press/2025/federal-court-green-lights-chamoru-lawsuit-to-protect-ancestral-lands-guam-beach-from-air-forces-open-detonation-of-bombs>
- Eldridge, R. D. (2007). The " Roadmap" to Nowhere: Explaining the. *国際公共政策研究*, 11(2), 39-56. https://ir.library.osaka-u.ac.jp/repo/ouka/all/8750/20-4_n.pdf

- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry*, 12(2), 219-245.
- Gravier, M. (2015). Imperial Governance: Governing Inwards or Outwards? *Geopolitics*, 20(4), 814–835. <https://doi.org/10.1080/14650045.2015.1065485>
- Greco, J. (2024, September). *What Is the Jones Act? The benefits and limitations of the 1920 Merchant Marine Act*. U.S. Naval Institute. <https://www.usni.org/magazines/proceedings/2024/september/what-jones-act>
- Guam | Statistics for Development Division. (n.d.). <https://sdd.spc.int/gu>
- Harvey, D. (2005). From globalization to the new imperialism. *Critical globalization studies*, 91, 100.
- Hattori, A. P. (1995). Righting civil wrongs: The Guam Congress walkout of 1949.
- Hernandez, J. (2025, March 14). ‘Addiction is a disease’: Guam launches National Drug and Alcohol Facts week. Pacific Daily News. https://www.guampdn.com/news/addiction-is-a-disease-guam-launches-national-drug-and-alcohol-facts-week/article_7b682886-fe28-11ef-894f-ef2ebfcf525e.html
- Hesse-Biber, S. (2010). Qualitative approaches to mixed methods practice. *Qualitative Inquiry*, 16(6), 455–468. <https://doi.org/10.1177/1077800410364611>
- Hickel, J., Dorninger, C., Wieland, H., & Suwandi, I. (2022). Imperialist appropriation in the world economy: Drain from the global South through unequal exchange, 1990–2015. *Global environmental change*, 73, 1-13.
- Hunter-Anderson, R.L. (2025, April 14). Latte - Guampedia. *Guampedia - The Online Resource About Guam*. <https://www.guampedia.com/latte/>
- Karppinen, K., & Moe, H. (2012). What we talk about when we talk about document analysis. *Trends in communication policy research: New theories, methods and subjects*, 177-193.
- Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical teacher*, 42(8), 846–854. <https://doi.org/10.1080/0142159X.2020.1755030>
- Kyodo News. (2024, December 14). U.S. Marines in Okinawa start moving to Guam, over 10 yrs after accord. *Kyodo News+*. <https://english.kyodonews.net/news/2024/12/877f1b933728-update1-us-marines-transfer-to-guam-from-okinawa-starts-us-military.html>
- Lei, S. (2023). Pacific Islands and the US Military: The Legal Borderlands of the

- Environmental Movement. *Seattle UL Rev.*, 47, 1547.
- Litekyan (Ritidan), Live-Fire Training Range Complex (LFTRC)*. (2017, 23 August).
Speaker Therese M. Terlaje. <https://senatorterlaje.com/litekyan-ritidan-live-fire-training-range-complex-lftrc/>
- Louie, M. R. (2021). Colonialism and the Politics of Space on Guam. *UC Merced Undergraduate Research Journal*, 13(1).
- Magallona, M. M. (2000). The treaty of paris of 10 december 1898: history and morality in international law. *Philippine Law Journal*, 75(2), 159-171.
- Mamdani, M. (2015). Settler colonialism: Then and now. *Critical inquiry*, 41(3), 596-614.
- Mar, S. (2024, May 31). Indigenous People of Guam Are Fighting US Militarism and Environmental Ruin. *Truthout*, truthout.org/articles/indigenous-people-of-guam-are-fighting-us-militarism-and-environmental-ruin.
- Marler, T. E. (2013). The intersection of a military culture and indigenous peoples in conservation issues. *communicative & integrative Biology*, 6(6), 207-8.
- Marler, T. E., & Moore, A. (2011). Military threats to terrestrial resources not restricted to wartime: a case study from Guam. *Journal of Environmental Science and Engineering*, 5(9), 1198-1214
- Mercer, H., & Simpson, T. (2023). Imperialism, colonialism, and climate change science. *Wiley Interdisciplinary Reviews: Climate Change*, 14(6), e851, 1-17.
<https://doi.org/10.1002/wcc.851>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: A sourcebook of new methods* (2nd ed.). Thousand Oaks, CA: Sage. Retrieved from <https://vivauniversity.wordpress.com/wp-content/uploads/2013/11/milesandhuberman1994.pdf>
- Montón-Subías, S., & Boyd, D. (2021). Margins are central: identity and indigenous resistance to colonial globalization in Guam. *World Archaeology*, 53(3), 419–434. <https://doi-org.ru.idm.oclc.org/10.1080/00438243.2021.1999851>
- Moore, J. W. (2017). The Capitalocene, Part I: on the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, 44(3), 594–630.
<https://doi.org/10.1080/03066150.2016.1235036>
- Morgan, H. (2022). Conducting a qualitative document analysis. *The qualitative report*, 27(1), 64-77.
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of

- Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22.
<https://doi.org/10.1177/16094069231205789> (Original work published 2023)
- Natividad, L., & Kirk, G. (2010). Fortress Guam: resistance to US military mega-buildup. *The Asia-Pacific Journal*, 8(19), 1-17.
- Non-Self-Governing Territories / the United Nations and Decolonization*. (n.d.)
www.un.org/dppa/decolonization/nsgt.
- Pacific Island News. (2022, December 29). One person is diagnosed with cancer every day in Guam. *pactimes*. <https://www.pacificislandtimes.com/post/one-person-is-diagnosed-with-cancer-every-day-in-guam>
- Pöllath, M. (2018). Revisiting island decolonization: The pursuit of self-government in Pacific island polities under US hegemony." *Island Studies Journal*, 13(1), 235-250.
- Peters, K. (2017). Selecting your methods: how to make the right choices. In *Your Human Geography Dissertation: Designing, Doing, Delivering* (pp. 144-160). Sage Publications Ltd, <https://doi.org/10.4135/9781529714869>
- Reibold, K. (2023). Settler colonialism, decolonization, and climate change. *Journal of Applied Philosophy*, 40(4), 624-641.
- Robinson, W. I. (2006). Beyond the theory of imperialism: Global capitalism and the transnational state. *Societies Without Borders*, 2, 5-26.
- Rowe, J. C. (2004). Culture, US imperialism, and globalization. *American Literary History*, 16(4), 575-595.
- Ruslin, Mashuri, S., Sarib Abdul Rasak, M, Alhabsyi, F. & Syam, H. (2022). Semi-structured Interview: A Methodological Reflection on the Development of a Qualitative Research Instrument in Educational Studies. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 12(1), Ser. V, 22-29. <https://doi.org/10.9790/7388-1201052229>
- Sablan, J. (2024, December 29). *Point-in-Time count data shows Guam's homeless increased from 1,075 to 1,249*. Pacific Daily News. https://www.guampdn.com/news/point-in-time-count-data-shows-guams-homeless-increased-from-1-075-to-1-249/article_23d8b3de-c4ca-11ef-9c11-538e30f0762e.html
- Schettler, T. H. (1995). Reverberations of militarism: Toxic contamination, the environment, and health. *Med. Glob. Surv*, 2, 7-18.
- Smallwood, R., Woods, C., Power, T., & Usher, K. (2021). Understanding the impact of

- historical trauma due to colonization on the health and well-being of indigenous young peoples: a systematic scoping review. *Journal of Transcultural Nursing*, 32(1), 59-68.
- Steinmetz, G. (2005). Return to empire: The new US imperialism in comparative historical perspective. *Sociological Theory*, 23(4), 339-367.
- Sultana, F. (2022). The Unbearable Heaviness of Climate Coloniality. *Political Geography*, 99(102638), <https://doi.org/10.1016/j.polgeo.2022.102638>. Accessed 17 Oct. 2024.
- Sultana, F. (2024). Urgency, Complexities, and Strategies to Confront Climate Coloniality and Decolonize Pathways for Climate Justice. In F. Sultana (Ed.), *Confronting climate coloniality: Decolonizing pathways for climate justice*. Taylor & Francis.
- Taitano Lowe, A. (2023). Rhetorical Dance of Belonging: Chamaole Narratives of Race, Indigeneity, and Identity from Guam. *Journal of Critical Mixed Race Studies*, 2(1), 93-117
- Tilghman, A. & Congressional Research Service. (2023). *Guam: Defense Infrastructure and Readiness* (report Nr. R47643). <https://crsreports.congress.gov>
- Treaty of Paris between the United States of America and the Kingdom of Spain, December 10, 1898, <https://history.state.gov/historicaldocuments/frus1898/d712a>
- United Nations. (n.d.). What is climate change? *United Nations*, www.un.org/en/climatechange/what-is-climate-change#:~:text=Climate%20change%20refers%20to%20long,activity%20or%20large%20volcanic%20eruptions.
- United States Congress. (1950). Organic Act of Guam. In *Chapter 512 Of The 81st Congress* (pp. 1–19) [Legal]. <https://www.govinfo.gov/app/collection/comps/>
- United States Environmental Protection Agency. (2010). *EPA comments on the Draft Environmental Impact Statement (DEIS) for the Guam and CNMI Military Relocation, November 2009*.
- US Census Bureau. (2022, October 21). *2020 Island Areas Censuses Data on Demographic, Social, Economic and Housing Characteristics Now Available for Guam*. Census.gov. <https://www.census.gov/newsroom/press-releases/2022/2020-island-areas-guam.html>
- US Census Bureau. (2023, July 26). *Census Bureau Releases 2020 Census Demographic and Housing Characteristics Summary File for Guam*. Census.gov. <https://www.census.gov/newsroom/press-releases/2023/2020-dhc-summary-file-guam.html>
- U.S. Code Annotated. (2004b). The ORGANIC ACT OF GUAM AND RELATED

- FEDERAL LAWS AFFECTING THE GOVERNMENTAL STRUCTURE OF GUAM. In *Title 48 U.S. Code Annotated*. <https://guamlegislature.gov/wp-content/uploads/2025/01/Organic-Act.pdf>
- U.S. Department of State. (2006, May). *United States-Japan Roadmap For Realignment implementation*, https://bsp.guam.gov/wp-bsp-content/uploads/govarchie/G01-60.166%202006%20May%201_United%20States-Japan%20Roadmap%20for%20Realignment%20Implementation.pdf
- US EPA. (2024, October 8). *What is Superfund?* <https://www.epa.gov/superfund/what-superfund#:~:text=Thousands%20of%20contaminated%20sites%20exist,plants%2C%20landfills%20and%20mining%20sites.>
- Usmani, I. W., & Jamil, T. (2015). Imperialism and Territoriality. *THE HISTORIAN*, 13.
- Van de Grift, L. (2015). Theories and practices of internal colonization: The cultivation of lands and people in the age of modern territoriality. *International Journal for History, Culture and Modernity*, 3(2), 139-158.
- Yip, S. Y. (2023). Positionality and reflexivity: negotiating insider-outsider positions within and across cultures. *International Journal of Research & Method in Education*, 47(3), 222–232. <https://doi.org/10.1080/1743727X.2023.2266375>
- Zyzanska, O. M., Ashfield, B. R., & Eulberg, K. E. (2023). The Effects of Climate Change in Guam. *Student Publications Gettysburg College*

Appendices

As I only changed the introductory questions based on the interviewees' occupation, the appendices will first show all the introductory questions per interviewee, and the main body of questions from the interview guides afterward.

1. Siobhan McManus

1. Would you like to introduce yourself? (age, occupation, hobby's)
2. Where do you live now? And did you grow up here?
3. You mentioned that you are the lead for the organization Protect Guam Water. Would you like to tell me more about this job and what you do here?
4. You are also the Program Coordinator for Nihi Indigenous Media. Would you like to tell me more about this occupation?
5. Before we move on to the deeper questions, I was wondering what the correct pronunciation was of Chamoru? And I always see it written differently, so how should I write it in my thesis?

2. Byron Aguon

These questions were made for the executive director, as I had a last-minute interview with the staff assistant instead.

1. Would you like to introduce yourself? (age, study, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. As executive director of the Commission of Decolonization, what does your occupation look like? What work do you do?
4. I saw that you have testified before at the United Nations. Could you tell me more about that? Do you feel like the UN is supporting Guam in the process to self-determination?

3. Laura Souder

1. Would you like to introduce yourself? (age, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. As Chairwoman of the Guam Indigenous Heritage Alliance, what does your job look like?
4. You are also the Vice-Chairwoman of the Kumisión i Fino' CHamoru. Could you tell me more about the work you do there?

4. Robert Underwood

1. Would you like to introduce yourself? (age, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. Could you tell me more about your experience as nonvoting delegate of Guam to the US House of Representatives?

5. Moneaka Flores

1. Would you like to introduce yourself? (age, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. Could you tell me more about the work you do for Prutehi Guåhan?

6. Victoria-Lola Leon Guerrero

1. Would you like to introduce yourself? (age, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. You are the director of Publishing at the University of Guam Press. Could you tell me more about that?
4. You are also the Co-Chair of the Independence Task Force of the Commission on Decolonization. Could you tell me more about what you do there?
5. I was also wondering, as I assume you were present, how the Fanhita conference went?

7. Michael Bevacqua

1. Would you like to introduce yourself? (age, occupation, hobbies)
2. Where do you live now? And did you grow up here?
3. You work for the organization Independent Guahån if I'm correct? Could you tell me more about the work you do there?
4. Could you tell me more about your work as curator for the Guam Museum and the Museum itself?
5. You also run the Guam Bus. Could you tell me more about that initiative?

Main body interview guides

2 - The environment

1. How would you describe Guam's environment?
2. Does Guam experience environmental disasters? In what way/how does that look like?
3. Would you say Guam experiences the effects of climate change? If so, how does that look like?
4. How is/does it feel different than natural environmental disasters?
5. How would you describe the Chamoru's relationship with the land/environment? How is it different from the US relationship with the environment?
6. Do you think Guam would experience fewer environmental/climate change problems if the US were not present or if Guam would have more political power?

3 - Militarization and colonization

1. I know Guam has an extensive colonial history and still has to gain its independence from the US. How would you say you experience US colonialism living on Guam?
2. How do you experience the US military presence on a day-to-day basis?
3. How does the US militarization impact the lives of the Chamoru population?
4. I have been reading about the US military build-up due to the relocation of US Marines from Okinawa to Guam, and am of the understanding that the first Marines have been transferring to Guam this year.
 - a. How do you feel about this? Have you noticed the increase of Marines/the military build-up?
 - b. How has the population reacted to this military build-up?
 - c. What are the main concerns you have about this military build-up?
5. How do you experience the environmental impact of the militarization of the island?
6. How do you think Trump's presidency will affect Guam's political status?

4 - Social impact

1. These last questions will be a bit more personal and focus more on the social impact of militarization. Again, you do not have to answer if you do not want to. How would you describe being Chamoru? What does that mean to you?

2. Can you describe Chamoru culture to me? Are you able to celebrate your own culture separate from the US?
3. Did you experience the US colonial presence in ways other than militarization? For example, culturally or socially. If so, how did you experience that, and how did it affect you and your community?
4. Do you feel secure and safe by the US military presence? Why or why not?
5. I know that many activist organizations are fighting for Guam's rights, and I've read about the victory in the 9th Circuit Court against the US Air Force. Could you tell me about the ways you and your community are resisting the US military and colonial presence?

5 - Conclusion

1. I have one final question for you:
What is your hope for the future of Guam?