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Abstract

Native Hawaiian and other Pacific Islanders, and the environment that they are in relationship with, have been the targets of exploitation, extraction, and destruction. Environmental atrocities throughout the Pacific have demonstrated the ways imperialism, capitalism and white supremacy drive destruction through efforts to dominate and exploit for material gain. The relationship between Pacific people and the environment, which defines who they are socially, spiritually, and ancestrally, continues to be damaged and even severed by these injustices. The purpose of this paper is to provide examples of major environmental injustices in the Pacific and to develop a deeper understanding of the relationship between settler colonialism and environmental injustices. Indigenous Knowledge (IK), with a focus on Traditional Ecological Knowledge (TEK), is incorporated to demonstrate not just the deep impact of injustices on Pacific people's cultures, but also to highlight how this way of knowing cultivates a path to revitalization and community resilience. Cultural practices rooted in TEK, such as the preservation of food systems, promote reciprocity between living beings and self-determination, necessary for community flourishing. With this understanding, Pacific peoples' relationship with their land offers further evidence of the critical role culture and IK can play in environmental justice policies and practices.

E malama ʻoe i ka ʻāina, e malama ka ʻāina ia ʻoe

Take care of the land and the land will take care of you.

Traditional knowledge systems in navigation among the people of Oceania led to a great migration beginning over 4,000 years ago throughout the Pacific (Kirch 2010). Over the span of centuries, the cultures of the peoples of the Pacific Islands have developed in relationship and connection to their local environments. Pacific Islanders refers to the people of Polynesia, Melanesia, Micronesia, and Oceania; as Native Hawaiians are people of Polynesia, we will hereafter refer to the entire group as Pacific Islanders.

For many Pacific Islanders, their identity is understood through this relationship to place—where they can trace the history of their people and chronicle events in nature (Kana'iaupuni and Malone 2016). However, the relationships between the people and their local environments and ecologies are threatened by environmental injustices, including the loss of land, traditional food sources, and cultural resources. At the core of these threats are ongoing legacies of imperialism, capitalism, and white supremacy.

Current United States (U.S.) environmental justice policies have made progress in addressing these threats and attacks by insisting on the fair treatment and engagement of all people (regardless of race, color, national origin, or income) in developing, implementing, and enforcing environmental regulations, policies, and laws (EPA 2020). These policies go beyond the preservation and conservation of the natural environment to recognize the inequitable impact of environmental hazards, such as pollutants and toxins, on people. EPA standards, however, are sometimes viewed as a moving target and as being controlled by political powers, with those who break them not always held accountable (Dillon et al. 2018; Lin 2019; Selby 2019). Also,

environmental injustices are not exclusively the product of disproportionate impacts, but rather the product of systemic racial power leading to environmental degradation, pollution and exploitation of the natural resources of racially oppressed communities (Falzon & Batur, 2018; Pulido, 1996). Globally, Indigenous communities face attacks that threaten to consume and fracture their cultural ties to the environment and a global environmental justice movement has been identified (Martinez-Alier, Temper, Del Bene et al., 2016). While we focus on the U.S. EPA definition of environmental justice, systemic racism exists globally and reinforces global environmental racism, manifested through settler colonialism and imperialism. In addition to calling for more accountability, fair treatment and engagement, recent Indigenous scholarship has advocated for a deeper understanding of how settler colonialism is implicated in environmental injustices and how to overcome it.

While climate change is a global threat, the disproportionate impact of this crisis on the Pacific Islands has gained increasing visibility (Falzon & Batur, 2018). As islands shrink and disappear due to sea level rise and coastal erosion, Pacific Island government officials, scientists and activists have recently garnered attention from the press and public with a unified call for more attention to the impacts of climate change on their homelands. These groups insist that it is time to listen to and support those who are on the frontline of global warming, climate change, and other environmental injustices (Albert et al. 2016; Roy 2019; Westerman 2019). As climate change continues to exacerbate environmental degradation on the Pacific Islands, it is crucial that Pacific Islanders' perspectives are incorporated in the policies that dictate how climate change is addressed.

Pacific Islander movements—like other Indigenous-led movements—include a centering of culture as a place of environmental protection and sustainability (Kavaliku 2005; McGregor

2004; McGregor et al. 2020; Metcalf 2003; Vickery and Hunter 2016). This paper seeks to build upon these frameworks, applying Indigenous Pacific Islander perspectives to look more deeply at what centering culture can mean within the broader environmental justice discourse. Furthermore, the paper explores how Pacific Islander perspectives can enhance environmental justice movements by foregrounding the relationship between communities and the ecologies they exist with and are a part of. The authors believe that the Indigenous Knowledge (IK) and values of Pacific Islanders can inform western science and theories around environmental justice, and extend Indigenous scholarship in ways that can help communities achieve a healthy environment and population globally.

Imperialism and Settler Colonialism in the Pacific

The Pacific Islands have long been a site of frequent exploitation, violence, and environmental degradation (Falzon and Batur 2018; Goodyear-Ka'ōpua 2017). These acts are linked to the main drivers of environmental injustice: imperialism, capitalism, and settler colonialism. Imperialism refers to extending a country's power and influence through diplomacy and/or military force (Phạm 1955). This influence extends to the domination of language, spirituality, traditions, norms, and values.

Settler colonialism can be understood as a continual process that is an expression of domination; it fiercely disrupts the existing relationship between humans and their ecology with the intent to permanently establish those seeking dominance in a place at the expense of the society already present (Whyte 2018). It is an ongoing system that perpetuates the repression and genocide of Indigenous peoples and cultures through sub-systems, particularly capitalism and white supremacy. The repressive nature of these systems are largely upheld by ideologies of

superiority and savior complexes that utilize stereotypes to justify genocidal actions. When justifying the theft of land and resources, for example, images of the "savage" are created; through this stereotype, settler colonial violence is transformed into the expression of a need to "civilize" or exterminate Indigenous populations. These stereotypes that aid in the repression and ongoing attempted genocide that Indigenous peoples endure in turn allow for other harmful concepts to come into play. The idea of terra nullius (nobody's land) evolved from a settler colonial desire to occupy land; land was newly created as 'uninhabited' by the act of deeming any existing communities as insignificant or null, such as those of "savages," which then allowed for the extraction of valuable resources, the usurping of property, and other colonial enterprises (Lindqvist, 2007; Jalata, 2013). Many areas around the world, including the Pacific Islands, have and continue to experience settler colonialism expressed through both racial oppression and capitalist exploitation (Batur and Weber 2017; Batur 2018).

Settler colonialism promotes environmental injustices through the commodification and destruction of land. This commodification turns aspects of the environment, such as plants and animals eaten for sustenance, into "goods," allowing for their removal for the profit and benefit of settler colonial powers while simultaneously and intentionally depriving Indigenous bodies access to safe and healthy environments (Whyte 2016). Robert Bullard, who is considered the founder of the environmental justice movement, identified environmental racism, defined as "any policy, practice, or directive that differentially affects or disadvantages...individuals, groups, or communities because of their race or color", as a driver of this phenomenon (Bullard 2001, p 160). Bullard grounds environmental racism within a system of domination and exploitation that ultimately creates "winners" and "losers" as a result of current environmental and industrial policies. The former—typically white and affluent—are able to wield their

privilege to live in comfortable, well-maintained and healthy areas at the expense of the latter. The "losers" are predominantly low-income and non-white communities; these communities often find themselves ignored by institutions and policymakers and are forced to navigate hazardous structures, ranging from superfund waste sites to water pollution. From this perspective, environmental racism is consistent with the exploitation and degradation of the environment experienced by Pacific Island people.

Underlying this pattern of abuse are power dynamics that view certain lives as disposable; historically and currently Black, Indigenous and People of Color (BIPOC) communities pay the brunt of the burden for others, namely white folks, to thrive. This is a pattern that is on clear display in the Pacific Islands. From the time that Europeans first set foot in the Pacific, it has been evident that Pacific lives are deemed expendable and insignificant. Stade (1998) presents records from a much publicized interview occurring in the 1990s with a member of the U.S. Air Force, Lieutenant Colonel Douglas, which demonstrates the long-held and common view of Guam not as an equal partner, but a possession. According to Douglas, the demands made by Guam for sovereignty remained ignored, justified by the nation's position as a belonging of the U.S. and therefore subject to its imperial whims (Stade 1998). In Guam, militarization has endangered sacred spaces and the very fabric of the native CHamoru island communities—places that embody their cultural-spiritual connection to the ancestors and the land. Years after a 2006 proposed relocation of U.S. military bases from Okinawa to Guam was made, an environmental impact statement was released mentioning that this move would necessitate the destruction of jungles for population growth and facilities such as firing ranges, as well as the dredging of a large swath of coral reef to harbor submarines (Na'Puti and Bevacqua

2015). These actions presented irreversible impacts on the lifeways of local communities in light of the ways the land would have to be altered, polluted and exploited for military interests.

Attitudes towards Pacific Islanders, in conjunction with the need to maintain imperial power and enforce settler colonialism, resulted in the vast militarization of the Pacific. There is a pervasive presence of U.S. military forces throughout the Pacific, numbering at approximately 375,000 U.S. military and civilian personnel, with the largest concentration of personnel stationed in Hawai'i and thousands of others throughout Guam, Samoa, and the Federated States of Micronesia (Lutz 2009; U.S. Indo-Pacific Command 2020). In defending economic settler colonial interests—specifically industrial capitalism—the U.S. military has become one of the world's leaders in pollution and environmental degradation, as well as the primary source of cultural genocide in Indigenous communities (Blackford 2004).

The infamous nuclear tests on Bikini Atoll in the Marshall Islands detonated 23 nuclear weapons between 1946 and 1958 (Ballou 1998). The atoll was severely damaged, forcing relocation of inhabitants, and still remains too polluted to sustain life. The massive fallout produced by nuclear tests resulted in extensive radiation poisoning in both human and non-human beings, leaving a legacy of long-term health problems. In Hawai'i, the island of Kaho'olawe—sacred to Native Hawaiians—was the target of military exercises that included decades of bombing and the 1965 Sailor's Hat tests, which dropped tons of TNT to simulate a nuclear explosion (Blackford 2004). The bombing has destroyed the island and it is now uninhabitable.

Besides being a prime location for launching global warfare, it has been suggested that the gendering of the Pacific as feminine and vulnerable, as well as illogical, primitive, and lacking reason, was presented as an ideological basis for U.S. military occupation—a supposed

masculine source of protection (Fujitani et al. 2001). This occupation, rather than offering protection, has resulted in ethnocide and ecocide. Here ethnocide is understood as the deliberate, ongoing and systematic destruction of the culture of a particular ethnic group (Mair 1975). Ecocide refers to the destruction of our ecologies (Merz 2014). Both the ethnocide and ecocide the Pacific Islands continue to face are a result of militarization in the service of continued exploitation and control by powerful nations of the Global North, namely from North America and Europe. The Global North/South Divide refers to the concept of a gap between the Global North and the Global South in terms of development and wealth. Na'Puti and Bevacqua (2015) succinctly describe this condition:

> In the Pacific we find stolen lands a plenty, stolen kingdoms, islands transformed into fortresses, bodies and lands poisoned through military testing and an array of colonial bodies shipped off to war. In the Pacific, we see that militarism and colonialism are not exceptional facets of American existence but structures that are constitutive and essential to the historical and contemporary production of American power (p. 839).

Relationships Severed by Settler Colonial Extraction

Beyond damage to the ecosystem, settler colonialism has led to the injury of relationships between land and its people through the extraction and resulting importation of its resources to outside countries. In Micronesia, mineral extraction has devastated the small island communities of Nauru and Banaba, where phosphate mining contamination has polluted the entire land mass and surrounding waters with heavy metals such as uranium and lead (Schlanger 2015; Falzon et al. 2018). Not only has this resulted in forced relocation of locals—an action that pushes Indigenous people further away from their connection to land and associated traditional practices

like fishing—but it has also created a dependence on imported food due to increased food insecurity. As a result, the Nauru, like many other Pacific communities, no longer have food sovereignty, defined as the right to and ability to access healthy and culturally appropriate foods produced through their own relationships with the land and self-defined agricultural systems (La Via Campesina 2007). This inherently creates a ripple effect, impacting the transmission of cultural knowledge, identity, capacity for resilience, and overall health.

In the late 1800s, the Pacific experienced an expansion of plantation agriculture—defined as the large-scale growing of crops only for profit—that included sugar, sandalwood, and pineapple, and other extractive industries such as whaling, which not only transformed the landscape, but also a way of life (Plahe et al. 2013; Shineberg 2014; Takaki 1984). Plantation agriculture, as well as the accompanying upsurge of militarization, necessitated massive resource appropriation. The resulting diversion of stream water away from Native communities deeply impacted their ability to sustain themselves with traditional foods and other necessities. In Hawai'i, the consequence for *kalo* (taro) cultivation is particularly significant, as it is more than just food for Native Hawaiians; it is a symbol of a relationship to the land, a source of spiritual, mental, and physical health. In their *Kumulipo* (creation story; Liliuokalani 1978), Hāloa-naka, the son of Wākea (Father Sky) and Ho'ohōkūlani, daughter of Papa (Mother Earth), was stillborn. Following the burial of Hāloa-naka in the ground, his body reemerged as *kalo,* sprouting from the earth. His brother, born after and also called Hāloa, was the first human and from the beginning cared for his brother and ancestor, *kalo* (Lincoln and Vitousek 2017). Thus, *kalo* is more than food, it is an ancestor. Dr. Mary Kawena Pukui notes that those belonging to the 'ohana all begin from the same root, like taro shoots; the term 'oha-na' means 'all the offshoots' (Pukui et al. 1972). As descendents of and caretakers of Hāloa-naka, Native

Hawaiians recognize that their family extends beyond humankind; they are offshoots and related to ancestors and living beings within their environment. The diversion of water and other resource appropriations occurring during the expansion of plantation agriculture, militarization, and tourism, which continues today, has deeply damaged the relationship between *kalo* and Native Hawaiians, as well as the people's ability to practice their culture through food sovereignty (Sproat 2011). As access to traditional ways of being and nourishment were depleted, Native Hawaiians were forced to become more and more dependent on imported foods. In Hawai'i, an island where food production occurs year-round, an estimated 87% of foods are now imported (Loke & Leung 2013). Unlike the traditional sustenance that nourished Pacific people spiritually, culturally, and physically throughout history, these imported foods (i.e., canned meat, white rice) are often high in sugar, low in nutrients, and highly processed.

Rising sea levels due to climate change and the commodification of land have impacted another important relationship for Pacific Islanders—their connection to coastal spaces (Keener et al. 2013; MacKenzie et al. 2015). These are the traditional spaces of ancestral burial grounds, salt cultivation—important for ceremony, healing, and food—seaweed, and fish cultivation. Severing the relationship with these coastal lands threatens the connection to ancestors and negatively impacts spiritual, mental, and physical health. Unable to go out and fish or farm, the changes in physical activity compounds dietary shifts and creates a feedback loop of cultural loss and deterioration of health, including some of the highest rates of diabetes and other markers of failing health in the world (World Health Organization 2014). The fact that the Pacific Islands have the highest rates of diabetes globally can't be understood without considering the ongoing impact of imperialism and settler colonialism that induces lifestyle changes (Anderson et al. 2006). Literature on Pacific Islander health must acknowledge that these health conditions are

not intrinsic or biological, but are a result of the cleaving of interdependent relationships, manifested in cultural genocide, that are at the heart of Pacific Islander culture. It should also acknowledge that the complete shift of environmental identity by loss of place is a form of post-traumatic stress (Khanna 2010).

Expanding Environmental Justice

The past two decades have seen the rise of Indigenous ecological scholarship that recognizes the necessity of expanding definitions of environmental justice to include not just distributive and procedural justice, but justice that better aligns with Indigenous experiences and values. This includes recognizing culture as a primary component of environmental justice (Hernandez 2019; Schlosberg et al. 2010; Figueroa 2011). For groups that are very much rooted in and dependent on their environments, achieving justice means not just cultivating conditions that support Indigenous livelihoods, but also addressing the concerns of generally excluded populations and placing accountability on the violent institutions that perpetuate harm. An approach that recognizes the centrality of community and the importance of nature and culture in human flourishing is necessary (Schlosberg et al. 2010). Holistic human flourishing demands a further expansion of justice to be one that holds spaces devoid of violent oppression or the "isms" in all realms, where biocultural diversity is honored, and bodies may fully thrive in an environment that "is safe, nurturing, and productive" (Bryant 1995, p.6). Indigenous scholars have also focused attention on the importance of justice for species outside of our own and for the Earth itself in their definitions of environmental justice. Winona LaDuke, an Anishnaabe environmental activist, refers to this as 'natural law' (LaDuke 1994). In this important aspect of environmental justice, the environment exists as more than just something necessary for human

sustainment—it has value in its own right. Thus, an Indigenous perspective on environmental justice begins to bring in our relationship with the environment, understanding that each partner in this relationship is living and has inherent value.

Culture plays a significant role in wellbeing, particularly for Indigenous communities, and it is recognized that threats to cultural livelihoods are direct threats to health, environment, and self-determination (Sproat 2016). Yet this is not incorporated into current environmental justice policies, which fail to see the intersections of culture and the environment, and the significance of place-based identities **(**Hernandez 2019; Hernandez et al. 2007; Kana'iaupuni and Malone 2016**)**. Collective continuance, or the combination of necessary relationships and interdependence that promotes resilience, highlights a society's ability to initiate and sustain self-determined strategies for harm reduction, quality of life, and wellbeing (Whyte 2018). This collective continuance creates pathways for the redressing of harms, including colonial-induced environmental injustice such as the loss of land, culture, health, and self-governance. By implementing environmental self-determination as part of international human rights [norm] and recognizing Indigenous peoples as unique cultural and political groups, steps may be taken to create global accountability on the part of those nations that engage in extractive activities with harmful consequences to the most vulnerable communities (Tsosie 2007). Self-determination allows Indigenous communities to heal themselves and their ecologies that have been devastated by settler colonial powers—and it is cultural sovereignty that provides the foundation of that agency (Coffey and Tsosie 2001). While, as with any people, there is no complete consensus among Pacific Island people regarding their relationship with settler colonialism, there is a growing trend for Indigenous Pacific Islanders to seek self-determination as a form of justice to heal themselves and their environments.

Traditional Ecological Knowledge and Environmental Justice

Like many Indigenous communities around the world, Pacific Islanders have a deep, intimate connection with the land that they live on and use TEK to maintain their wellbeing. Their cosmologies guide the ways in which they interact with the world around them, and these IK systems are centered around principles of reciprocity, interdependence, gratitude and respect. Rather than a set source of knowledge, TEK is known to be dynamic, uniquely specific to place, and a lived experience of being in relation with the local environment (Gómez-Baggethun et al. 2013; Battiste 2002; LaDuke 1994; McGregor 2004). The nature of TEK reflects the relationships between humans and the environment as inseparable, creating a framework around kinship. As relatives, there is a duty for human and non-human beings to uplift and nurture one another, and to support the Earth in the way that the Earth supports all inhabitants (Lajo 2012; Huambachano 2018; Trask 1999; MacKenzie et al. 2007). The elements of the Earth are entities of value, not objects.

Central to TEK is the understanding that sustaining the system for future generations is dependent on respecting, supporting, and investing in the interdependent relationships of all life. Given that land is tied to the people, their cultures and identities, it is critical for these communities to protect the places that provide life. This kinship framework is a concept that is shared across many Indigenous groups. The Maori (*Tangata Whenua*) view themselves as direct descendants of "*Papatuanuku"*—the embodiment of the earth and land; their own well-being is tied to that of the earth, promoted by a relationship of unconditional love (Huambachano 2018). This perspective shifts environmental justice movements away from considering the environment

and humans as separate entities—with the focus on solely environmental protection—to instead center the relationship between a community and their ecology.

Pacific Islander Responses to Settler Colonialism and Environmental Justice

It is apparent that environmental injustices pervade Pacific Islander communities, resulting in destruction, desecration, and exploitation. All this is evidence that settler colonialism has long-enduring legacies; it must be put at the forefront of accountability if healing is to occur in the Pacific Islands and elsewhere. The settler-industrial complex is anti-adaptive and intentionally targets sources of community resilience, such water and food systems, which can lead to the forced displacement of communities away from their traditional homelands. This further leads to a reduced capacity for self-determination that disallows Indigenous communities to protect their environments and cultural practices (Whyte 2016).

Bolstered by imperialism and capitalism, which view humans and the environment as separate and the latter as a commodity, land is easily monopolized for profit without regard for those who rely on and find nourishment from it. Manifest destiny and humans' ability to control nature is applauded in this society. Conservationists and environmentalists, on the other extreme, often view the environment as pristine and exclude humans who are at most visitors, envisioning them as blights to the land. For example, wind farms, a cleaner source of energy, in Kahuku on the island of O'ahu, have been met with great opposition, as they are being placed in rural communities largely populated by Native communities. Additionally, the land where the current and proposed new wind farms are located is home to the Hawaiian hoary bat, Newell's shearwater, Hawaiian stilt, Hawaiian moorhen, Hawaiian duck, Hawaiian goose, and the

Hawaiian short-eared owl— species that are endangered and that possess spiritual and cultural significance (Hawaii Department of Land and Natural Resources 2016).

For Pacific Islanders, the fight for justice is directly tied to the preservation of their identities, cultures, and their homelands—for some, a right to a homeland that is rapidly under threat of disappearing due to rising seas (Batur et al. 2017; Wing 2017). With all that has been thrown at these communities, they refuse to be silenced. Pacific Islanders and other Indigenous groups around the world are not passive victims. They are actively resisting U.S. imperialism, settler colonialism, and capitalism for the right to their homeland and traditional lifeways. IK revitalization has grown as a response to a rapidly changing Earth and the violent systems that perpetuate an unsustainable world. The holders of this knowledge recognize the value of adaptation, which is embodied in their ways of being, by embracing cycles of constant change (Nalau et al. 2018; Huambachano 2018; Figueroa 2006). It is what has allowed them to survive; Indigneous knowledge is key to community survival and resilience, not just for nations in the Pacific, but for the greater global population.

Central to Indigenous tenets are relationships and the pursuit of reviving IK and TEK, which in turn play a role in healing (e.g. cultures, livelihoods, economics, political self-determination) (Whyte 2018). Pacific Islanders' engagement in the most recent wave of anticolonial movements centers cultural revitalization and self-determination, seeing this resurgence as capable of restoring sustainability and resiliency for the people and for the environment (Blackford 2004). The revival of ancestral knowledge is a form of resistance to settler colonial and capitalist regimes and seeks to dismantle systems of violence. By centering TEK, revival and restoration are ways to envision multiple futures, multi-dimensional relationships, and Indigenous cosmologies (Goodyear-Ka'õpua 2017).

Within more direct resistance movements, protests are focused on not just putting a halt to extractive, exploitative practices, but also on honoring the ancestors and relationships. On Hawai'i Island, the battle between Native Hawaiians and the planned thirty meter telescope (TMT) on top of Maunakea, a sacred cultural site, provides a recent example of resistance at work. Native Hawaiians seek to stop the TMT not just because it would damage the environment, but because it would harm Manukea, the first-born child of Earth Mother, Papahānaumoku, and the Sky Father, Wākea. In the uppermost zones of Maunakea, one cinder cone, or *pu'u*, named Pu'u Mākanaka, or "hill crowded with people," contains burials (Witze 2015). The waters of lake Waiau are associated with the god Kāne and have long been used in ceremonies and healing. Protecting Maunakea then is about protecting the first ancestors, the bodies of human ancestors, and the healing power of the land; it is about protecting the relationship with the land that sustains the people (Casumbal-Salazar 2017; Goodyear-Ka'opua 2017; Kahanamoku et al. 2020).

The value of IK systems can also be seen in how it enhances biodiversity and is a method of biodiversity conservation, supporting ecosystems for the life of their communities (Gadgil et al. 1993). Indigenous-led biodiversity conservation can also act as a form of resistance. In Aotearoa, *mara kai*, or Maori food gardens, have allowed communities to cultivate traditional foods despite dispossessed land and decreased access, reinforcing their responsibility to the earth as stewards and relatives as they pursue food sovereignty to restore their connections to culture and ecosystems (Huambachano 2019). Recognizing TEK and food sovereignty as integral to environmental justice is necessary and Indigenous communities must have the self-determination to preserve collective food relations and ancestral rights to land for this to be possible. The restoration of these systems can provide food security while also strengthening well-being,

family and community ties, knowledge transmission, and cultural identity. Traditional agroecosystems prove to be more than a source of food; they promote landscape resilience through the restoration of biodiversity and social resilience in the ways culture and cultural sovereignty are revived (Kurashima et al. 2019). The biological diversity that the wellbeing of this planet is acknowledged to be dependent upon is directly linked to the cultural diversity expressed through the TEK of those who are relatives and stewards of the environment they exist within.

Other initiatives are similarly composed of culturally-grounded, holistic, community-led interventions linked to conservation, restoration, and self-sufficiency to address environmental destruction and desecration. The Waimānalo Pono Research Hui (WPRH) on the island of Oahu is an example of such an initiative. WPRH integrates IK through stories of place and people (*mo'olelo*) and promotes the traditional values of *pono* (justice) and *lokahi* (harmony, unity) for the community (Chung 2019). The project addresses access to nutritious foods through the promotion of backyard aquaponic systems for raising fresh organic vegetables and fish. Backyard aquaponics offers itself as a potential health intervention because of the symbiotic relationships between fish and plants creating a sustainable food production system. Culturally, the system metaphorically reflects the reciprocal caretaking model of the *ahupua'a*, the traditional Hawaiian land management system (Beebe et al. 2020).

The WPRH also addresses the disappearance of *limu* (seaweed) along its shores due to over harvesting, run off, and the diversion of fresh water that previously flowed into the ocean away from the community. This last point is crucial as limu thrives in brackish water, where salt and freshwater meet. Limu is an important source of food and medicine for Hawaiian residents, both directly as food and as an attraction to and food for small fish, which in turn bring larger

fish. Thus, the presence of limu is significant for a healthy shoreline. From the WPRH, the Waimānalo Limu Hui was created, which has been working not only on limu restoration, but also the restoration of Pāhonu, a fishpond left by the ancestors of this region. Through projects like these, participants reported a greater sense of community connectedness, land stewardship, and health in their eating habits, all while being able to embrace their cultural heritage and engage in efforts of addressing food insecurity (Beebe et al. 2020).

Discussion and Conclusion

Environmental benefits and risks are inequitably distributed globally in our societies and these inequities are inexorably linked to the continuing legacy of imperialism, settler colonialism, and the social processes and structures of institutional racism and capitalism (Nadybal et al. 2020). In the Pacific, these processes and structures have led to egregious acts of environmental injustice that have devastating impacts on Pacific people, their environment, and culture. Environmental justice movements must expand beyond procedural and judicial justice to incorporate understandings of the essential nature of culture and the inherent worth of the environment (Hernandez 2019; McGregor et al. 2020). A perspective shaped by Pacific Islander TEK adds to the environmental justice movement by focusing specifically on relationships, including physical, spiritual, genealogical, and sociopolitical (Kana'iaupuni and Malone 2006). Rather than a false dichotomy where the environment and the individual or community are considered as separate entities, this framing of environmental justice emphasizes that biodiversity is inherently intertwined and in relationship with cultural diversity The focus on restoring traditional foodways is not simply because they are essential for the health of the community or because they help restore regional biodiversity, but because the relationship itself is worthy of

protection and worthy of honoring. By centering such a relationship within environmental justice, a Pacific Islander perspective can further expand on the work being done in Indigenous communities globally to prevent the commodification of culture, to heal the ongoing wounds of settler colonialism, and to combat the forces that work to sever the connection to place. True justice insists on protecting what is the real heart of all diversity—the relationship that makes the environment and its people one.

While this paper has focused on localized forms of environmental injustices, it is important to note here that these occur within the context of global environmental concerns, such as climate change. While climate change is a global concern, here too exists an inequitable distribution of impacts; despite only contributing less than 0.03% of global carbon emissions, Pacific Islands are often said to be at the frontlines of climate change because of the devastating losses being experienced there (Falzon et al. 2018). While the Global North engages in wealth-building activities that drive a great deal of climate change, the negative impacts are disproportionately concentrated in BIPOC communities, including sea-level rise, drought, increased storm frequency, ocean acidification, and heat stress. Coupled with local extractive practices and other forms of environmental degradation, these impacts of climate change ultimately endanger Indigenous identities, and the traditional homelands and lifeways they're in relationship with (Sproat 2016). In 2016, four of the Solomon Islands disappeared due to rising seas, followed by three islands in the Federated States of Micronesia in 2017, with thousands of low lying islands now at risk for becoming uninhabitable. This has resulted in upending numerous communities and fracturing their connection to the lands they exist in partnership with (Gerhardt 2020). Knowing that rapidly rising temperatures threaten to create irreversible alterations to ecosystems and the cultural practices deeply tied to place—with accompanying

physical, emotional, mental and psychological dimensions to consider—developing an agenda to address these issues as a collective to cultivate resilience is of utmost importance.

How can communities move forward and produce new futures given the challenges and the threats posed in the Pacific? Indigenous cosmologies of Pacific people embrace reciprocity, interdependence, and relationship. The system that we currently live in centers on greed, scarcity, dehumanization, independence, and disposability. By reviving cultural values and practices, Pacfic communities are engaging in resistance that directly challenges and undermines the oppressive systems brought about by colonization, posing instead a culture of love, respect, and abundance.

Environmental issues are inherently economic, social, political, and cultural issues. In order to achieve a state of full functioning and integrity for all life, solutions must be intersectional and all-encompassing. In respecting the rights and voices of Pacific Island communities, much can be learned from their specific TEK, one that focuses on foregrounding the relationship that defines the whole. In shifting the focus from solely the person or the environment to instead focus on the interconnectedness existing between them, the concept of environmental justice can be reframed to go beyond distributive and procedural frameworks. Environmental justice is not just about equal current distribution, both of resources and risk, and having a seat at the table. It is about healing relationships. In order to do this, reparations in the form of the return of land and resources are also necessary. The reclamation of land is necessary for cultural resilience; it is a means of self-determination and allows communities to create a sustainable life based on ancestral practices that promote political/cultural sovereignty and wellbeing (Sproat 2016; Tuck and Yang 2012). This returning of the land benefits those that exist with it directly and also provides a space for healing for all people by moving away from

the greed of settler colonialism that is dependent on oppression and overconsumption. Understanding that cultural diversity is as important to collective survival as biodiversity allows for changes in society's most fundamental values and beliefs, providing paths to address inequities and to repair harms done.

In the face of injustice, Pacfic people continue to organize themselves to promote opportunities for cultural revitalization, restoration, and reinvestment in sovereignty, governance, and social justice. When these opportunities involve cultural values and practices, there is benefit for both the individual as well as the environment. These communities recognize that ecologically-based interventions and programs that promote culture offer benefits that are holistic in nature (mind-body-spirit) and lifestyle enhancing.

How can the health problems among Pacific Islanders that arise from the violent legacies of colonization--legacies that still continue to inflict damage today--be addressed? What preventative measures can be taken in order to ensure a healthy quality of living for all people and non-human relatives on this earth and to break the cycle of exploitation? More importantly, how can Indigenous resistance and resilience be centered? The literature needs to elevate the voices of those in the Pacific who are continually working to dismantle settler colonialism. Knowing the biggest toll will be on communities of color, it is critical to center relationships to land and create a holistic approach to health. By doing so, a culture of resilience can be cultivated, which will allow people to rise up in ways that the world currently needs to dismantle the systems of capitalism, colonialism, and white supremacy. The actions and cultures that challenge violence are ones promoting solidarity, care and mutual respect for their own communities as well as the earth. Justice for the people is ultimately justice for the land. We are not separate from the world we hold that, in turn, holds us.

*ʻAʻohe pau ka ʻike i ka hālau hoʻokā*hi.

All knowledge is not taught in the same school.

One can learn from many sources. (Pukui, 1983, p. 24)

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