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Climate coloniality and settler colonialism: Adaptation and indigenous futurities

Faisal Bin Islam [a], Lindsay Naylor [b,*], James Edward Bryan [c], Dennis J. Coker [d]

[a] Department of Geography and Spatial Sciences, University of Delaware, 226 Pearson Hall, 125 Academy Street, Newark, DE, 19716, USA
[b] Department of Geography and Spatial Sciences, University of Delaware, 216 Pearson Hall, 125 Academy Street, Newark, DE, 19716, USA
[c] Department of Geography and Environment, University of North Carolina at Chapel Hill, Carolina Hall, Campus Box 3220, Chapel Hill, NC, 27599-3220, USA
[d] Lenape Indian Tribe of Delaware, PO Box 79 Cheswold, DE, 19936, USA

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ABSTRACT

Climate change puts an inequitable and heavy burden on people who are forced to adapt to unjust socio-environmental conditions created by the legacy of ongoing climate coloniality and historical settler and imperial colonialism. However, universalizing climate adaptation discourses fail to conceptualize these historical processes by framing climate change as external to complex social and human systems. A plural reconceptualization of adaptation instead asks us to question what it means to adapt to environmental changes not just under the guise of global climate change, but as embedded in coloniality and settler colonialism in place. Critically engaging with different epistemologies of adaptation and grappling with what it means to do this work in the context of settler colonial realities asks scholars to co-produce knowledges of adaptation that embody place-based histories and human-environmental relations that are too often erased, elided, or appropriated in mainstream Eurocentric adaptation science. In this paper, we draw on an environmental oral history with the Chief of the Lenape Indian Tribe of Delaware to understand how the possibility of indigenous futurity and climate adaptation unfolds towards confronting climate coloniality and efforts to unsettle settler colonialism on stolen lands. Addressing climate coloniality on settler colonial territories suggests that as part of discussing climate change adaptation, scholars should make way for repatriating indigenous knowledges of adaptation and climate change to repair colonial wounds.

1. Introduction

Adaptation to climate change is commonly referred by the Intergovernmental Panel on Climate Change (IPCC) as "the adjustment in natural and human systems in response to actual or expected climate stimuli or their effects that moderates harm or exploits beneficial opportunities" (IPCC, 2014). IPCC holds a powerful position as a producer of climate knowledge because it synthesizes climate change research to inform 195 states under the United Nations Framework Convention on Climate Change (UNFCCC) process to invite policy actions for climate change. However, Chakraborty and Sherpa (2021), show how climate knowledge synthesized by the IPCC is biased towards western science over indigenous knowledge and favors global core over global periphery researchers in ways that work to maintain western hegemony for producing climate knowledge. As such, the IPCC definition of adaptation is grounded on the Eurocentric and modernist ontological separation of the "natural world" and "social world" where climate change is seen as "external" to human lives and thus it can be managed and exploited through technocratic solutions (Hulme, 2009). This normalized conceptual framework of adaptation conceives a landscape, a community, or a whole population as closed systems upon which climatic stresses produce "vulnerability". Based on this conceptualization, western researchers, academics, and "adaptation experts" are often bound by the questions of who then is to adapt? where? and how? and what index based quantitative formula to use to measure a system's "vulnerability" and its "adaptative capacity" to withstand climate change, suggesting "vulnerability" and "adaptive capacity" can be linearly measured to produce a technocratic solution (Adger et al., 2009, 2013; Andreucci & Zografos, 2022; Williams et al., 2015). By universalizing a western scientific formula, in many cases scholars and practitioners are demarcating a conceptual and territorial boundary of adaptation to a planetary crisis (Taylor, 2015: xii). As a result, the extent of vulnerability as a

* Corresponding author.
E-mail addresses: fislam@udel.edu (F.B. Islam), lnaylor@udel.edu (L. Naylor), jameb@unc.edu (J.E. Bryan), lenape1212@comcast.net (D.J. Coker).

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historical process, and how humans are, as Taylor suggests "fundamentally embedded in the production of climate change" (ibid: 11) remains problematically unquestioned.

Following Andreucci and Zografos (2022) where they link the biopolitical ecology of climate change within the logic of coloniality, we argue that the ontological separation noted above is made possible through the coloniality of knowledge production. Western scientific discourses that render nature as an exploitable commodity, and human lives as disembodied units, simultaneously rewrite territorial histories onto ahistorical landscapes perpetuating "settler colonialism" on stolen lands.[1] In this context, adapting to climate change while keeping intact the colonial/imperial logic of knowledge extraction and appropriation, capitalist accumulation, and dispossession in settler colonial societies further reinforces "the unbearable heaviness of climate coloniality" argued by Sultana (2022a). Expanding on Sultana's work, we argue that the "settler colonial" logic of adaptation reproduces the colonial wounds for 'racialized others' (Andreucci & Zografos, 2022) that is "engraved in bodies and minds" (Sultana, 2022a, p. 3). A discussion of what counts as adaptation knowledge, how it is acquired, appropriated, and erased, and what needs to be done to confront climate coloniality across scale and space is needed to make way for plural understandings of climate change adaptation that come from indigenous, non-western, and non-indigenous scholarship and accounts (cf. Murphy, 2011; Norton--Smith et al., 2016; Sultana, 2022a; Whyte, 2018). Critically engaging with different epistemologies of adaptation and grappling with what it means to do this work in the context of settler colonial realities asks scholars to co-produce knowledges of adaptation that embody place-based histories and human-environmental relations that are too often erased, elided, and/or appropriated.

For settler colonial societies there is no "post-colony". The colony persists not just through settler occupation, but also through structures and systems that are ensconced in white supremacy. Thus, challenging the "settler" notion of climate adaptation science is a formidable task given that "the master's tools will never dismantle the master's house" (Lorde, 2003 [2003]). Ahenakew (2016), citing Ahmed's (2012) work, noted that the power that reproduces and maintains colonial hierarchies also remains invisible by rendering itself normal, natural, and desirable. Any intervention coming out of indigenous practices that challenges this power structure is therefore appropriated to make indigeneity desirable for settler colonial society (2016: 9). Moreover, indigenous knowledge of adaptation in settler society is at times put into practice through appropriating the 'native figure' to be saved by the white colonizers (Nichols, 2022). This logic assumes that knowledge is always out there that can be extracted and integrated into western science (Cameron et al., 2021; Latulippe & Klenk, 2020). To unsettle "settler colonialism" therefore is an unending process where we must address the systems of power that reproduce "climate coloniality" (Sultana, 2022a). Thus, reconsidering climate change adaptation and indigenous knowledge production is about not only resisting and unmaking these constituents of climate colonialism, but also making way for indigenous futurity and repatriation of land, which is essential to the nourishment and flourishing of Indigenous knowledge systems and ways of knowing and being.

In this paper we draw on an environmental oral history with Chief Dennis White Otter Coker of the Lenape Indian Tribe of Delaware, and we situate our discussions in the political geographies of settler colonialism, territory, and climate coloniality. We first give context for the larger study at hand along with a discussion of the stolen territories of the Lenape Peoples, which is followed by considerations of settler colonial territories and scaling down the ideas of climate coloniality to the national scale of the U.S. and regional scale of the Mid-Atlantic. Here we discuss the violence of settler colonialism and how territory is approached in climate adaptation conversations. With this structuring we then turn to the coloniality of climate change adaptation narratives, which is followed by a conversation on indigeneity, climate change, and settler colonialism with the Lenape Indian Tribe of Delaware.[2]

2. The first peoples of the first state

What is now considered the Mid-Atlantic of the U.S.is the ancestral home of the Lenape peoples. The Nanticoke Lenni-Lenape, the Lenape, and the Nanticoke Tribes remain in the greater region (New York, New Jersey, Pennsylvania, Delaware) and have persisted (see Fig. 1). The Lenape Indian Tribe of Delaware is, at present, concentrated in the central part of the state within the community of Cheswold and the village of Fork Branch, which is close to the state Capitol (see Fig. 2). For the Tribe, the Village of Fork Branch is a sacred place made up of woodlands, the Fork Branch Creek, and prehistoric Lenape archeology and contemporary historical sites. The cemetery in Fork Branch is active and connects the Lenape as a larger Tribal Nation.

The Lenape peoples are the first peoples of this land that is now called Delaware and there is very little in the written historical record about the Lenape and Nanticoke Tribes—there was an armchair historian who talked with Tribal members in the 1940s and published accounts (cf. Weslager, 1943) that have some credible information, but are in large part deemed unreliable. Dunkley (2019), in attempting to understand the resurgence of the Nanticoke Lenni-Lenape of Southern New Jersey, found that like many other Tribes the Lenape peoples were forced westward and also northward—with many re-establishing themselves in Oklahoma or Ontario. However, many maintained their presence in the territories that they had co-existed with for over ten-thousand years. Those who remained became known as "the keepers of the land" and those who fled or were forced out of their homelands were considered "the keepers of the culture and tradition."

Over a few short generations the Lenape peoples who remained hid their native heritage and discontinued their ancestral practices. In the context of twentieth century racism, Delaware was bifurcated by binary understandings of race. The Lenape Peoples became officially labeled as "Moors," a designation that became part of public record through the category of race listed on early state driver's licenses. Dunkley writes that the Tribes were "repressed" by this inaccurate racial division and in the 1960s many started to question their ancestry through rejecting the binary of white or Black (2019: np). However, by this point the category of "Moor" had been firmly established in describing the greater Lenape Peoples in policy and *de facto* racialized spatial arrangements in the Mid-Atlantic. It was not until the 1960s and 70s, that the generation who are now Tribal elders began to organize and make contact with the Oklahoma and Ontario Lenape groups and to begin to recover lost knowledges. In 2010, the Lenape Indian Tribe of Delaware formed a constitutional Tribal government, and the United States Census Bureau granted the Tribe "state designated tribal statistical area" status for the purpose of the 2010 Census. Finally, in 2016, after years of organizing and petitioning the Delaware State Legislature, the Lenape Indian Tribe of Delaware received official state recognition. Having established their long history and cultural ties to the land, the General Assembly passed HB 345 stating: "The Lenape Indian Tribe of Delaware is designated and recognized as an American Indian Tribe with a recognized tribal governing body carrying out and exercising substantial governmental duties and powers." Thus, the conversation about indigeneity, territory, and coloniality is very different as the Lenape consider their futurity in a

[1] The way that "land" is understood varies vastly between settler colonial peoples and Indigenous peoples and here we refer not just to *terra firma*, but to land, air, water, and all other forms of life, including human and non-human beings to acknowledge indigenous epistemologies and the continuous processes of theft that climate coloniality wages (cf. Justice, 2016; Kimmerer, 2015; Simpson, 2017; Whyte, 2016b; Wildcat, 2005).

[2] The Lenape Indian Tribe of Delaware is the official state-recognized title that the Tribe uses for legal standing.

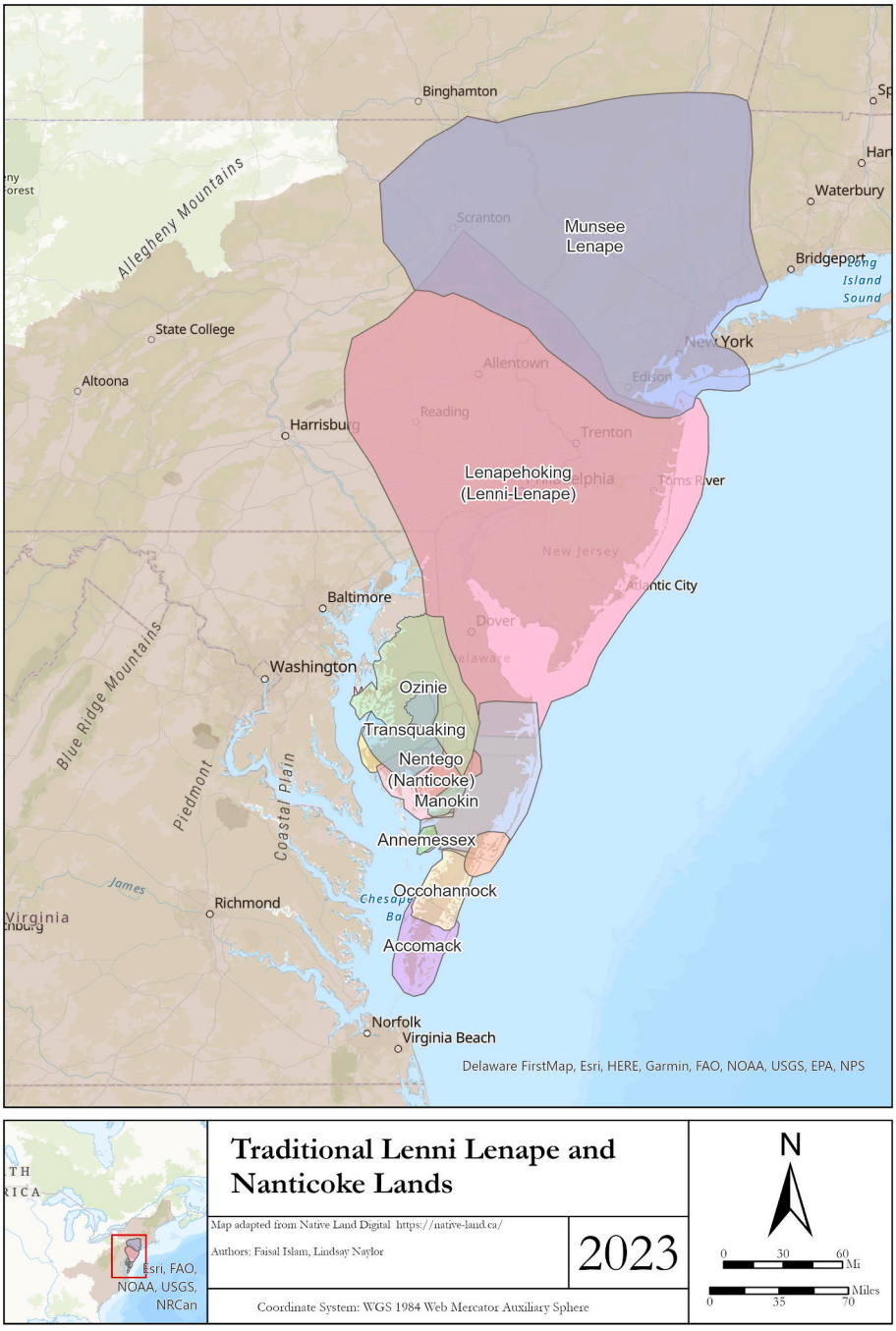

Fig. 1. Traditional Lenni Lenape and Nanticoke lands.

climate-changed world while living in their occupied, ancestral lands.

The data that we are presenting in this paper is part of a larger project on inclusive climate change adaptation in the State of Delaware. We focus here on an oral history taken with Chief Dennis White Otter Coker as an entry point into considering how to reconcile climate change adaptation on stolen lands with attention to place and home, threats and fears, changes, and adaptation. We conducted the oral history as the starting point for the larger project and thus our dialogue with the Chief and these themes serve to guide later interviews, observation, citizen science work with qualitative surveys and a climate change adaptation workshop held with governmental organizations, university faculty and students, and Tribal members. Delaware is a coastal state, and the funding of this research project is one of many ways that governmental organizations charged with enacting climate change adaptation measures are working to include communities in state planning processes. As a "keeper of the land" who saw the Tribe through their state recognition and official census designation, Chief Coker is an important first point of contact for how we approached other methods undertaken in the project with Tribal participants.

Because we, as researchers are grappling with interpreting indigenous ways of knowing and being in settler society as they relate to non-indigenous (here, settler) ways of being (Ahenakew, 2016) in a climate-changed context we also, through our feminist methodology reflect on our position as researchers, authors and interlocuters. Critical reflexivity is a requirement in all research (see: Naylor, 2019), and we undertake this practice as a collaborative group in conversation with our participants. We do this by locating ourselves relationally and historically reflecting how the personal is always political (Sultana, 2022b). As

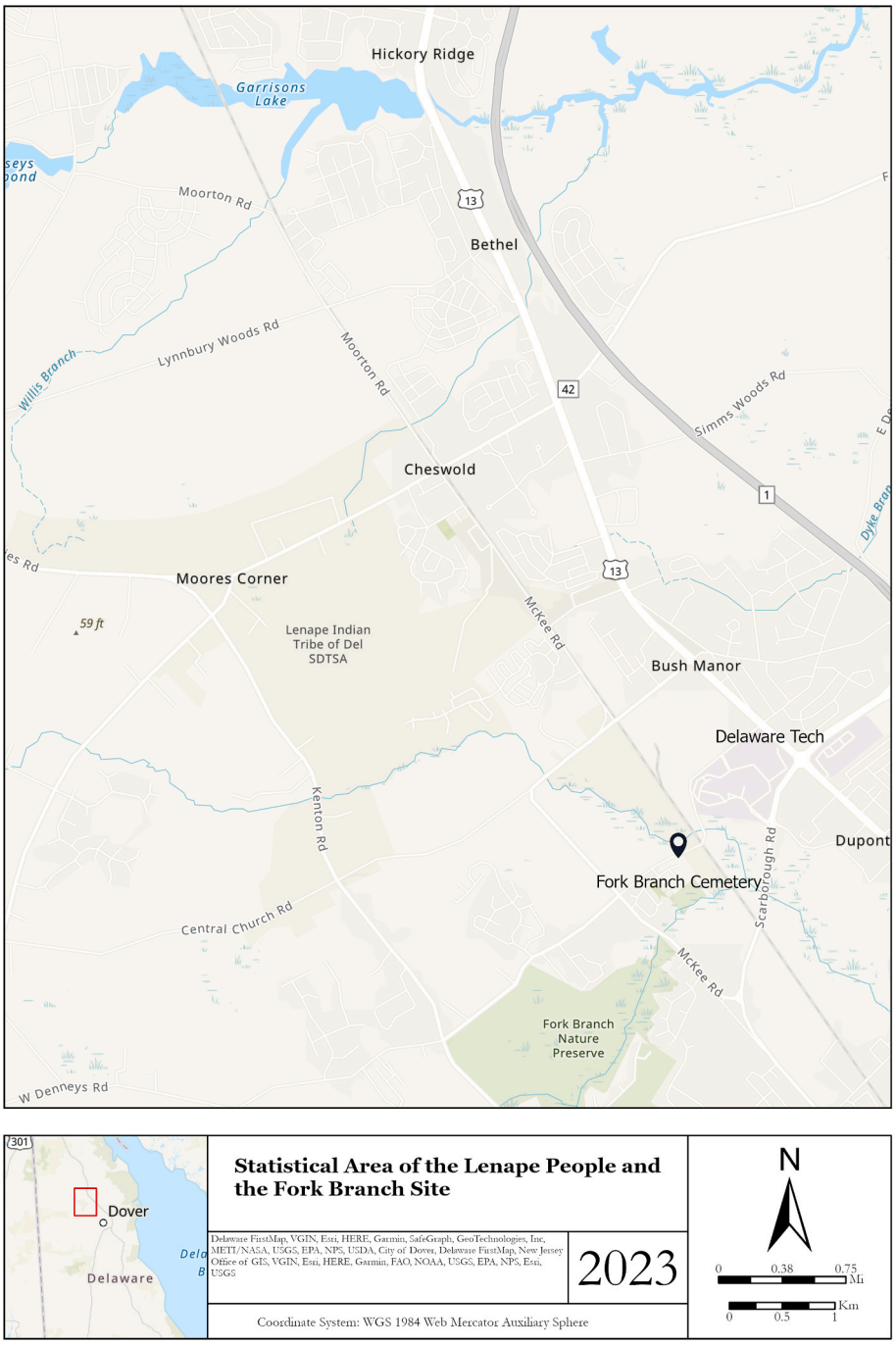

Fig. 2. Statistical area of the Lenape people and the Fork Branch site.

the writers of this paper (Islam and Naylor) and participants in the crafting of the research (Bryan and Coker), we state the following positionalities:

Islam: I situate myself as a decolonial scholar from the global south whose experience of climate coloniality is different from the settler colonial context in the United States. I am a person from the Bengal Delta who is producing knowledge in the land stolen from the Lenape and Nanticoke people. My research work towards adapting to climate change in settler colonial context is care work for the Lenape Indian Tribe of Delaware that creates alternative futures of mutual healing, flourishing, relating, and therefore co-creating (Sultana, 2022a). I work to dismantle neocolonial adaptation that creates unequal spaces towards just adaptation for mending broken hearts and broken lives.

Naylor: I am a settler colonial situated on stolen lands and surrounded by the labor of stolen peoples. I was born in the United States and benefit from white privilege. My research focused on climate change adaptation is intended to care for the voices that are silenced and ignored as part of the conversations around adaptation and to mentor the researchers on the team to think multiply about climate change and to consider the imperial/colonial relations that undergird both climate change and adaptation measures.

Bryan was the lead on the oral histories conducted with Chief Coker and positions himself: I am a Black scholar situated on stolen lands and territories across the eastern coast of the United States. My

research surrounding climate change adaptation considers alternative ways to imagine our relationships to land, ecosystems, and how we can reform and repair the lasting impacts of settler colonial histories.

Coker helped shape the research and gave the oral history contained herein: I am an American Indian of Lenape descent born and raised in the Lenape traditional homeland. I am focused on gaining further understanding of the impacts of colonization and how those impacts inform community responses to climate change and sea level rise. Giving voice to those whose voice has been ignored, human and non-human, is the driving force of my relationship with academia. Thousands of years of adaptation have enabled the continued existence of a pre-contact culture deemed unworthy of equal status compared to the privileged colonizers of my Homeland.

Recognizing that there can be no adaptation without talking about the colonial history of the indigenous people in settler colonial lands, the following questions drive our research in the larger project we are working on related to inclusive climate change adaptation: Why is it important for the research team as climate change researchers to think about adapting to climate change on stolen lands? What is our positionality that enables us to engage in this conversation? What does it mean to attempt to do climate adaptation research that does not reproduce climate coloniality? By attending to the indigenous knowledge of the Lenape Tribe of Delaware, we, with their elders attempt to provide a set of discourses to contest and resist the hegemonic exercise of power in adaptation research, while also exposing colonial violence and trauma.

3. Settler colonial territories

Territory, a much-discussed concept in political geography (cf. Agnew, 1994, 2010; Elden, 2007, 2010, 2013; Murphy, 1996, 2013; Paasi, 1998; Painter, 2010), is defined in relation to the state. It is commonly understood as a bounded space that has power exerted over it by people, often the state (Elden, 2009: xxv). There is recognition among political geographers that there is an over-reliance on a simplified understanding of the state as the main feature of territory and the assertion of territoriality (Agnew, 1994, 2010; Murphy, 1996, 2010). Indeed, Sack's (1983) focus on power relations provides a more expansive view of territory that allows us to understand it as a space (or as spaces) where power is consolidated. Such a definition widens the gaze to see in, through, and past the state as the ultimate arbiter of territory and consider multi-scalar phenomena that challenge or even undermine what Agnew (2009) refers to as the socio-spatial order of states, such as climate change.

In large measure, these discussions of territory—bound as they are to narratives of the state and sovereignty—are Eurocentric. In many cases the divvying up of territory into bounded units under the control of a sovereign state is historically grounded in the Peace of Westphalia (1648), revisited in the period of the Berlin Conference (1884), and again in the post-war years (1918; 1945) and most recently with the demise of the Soviet Union (1989). Yet, the Westphalian concept of territory emerged nearly one-hundred and fifty years after the start to what is called by the indigenous peoples of the Americas, the war of five-hundred years, which began with the arrival of Europeans and the occupation of indigenous territories. Much of the literature theorizing territory is silent on colonialism, except to discuss *de jure* liberation or the right to self-determination and the ability to have a degree of autonomy or control within state territory (Naylor, forthcoming). Indeed, much engagement reifies existing colonial/imperial designs and as argued by Dietrich (2017), settler colonial logics particularly disrupt Indigenous land-territory relations. Indigenous authors do not usually use the colonial academic concept of 'territory,' as Wildcat notes: "the big picture in indigenous thinking is informed by the lands, by other living species … and by the unique ecological and environmental features of the continents" (2005: 423). In approaching settler colonial territories, it is therefore important to recognize the distinctly different and multiple ways that they function.

What is now recognized as a sovereign entity called the United States of America is stolen. Founded on genocide, displacement, and enslavement, the climate changed lands under settler colonial occupation are an open and festering wound. As Veracini (2010, 2011) and others argue, settler colonialism is not the same as colonialism. Settler colonialism is domination imposed by foreign entities through conquest and migrant occupation of the territories of indigenous peoples (Veracini, 2010). It is, as Whyte argues "an arrangement of social institutions that support a structure of oppression" (Whyte, 2016a, p. 14). U.S. settler colonialism originated with the European invasion of the northernmost territories of what is now called the Americas. As Wolfe (1999) contends, settler colonialism was not a single event but is instead a process or structure that has changed over time and space. Not unlike colonialism, settler colonialism is undergirded by, as Steinman describes, an "underlying logic" that is grounded in the "displacement, erasure, and elimination of Indigenous peoples by settlers to gain access to land and resources" (2020: 559). Settler colonialism is operationalized by pretending it does not exist, creating justifications for violence, genocide and dispossession of Indigenous lives and livelihoods and through the invisibilization of indigenous ontologies and epistemologies (Steinman, 2020; Veracini, 2010) and the occupation of land. Simultaneously, while Indigenous peoples have longstanding adaptations to environmental change, settlers actively seek out and benefit from practices on the land that directly contribute to anthropogenic environmental and climate change—industrialization and extraction are at the forefront of settler colonialism (Whyte, 2016b).

Political geographers, although engaging deeply with ideas adjacent to settler colonialism, have not yet addressed the implications until very recently (Velednitsky et al., 2020). However, it is thematically emerging as an area of direct interest with pushes coming from within to reckon with the Eurocentric character of thinking on territory, land, and sovereignty (cf. Naylor et al., 2018). Indeed, the imposition of white supremacy and territoriality lie at the foundations of settler colonialism. As Wolfe (1999) and Veracini (2010) contend, there is an apparatus of elimination and sovereign entitlement that manifested in the permanent settlement and assertion of political economy by settlers, topics that are beginning to be taken up in broader discussions in political geography (cf. Bauder & Mueller, 2023; Weinger, 2021). Returning to the messy character of territory as power, Velednitsky et al. suggest that "settlers exercise *unbounded territoriality*, a strategy of territorial control best exercised by *not* delimiting boundaries, by not making clear the extent of sovereign authority" (2020: 6, emphasis in original). Moreover, the glorification of early pushes westward are extensions of this logic whereby progress is seemingly endless.

The oppressive character of settler colonialism does not exist without opposition, however. Indigenous resistance has been in existence for as long as the occupation of stolen territories. In this particular generation, the American Indian Movement (AIM) and broader struggles for "Red Power" surged from coast-to-coast, from the destruction of the Bureau of Indian Affairs building in Washington, D.C., to the occupation of Alcatraz in San Francisco, California (see: Johanesen, 2013). These broader mid-century movements were about Indigenous and civil rights. More recently, there is an entanglement of Indigenous and environmental rights activism as water protectors resist efforts of fossil fuel companies to build infrastructure—the NoDAPL (No Dakota Access Pipeline) and Standing Rock protests for example. There also exists ongoing efforts to maintain culture, history and language, while receiving political recognition at multi-scalar levels. Additionally, there are ongoing responsibilities to the land, where land as bounded territory, a resource, or property is rejected, and Indigenous peoples in many cases continue to have responsibility to land through place and kinship (Kimmerer, 2015). These resistance practices are complex. They sit alongside settler colonial realities. For the state recognized Lenape Tribe their resistance to

the settler colonial conditions of existence had been to, what members of the Tribe identify as, 'hide in plain sight' (Dunkley, 2019). Thus, to be the "keepers of the land" they were effectively forced to assimilate into white settler colonial spaces—something that we will discuss in the empirical section of the paper. And so, resistance by indigenous peoples in the U.S. takes many shapes.

Increasingly there is an interest in traditional ecological knowledge in the U.S. (Hosen et al., 2020) and many Tribes are being consulted in relation to climate change adaptation and mitigation practices as part of local and state planning processes—the Lenape Tribe are among those being called upon to consult on various green energy projects, for example. However, these consultations are still part of climate change narratives that are exclusionary and mired in western scientific technical solutions, settler white supremacy, and coloniality. Moreover, they require adaptation in settler bounded spaces that are not easily mapped onto ancestral Indigenous lands, or for example, U.S. reservation lands (Whyte, 2016b) and continue to be anthropocentric, not taking into account other non-human inhabitants (Wildcat, 2005).

Narratives of a climate apocalypse eclipse the already existing apocalyptic character of the war of five-hundred years. Indigenous peoples have long been withstanding an apocalyptic present that has divorced them from culture, language, spirituality, culinary, agricultural and harvesting traditions, and relations with the natural world. In these conditions, imperialism, extractivism, and the slow violence of environmental degradation proceeded. In the next section we turn our attention to climate coloniality in the settler colonial state with a focus on adaptation to climate change.

4. Coloniality of climate change adaptation narratives

As noted earlier, in a U.S. settler colonial context, settler colonialism is a historical process perpetrated through stealing lands, history, and native identity from the original peoples of the land; as such, settler colonialism acts to erase the identity, worldviews, and native claims of indigenous people to validate the colonizers claim to the land (Dunbar-Ortiz, 2014; Whyte, 2016b). Our discussion of coloniality of climate change is based on the premise that the world we inhabit is a colonial modern world. Ignoring this premise in the discussion of climate coloniality risks converting it into a metaphor (Bhambra & Newell, 2023). In this colonial modern world, global capitalism is not simply the consequence of colonization, it is a world where capitalism is reproduced through ongoing colonialism (Bhambra & Newell, 2023). Quijano traces the history of the colonial modern world to the conquest and colonization of the Americas (2000, 216). The global capitalist system in place today is founded on a set of social and economic relations around a single power structure formed through uneven relations of production and racial hierarchy. A codification of race along an axis of different melanin levels created a hierarchy of laborers in a global hegemonic system (ibid). In this coloniality of power, all the diverse tribes of the Americas become categorized as: "Indians," towards coloniality and the segregation of labor.

This racial colonial violence had larger implications for epistemic erasure, where one form of totality, in this context, Eurocentric ways of knowing and being is afforded supremacy (Quijano, 2000, p. 220). Fanon (1961) suggests that colonialism is not satisfied by only occupying the place of the native and erasing their history, in some perverse logic, it distorts indigenous history, disfigures, and destroys it. Thus, over ten thousand years of indigenous histories in the Americas were destroyed and distorted into the 500 years of so-called 'modern' history of white European exploration, conquest, and the colonial imagination of white supremacy.

Modernity presented a new idea of the future in the world imaginary. The white European was modern, and modernity Eurocentric. For non-European societies, futurity meant turning to Eurocentric knowledge and systems from past to future. Modern colonial rationality made it possible view Europeans as subjects and non-Europeans as objects of study, or exploitation. Additionally, the conceptualization of a 'dead nature' only valued for its resources and ready to be exploited, and its growth imperative that sustains global capitalism is at the core of Eurocentric knowledge.

This colonial, socio-environmental violence manifests in distinct ways. One of them is the 'power of death' or necropolitics coined by Mbembe (2003), that demonstrates that death is the ultimate power a sovereign can exert on racial others; the imagination of the colonizers dictates that the existence of a particular racial other is a direct threat to the colonizers, and whose biophysical elimination would strengthen the life potential and security of the dominant class. This imagery of creating "others" is intrinsic to the "colonial ways of worlding" (Spivak, 1985), which also points to colonial knowledge production that reflects asymmetries of power. Whyte argues that political relations established through settler colonialism "sought to weaken indigenous peoples' cultural and political capacities" (2016b: 12). Andreucci and Zografos note that states use this colonial logic of "inclusion" to improve and "exclusion" to sacrifice the lives of "others" in climate adaptation narratives to put the blame on "climate change" and erase the possibility of challenging colonial systems of power (2022: 92).

Climate coloniality is synonymous to the colonial character of human-induced climate change that impacts people in drastically inequitable ways across regions with varied circumstances. Colonial tools such as capitalism, neocolonialism, land dispossession, as well as labor and resource extraction in colonized/imperialized places made possible the degradation of the environment through the emissions of greenhouse gases, pushing the planet to an ever-closer tipping point. The coloniality that results from colonialism defines futures, epistemologies, global governance structures, discursive framings, imagined solutions, and interventions that are based on colonial knowledge production (Sultana, 2022a). Through these framings, colonial/imperial powers continuously reinvent extant hierarchies that persist in climate debates, negotiations, adaptation and mitigation tactics (Sultana, 2022a).

For indigenous survivors who are withstanding coloniality on stolen lands, adapting to climate change is nothing new. Colonial induced environmental change forced indigenous people from their homes to the point of extinction. Now the same cycle surrounding relocation and displacement is forcing indigenous people to adapt to environmental changes in ways that reifies the hauntings of settler colonialism (see Ramirez in Naylor et al., 2018). Moreover, the colonial practices that are producing environmental harms are also responsible for making adaptation difficult for indigenous people living in settler realities (Whyte, 2016b, 2017).

Climate change adaptation measures are likely to fail if adaptation means coping with and adjusting to colonial violence and systemic oppression in a climate changed world (Chakraborty & Sherpa, 2021). Non-indigenous and settler societies perceive climate change as an external threat that will create a dystopian future. Whereas indigenous societies believe that their vulnerability to climate change is an "intensification of colonially induced environmental change" (Whyte, 2017, p. 154). Whyte argues that indigenous people already live in a dystopian climate future where their native land, environment, culture, language, and identity is repeatedly stolen by the colonizers (ibid: 160).

Climate coloniality becomes invisible through universalizing discourses such as *anthropocentric* climate change, and the Anthropocene, which gained traction through the erasure of the history of global warming created and continued by extractive colonialism and industrialization at the hands of (largely) the United States and Western Europe (McEwan, 2021). The Anthropocene discourse implies that all humans share responsibility for human induced climate change, and experience an even distribution of the impacts of industrial capitalism and imperial/colonial relations (Schulz, 2017 in Whyte, 2017). For indigenous people, the Anthropocene is rooted in colonialism because it erases colonial violence to nature and disregards or divides human-non-human ecological relationships from the perspective of settlers and imperial colonizers (Mitchell, 2015 in Whyte, 2017).

Adaptation to climate change is thus rendered a problem for global humanity as a whole, homogenizing place-based contexts and relying on supranational structures to effect adaptation and mitigation measures. The global periphery, despite having many differences and complex histories, is rendered as a homogenizing unit to be dealt with cookie cutter technocratic adaptation solutions. Such technocratic climate solutions create sacrifice zones and so-called "vulnerable populations" and reproduce neocolonial relations that often make people more vulnerable to political ecological marginalization (Paprocki, 2021; Zografos & Robbins, 2020). The urgency of the climate crisis posed by the IPCC, makes little attempt to address the neocolonial structures embedded in the climate crisis. However, the "crisis" narrative results in those with the most power being able to ignore climate injustice (through the universalizing "anthro" and homogenization of place) and creates additional opportunities for land dispossession, cultural appropriation, and theft of indigenous ways of knowing and being in the name of green solutions (Whyte, 2020).

The coloniality of adaptation narratives is also visible in Eurocentric disaster planning and practices. For example, by examining the structural faults that fail to link Puerto Rico's colonial past with disaster planning, Rivera (2022) theorized "disaster colonialism" that deepens "coloniality of being". Rivera (2022) turns our attention to the "procedural vulnerability" that gets reproduced through people's relation to power and exercise of that power. By producing a "crisis" narrative and a futurity that is already lost, the disaster response can manage to deliver technical fixes that suggests "going back to normalcy" without dealing with the colonial past and social inequalities that produced "vulnerability" in the first place (ibid). Rivera also argues that "disaster colonialism" is used as a colonizing tool to produce indigenous people as the "vulnerable other" and normalize spatial dispossession that would not be possible if the "disaster" had not occurred.

Expanding on the argument stated by Rivera (2022), we add that colonial adaptation narratives create "vulnerable others" who need to be provided with technical measures to become "resilient" to climate change. A climate coloniality perspective shows how these "vulnerable others" are made and reified through white saviorism; and in the settler colonial context, 'settler saviorism.' Thus, experts are employed to render complex human-environment relations into simpler problems that can be managed and fixed. While indigenous people see adapting to climate change through more than 10,000 years of co-living in native lands, settlers see adaptation as managing lands and environments to stabilize capitalist extraction. As a result, adaptation solutions are by design enacted to fail.

These simplistic adaptation narratives are not just static projects, they produce discursive frameworks by which we view and act upon the world (Taylor, 2015). Enacting colonial climate adaptation narratives thus becomes a political process that serves to normalize a human-environment dichotomy and in the process invisibilize the ongoing colonial violence that takes place on stolen lands.

5. Negotiating stolen territories in a climate changed world

Indigenous people struggle to survive in a world based on settler histories of modernity, conquest, and development. At the same time, they struggle to preserve their indigenous ways of knowing and being in a world that was designed to erase and/or extract from them. As noted earlier, much adaptation research that draws from indigenous knowledge tries to integrate (or appropriate) local wisdom with western science (see: Makondo & Thomas, 2018). This act simultaneously can be interpreted as "settler moves to innocence" to assuage white settler guilt (Tuck & Yang, 2012). Moreover, many settler strategies towards adaptation are premised on the removal of people from so-called 'vulnerable' lands and are viewed as genocidal (LaDuke, 2016). Such white settler expectations remain a major challenge towards having dialogue that embraces complexities, multiple ways of thinking and doing, as well as reciprocity towards inclusive adaptation planning. Enabling a conversation on adaptation without thinking about the asymmetric power relations between indigenous and settler societies fails to decenter settler ways of thinking. Moreover, it rarely suggests an indigenous futurity by largely ignoring the possibilities of land reparations. Fanon argues "for a colonized people, the most essential value, because it is the most meaningful, is first and foremost the land: the land which must provide bread and, naturally, dignity" (1961, 9). Another aspect of indigenous futurity is to confront the fallacy of modernity and to delink it from the coloniality of knowing and being (Mignolo, 2007). For Mignolo (Mignolo, 2007), "de-linking presupposes to move toward a geo- and body politics of knowledge that on the one hand denounces the pretended universality of a particular ethnicity (body politics), located in a specific part of the planet (geo-politics), that is, Europe where capitalism accumulated as a consequence of colonialism. De-linking then shall be understood as a de-colonial epistemic shift leading to other-universality, that is, to pluri-versality" (ibid 453). Part of this shift includes listening and learning from alterity.

To consider possibilities for a pluriversal future, we must attend to the hierarchical power relations created and made normal, natural, and desirable in perpetuity, and therefore rendered invisible in settler society. As such, the violence that is enacted through that power, such as capitalist exploitation, pollution, dispossession, and greenhouse gas emissions also remains normal and natural (Ahenakew, 2016) while simultaneously in need of fixing. When a particular social group has power to decide what is normal, natural, and desirable, it also has the power to decide what knowledges are desirable or necessary, and therefore can be attributed to settler institutions without acknowledgement or changing hierarchical power relations that persist in the production of knowledge. We fear that sharing indigenous knowledge of adaptation with settler institutes without fully comprehending the long-standing power relations and inequities may end in the appropriation of indigenous knowledge without any change for indigenous people. However, we also recognize that by co-creating knowledges of adaptation and participating in the 'renewing' of indigenous memories can bring indigenous people together to exercise their self-determination (Kimmerer, 2015; Whyte, 2017).

Here, we point to the normalized power and hegemony of climate change narratives firmly enmeshed in climate coloniality and shout our dialogue in disruption of hegemonic 'truths' about climate change adaptation on stolen land. We start this process of shouting with an environmental oral history as a form of praxis of care to envision futurities of healing, nourishing, and relating (Simpson, 2017 in Sultana, 2022b). We offer this oral history, as part of possible antidotes to the technocratic and universalizing climate change adaptation narratives; as an example of the potential, fruitful directions we can imagine in climate conversations.

6. Climate change, indigenous futurities, and Lenape lands

We now turn to the environmental oral history given by Chief Dennis White Otter Coker, Principal Chief of the Lenape Indian Tribe of Delaware. A lifelong resident of the Cheswold community and direct descendant of Cheswold families that can be traced back to the 1760s, Chief Coker has been the democratically elected figurehead of the Lenape Tribe since 1996 and was pivotal in the effort to gain state recognition for the Lenape Peoples. We draw from five, two- hour audio recorded conversations, each with a different theme: (1) place and home; (2) movement; (3) threats and fears; (4) changes; and (5) adaptation. These were broader talking points we used to focus the

conversation as it relates to climate and other environmental change.[3] Selections from these dialogues are presented in their rich detail in the pages that follow to amplify our conversations around adaptation, displacement, environmental change, and coloniality. This data and analysis is not intended as a comprehensive nor homogenizing viewpoint for the Tribe, nor Native Americans, nor Indigenous Peoples globally. Nor do we intend to romanticize indigenous pasts or relations to the land, but instead offer snippets from this oral history as an account by a "keeper of the land" as they seek to reconcile their knowledge in place.

"Man did not spin the web of life; he is just merely one strand of it. And what man does to the web, he does to himself …" (attributed to Chief Seattle), Chief Coker noted mid-way through our first session, when asked about how we can rebuild indigenous culture and futures at a time when the world is already in turmoil due to human-induced climate change. Contrary to many scientists and policymakers who are putting forward a doomsday scenario due to climate change, Chief Coker shared that there are a thousand years of Lenape history of adapting to environmental changes, to call for a regenerative process of mutual respect and healing. Adapting to environmental change in indigenous lands—as part of this conversation—is not fully comprehensible without thinking about the disruption to indigenous way of life created by settler colonialism. Particularly because, as discussed earlier, capitalism, settler colonialism, and climate change are constituent (Whyte, 2016b). Throughout our conversations, Chief Coker emphasized the relation to land, connections to place, indigenous spirituality, and long-term cycles of migration all disrupted by colonialism and ongoing coloniality to the extent that repatriating indigenous life or imagining a future where there had been no "contact" produced a prolonged and thoughtful silence in our dialogue. However, there is a longer history that foregrounds these silences, a thread of which concerns the ability of the Lenape Peoples of Delaware to withstand ongoing coloniality by, what has been termed by the People as "hiding in plain sight." This speaks to some degree to the erasure that is/was experienced by Indigenous peoples, whereby removing the People from the landscape allows for state control and assertion of sovereignty (cf. Simpson, 2017).

We started by asking Chief Coker to define home and the relation to land in the state that is now called Delaware:

> We as a people, and all the Native people on the East Coast, have been dealing with environmental changes for thousands of years … we have been retreating inland since the beginning of sea level rise … but what's very different about this time is the fact that we have nowhere to go now. We've been boxed in by a colonizing society that has, just forced us to be in one place, instead of being spread out over a longer, or larger, geographic area. Now, this place for me is my home … I mean my roots are so deep in this soil, that it just has never occurred to me to leave. All my family, my ancestors, that are buried here, that are interred in this ground. And I know that when I do go away, I can't wait to get home.

Contact with the modern/colonial world had a profound impact on the way of life of the Lenape people. The expansion of the colonial project and its resulting displacement of indigenous lives also shaped the way how the Lenape think about their home and their ancestors the "keepers of the culture and tradition" having been displaced.

Pre-contact, before the displacement and division of the People, Chief Coker describes interactions with land and territory as something that he can only imagine now. During pre-colonial times, Lenape people were in his words, "water people." They depended on the Bay as a food source and their community spread across the DelMarVa peninsula. In summertime they would be on the water, and in wintertime, they would be inland, closer to the center of the Peninsula. They established territory for hunting, but Lenape land was porous, there was no designated boundary. Other tribes were welcome with permission and depending on the "bounty offered." The notion of private property was absent in Lenape culture. However, with contact and the violence of colonialism, came the apocalyptic character of coloniality. Colonization disrupted the way Lenape people interacted with their environment and seasonal changes. Colonial expansion, dispossession, and extraction meant that they could no longer migrate seasonally to sustain their way of living and being. This change, in effect, meant remaining in their home and on their land, but experiencing internal displacement and identity loss.

6.1. Coloniality and displacement

The colonial domination of indigenous lands has the "doctrine of discovery" at its foundation (Nichols, 2022). Chief Coker elaborated on these beginnings "… those Christian monarchs of Europe, were given permission by the Holy See, the Pope, to go out there and find these new worlds and Christianize everything that you find by any means possible, including extermination." This understanding signals the necropolitics discussed earlier in the paper—where a sovereign, through racialized power dynamics maintains power over life and death (Mbembe, 2003). In discussing Lenape territories and colonization in more depth, Chief Coker expounded on how relations to land multiplied disruptions:

> Our life was not a struggle for us. But it became a struggle. And when you're told repeatedly that you're a savage, a heathen, and an infidel, and you're a devil worshipper because of the way you live, because of the things that you believe, it just total denigration from people that were supposedly the leaders of this colonial system … And those, we called them the "Black Robes", the preachers that would come in. They would send in the Black Robes first and their goal was to pacify you and disarm you and then the military would follow suit and, clean up what was left.

The violent dispossession of land is but one facet of the impulses of coloniality, which displaced the People and their Knowledges. And so, while some of the People remained through internal displacement and forced assimilation, many more were lost either through displacement outside of their traditional territories, or through the violence of contact. It is estimated that ninety percent of the Lenape population was decimated upon the first contact with the colonizers:

> Smallpox was devastating to us … The traders would interact with them on the shore, they may get infected, they'd head inland, they'd canoe for 3 or 4 days or 5 days and all of the sudden they're contagious because they've run the course of their infection … we've identified six smallpox outbreaks that took place in the Delaware Bay between 1600 and 1700. So, with every outbreak, we would lose our wisdom keepers, our teachers, our oral historians, and then our next generations, and then that happened every 15 years. So, at the end of the 17th century, we had experienced an almost 90% depopulation. We were just outmanned and outgunned and just totally disrespected in our way of life, the way that we viewed things, and it didn't fit into their, to the colonial idea of land ownership.

In its totality, colonial domination resulted in a multi-fold scenario of violent displacement and a sedimenting of coloniality, which form the backdrop of irreversible environmental change. The destruction of the native population during the colonial expansion through diseases is one way 'necropower' (Mbembe, 2003) manifests in the colonial imagination of settling territory.

6.2. Environmental changes in a settler colonial landscape

The domination of Lenape lands was not limited to cultural

[3] These oral histories were conducted over a six-month period between October 2021 and April of 2022 by Naylor and Bryan and the themes were developed by Bryan in conversation with Naylor and Coker. All oral history sessions were held at the official Center of the Lenape Tribe in the Cheswold/Dover area.

expropriation, it also had a deleterious impact on the environment itself. Chief Coker suggested that the climate change debate that revolves around present fossil fuel emissions is not effective because they do not take account of historical emissions due to colonization. Citing examples from the colonial dispossession in his own community, Chief Coker discussed these impacts:

> … When we talk about human induced climate change, we tend to pinpoint it around our use of, fossil fuels and the industrial revolution. And I want to throw the idea out there … that human induced climate change, like the rapid warming and the rapid creation of conditions that are going to be inhospitable for life, really started with the colonial period. We just couldn't understand their veracious need for wood because we didn't use wood like that. Our philosophy was to take what you need and give thanks for everything that you take … They were just killing all the animals, they truly were harvesting resources. Where we nourished our relations with those same resources, that we didn't consider to be resources. To us, they were our relatives.

The rapid capitalist extraction of wood, animals, and water forced the Lenape people to move inland, bearing witness to the destruction of life:

> … and then just sitting here having to live with all of that destruction, having a cultural philosophy that's supposed to respect nature and then understanding, that look there's nothing we can do about it. You have to go along to get along. I truly believe that one of the reasons that those that stayed behind did stay behind, was to preserve that connection with the land.

In our discussions about environmental change, we broached the subject of the "Anthropocene," and Chief Coker challenged the anthropocentric view of climate change regarding the issue that it "blames all of humanity" for climate change. This perspective is consistent with others that suggest the unevenness of climate disturbances (cf. Sultana, 2022b; Whyte, 2018). Chief Coker mused that while it is "true" that if we "take humanity from nature, the nature will thrive," it does not mean that everyone is responsible for the environmental destruction caused by the colonizing appetite (as we and others suggest).

> Finding a scenario that compared apples to apples is difficult cause if you have one society that's an apple that is adhering to the strict 10,000-year-old practice of honoring Mother Nature and then you have the other society, right now the predominant one, that's an orange, that has zero respect for Mother Nature … we weren't anthropogenic, where this new culture is. It's all about them.

However, the ability to denounce colonial power or resist the practices that subsumed them in settler society by large measure is a long-standing challenge for the Delaware Lenape because of the cultural assimilation they withstood over five-hundred years of colonial history. The ability to claim Native heritage and to receive state recognition as an American Indian Tribe is only the beginning of reconciling the centuries of survival strategies put in place.

6.3. Adaptation in the face of coloniality

To adapt to environmental changes in a colonial landscape, the Lenape People assimilated into colonial society and did whatever they needed to survive. According to Chief Coker, "… the People have been adapting for a long, long time. And they've been adapting to change, environmental change, more broadly, and their adaptation to climate change may be subtle and unnoticed, that they might not even know they're adapting when they have no choice. And they're so good at adapting that it's not something they think about these days or anymore." As stated earlier, the primary survival strategy of adapting to a colonizing society was to "hide in plain sight," to become "unnoticed." To do so, the Lenape Peoples first Christianized to remain on their land, what is today the Cheswold area of Kent County, Delaware. Second, they exercised endogamous marriage in a racialized society where they were largely known as "Delaware Moors" in the official record. Their endogamous marriage created an insular community with a high blood quantum allowing them to quietly maintain an identity as Lenape Indians. Although there is a community of people, state-recognized Tribes do not have the same rights as federally recognized Tribes and a long-term goal of the Tribe has been to reclaim spaces in their community.

The Fork Branch area near Cheswold is a key site for the contemporary generation of Tribal members that they are trying to reclaim and preserve as Lenape land. However, repatriation of land still sits within colonial-imperial systems and the land that is currently held by the Tribe is held under capitalist relations of private property. A quarter-acre piece of land that was recently reclaimed by the Tribe was used as a dumping ground for decades. As part of a larger effort to restore the site, volunteers cleared the site of garbage, including hundreds of tires, broken glass, machine parts, car frames, and the invasive *Ailanthus altissima* (Tree of Heaven). Without romanticizing the return of a small piece of land, it is important to note that this site is not just a piece of the Tribe's past, it is an opportunity to exercise relationship building among inhabitants as is often discussed in the literature (Kimmerer, 2015; Wildcat, 2005).

The restoration of the Fork Branch site is also part of a new adaptation process, one that is directly addressing the loss of Tribal Knowledges and a safe climate. "We gotta go back, maybe even 100 years back. And if we can get things back to where they were 100 years ago, then we could possibly say it's sustainable from that point forward …" In cooperation with multiple groups the site was transformed from a host to garbage and invasive species to a forest garden. "When we had the opportunity to create that forest garden, at Fork Branch, and take a piece of colonized property that had been trashed, and regenerate that property back and set the example that we can do this if we are committed enough to the philosophy of regeneration." To put the ideas of indigenous adaptation to environmental change into perspective within a colonizing society, we asked Chief Coker to reimagine a world without colonization. He suggested:

> There would be no apocalyptic experience … but if there was a technological revolution that the Indians had access to, they would have been the first ones to use it, they would have used it from a much different perspective. They would not have used it to destroy the natural world with capitalistic extraction. So, I mean that to me is really the root of many of our problems.

In this non-apocalyptic vision, scientific advancement would not have at its foundation growth and profit. Understanding that 'if we only limit ourselves to growth and profit, we are forsaking a lot of scientific advancement that did not have a metric for it.' "I think that if we had given the American Indians the benefit of technology, we would be in a much different place today. You know, we would not be continuing to colonize the world."

6.4. Reimagining indigenous futurities

To imagine a future where indigenous knowledge of adaptation to climate change is respected and acknowledged for a sustainable future, Chief Coker emphasized the sovereignty of his community. "… They (the settler colonial state) need to do more than that (recognizing their colonial history, violence, racism, and segregation), because they need to be less selfish and think less about themselves and more about the community. That's what we were all about. We were all about community." Indigenous futurity for the Lenape Peoples is not about getting federal recognition and maintaining colonial-imperial capitalist relations. It is about being a sovereign entity to work and thrive and to be able to tackle climate change.

> I don't need the federal government to acknowledge my sovereignty or to grant me sovereignty. The creator already did that, you know? The creator gave us our sovereignty. He put us here on this land thousands of years ago. And the simple fact of the matter is this: when you are successful at federal recognition, then you automatically become what is known as a domestic dependent sovereign. So, your sovereignty depends on a greater sovereign to issue you that sovereignty. So, and that greater sovereign can take it away whenever he feels like it. Which has happened many, many, many, many, times in American history, where the federal government, you know, de-recognizes, they call it "terminate". They terminate tribes … So now the federal government says to me, "if you relinquish some of your sovereignty to me, I will give you health care, I will give you education, I'll give you economic opportunities, I'll give you housing." They're just buying you with gifts and trade goods to get you to submit to their jurisdiction. Lenape sovereignty is not for sale. I would, in essence, give up my land claims that I would have, which I think are very valid on the international stage, the United Nations stage, because the Declaration of Rights of Indigenous Peoples, which is a resolution that has been actually signed by all UN member nations specifically states that I have a right to my traditional homeland, I have a right to my own political affiliation, I have a right to clean water, I have a right to clean air, I have a right to my own language, I have all of these Indigenous/human rights, these rights that the creator gave me that aren't dependent on someone else reinforcing. I have these rights already, just by being human.

According to Chief Coker, demonstrating sovereignty is only possible if the Lenape community can act as a sovereign and manage their own affairs without interference from any other entity. The current colonial practice of federal recognition he suggests works as a trade off, and what the government gives, they can take away.

For the Lenape people, acting as a sovereign entity is a goal towards their indigenous futurity. But acting as a sovereign entity in a climate-changed world does not insulate the Lenape from further environmental change, nor coming adaptation measures. The Fork Branch site described earlier is but one example of this conflict. That land has been exploited, "… when they took that land it was pristine. It was without environmental contamination. The EPA (Environmental Protection Agency), it would never have been on their radar. But now when they want to give it back to us, it's much less than pristine, and it's got environmental restrictions on it. Have we really done what the intent of land back is, or are we just finding a cheap way to check a box?" Our conversations ended with this question to open up the possibility of an alternative future.

7. Conclusion

Indigenous knowledge in adaptation research is only appropriate when we talk about inclusion for environmental and social justice as well as futurities. But what next? Are we talking about indigenous futurities in a climate changed world? What is the limit of western adaptation knowledge in bringing justice to people whose land has been stolen by settler colonial violence? We try to answer these questions by attending to indigenous placemaking in settler colonial territories. By drawing from the oral history of Chief Dennis Coker of the Lenape Indian Tribe of Delaware, we see indigenous adaptation to climate change is not separate from their struggle to survive historical and ongoing settler colonial violence. The neocolonial power structure that puts indigenous people's experience of climate change into the adaptation bandwagon without acknowledging the colonial violence further reproduces the haunting of the climate coloniality engrained in Eurocentric adaptation discourse. We position our paper against this invisible power structure by carefully making a space for accountability (see: Daigle in Naylor et al., 2018) and mutual healing with the indigenous people of the stolen lands.

IPCC in one of its most recent climate change synthesis reports has referenced "colonialism" as not only the driver of climate change, but also something that exacerbates the vulnerabilities of communities (IPCC, 2023). This recognition opened the conversation about colonialism to different actors and institutes, including those whose discursive framings and imaginations often appropriate the meaning of colonialism to reinforce hegemonic power relations, thereby rendering climate coloniality a metaphor (Bhambra & Newell, 2023). The conversation around adaptation needs to account for this coloniality of power and historicize climate change as a colonial process where indigenous people have been adapting to ongoing colonial violence. If adaptation is a process of adjustment to confront climate change, it needs to do so by opening the conversation for climate reparations. The current limited technocratic conceptualization of adaptation only serves to reinforce the coloniality of climate change, as we argued throughout this paper. This limited conceptualization also gives a false notion of an "adaptation limit" based on an imagined adaptive capacity of the "vulnerable others". We urge scholars to critically reflect on this limited and limiting knowledge and meaningfully engage with plural epistemologies of adaptation to make way for reparative justice and indigenous futurities. If adaptation is a process, indigenous adaptation is an unfinished task until the stolen land is repatriated from the colonizers. It is only by having stolen land returned that a healing process can begin in earnest.

CRediT authorship contribution statement

Faisal Bin Islam: Writing – review & editing, Writing – original draft, Visualization, Formal analysis. **Lindsay Naylor:** Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **James Edward Bryan:** Writing – review & editing, Methodology, Investigation, Data curation, Conceptualization. **Dennis J. Coker:** Writing – review & editing, Methodology, Data curation.

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