Climate Special Issue Foreword

Tracie Mafile'o
Avondale University

Climate change brings environmental, social, and cultural disruption to peoples and communities globally. Indigenous peoples experience these impacts most intensely (Reyes-Garcia et al., 2024), ranging from atoll islanders' diminished access to traditional reef fishing sites, to loss of lives and livelihoods because of drought-induced bushfires. While climate disruptions perpetuate long standing marginalisations and oppressions (Ngcamu, 2023), Indigenous resurgence, resistance, and resilience is evident. There is a need to dislodge the centre position of Western science and to centre Indigenous knowledge, perspectives, action, and lived experiences of climate disruption response. This calls for greater intersectionality to drive innovation in decolonising and Indigenising climate scholarship (Johnson et al., 2022). Indigenous knowledge is key to reversing the trajectory of climate disaster – not merely for Indigenous communities but all of humankind.

This special issue of the *Journal of Indigenous Social Development* (JISD) brings together a global collection of Indigenous voices to examine the resurgence of Indigenous thought and action amidst climate disruption. The five contributions in this issue examine how Indigenous communities in different parts of the world are leading their own climate responses and 'just transitions', grounded in their connections to territory, ancestral knowledges, and responsibilities to current and future generations.

Williams, Awasis, and Ramnarine's (2025) contribution highlights the unique challenges Indigiqueer individuals face in the climate emergency, rooted in historical and ongoing colonial legacies. The authors argue that Indigiqueer perspectives disrupt mainstream

climate justice narratives, including those within non-Indigenous queer communities, in transformative ways. They highlight the distinct roles and contributions of their communities in fostering cultural-ecological and climate resilience (CECR). CECR recognizes the climate crisis as a cultural emergency and asserts that true resilience can only be achieved by revitalizing connections between human and more-than-human worlds.

Colonialism has historically erased diverse gender and sexual identities in Indigenous societies, leading to marginalization and environmental dispossession. However, Indigiqueer individuals possess unique knowledge and agency that can contribute to climate adaptation and resilience efforts as well as in transnational and diasporic contexts. Their perspectives challenge dominant Eurocentric and heteronormative climate justice frameworks, instead promoting relational, land-based approaches to sustainability. Indigenous knowledge systems inherently value diversity and interconnectedness, positioning Indigiqueer individuals and agencies as contributors to cultural-ecological restoration and climate resilience. Overall, the authors argue that Indigiqueer agencies contribute to climate justice in three main areas: 1) land-based relationality and kinship; 2) diversity of tactics and methodological praxis; and 3) multiplicity of Indigenous cosmologies, epistemologies, and ontologies.

Writing from a South Pacific context, **Raisele, Waqa, and Lagi's** (2025) article explores the psychological, cultural, and ontological impacts of the climate crisis on two Indigenous Fijian communities - Nukui and Vunisavisavi - facing the immediate threats of rising sea levels and environmental change. Their paper highlights the often-overlooked mental health consequences including eco-grief, solastalgia, and pre-traumatic stress associated with potential displacement of Indigenous communities.

Employing the Vanua Research Framework and the Na Bu Ni Ovalau Research Framework, the study follows a community-engaged, Indigenist approach, incorporating *veitalanoa* (dialogue-based discussions) with youth, women, and men. Thematic analysis identifies three core themes: 1) Effects of climate crisis on communities' ancestral land (e.g. changing weather patterns impacting traditional weather forecasting and cultural preservation efforts, with emphasis on ancestral burial sites); 2) Psychological reactions to these effects (e.g. concerns about their children's future and anxiety over impact on livelihoods which rely on fishing); and 3) Ontological and epistemic shifts within the community (e.g. sense of self in relationship to land).

Despite these challenges, the study highlights community-driven resilience strategies. The authors advocate for policy interventions that integrate mental health support, Indigenous-led climate adaptation, and legal protections for ancestral lands. It calls for recognizing Indigenous knowledge in climate governance, ensuring solutions are culturally sensitive and community-driven.

Extending the focus on mental wellbeing, **Hill, Russette, Steinberg, and Fernandez** (2025) write on the role of Indigenous Traditional Ecological Knowledge (ITEK) in sustaining ecosystems and promoting Indigenous health. The research introduces Indigenous Eco-Relational Engagement as a framework that measures the impact of land-based cultural and spiritual practices, as well as Indigenous language use, on mental health. The study utilized data from the Healing Pathways Project, drawing on American Indian or First Nations peoples from four U.S. reservations/nations and four Canadian First Nations. Zero-order correlations indicate Indigenous Eco-Relational Engagement (IERE) and nature-based activities are positively associated with positive mental health. The study shows significant positive association between

participation in IERE and positive mental health. While cultural participation was found to be a strong determinant of mental health, socioeconomic factors, particularly low income, were negatively associated with well-being. The authors emphasize the importance of policy efforts that restore Indigenous cultural traditions, sovereignty, and access to land-based practices as essential components of climate and health interventions. This research contributes to a growing body of literature advocating for the integration of Indigenous knowledge systems into environmental and public health initiatives.

Carroll, Redvers, and McGregor's (2025) contribution examines the role of Indigenous Knowledge (IK) in addressing climate change through a comparison of the policy approaches of the U.S. and Canada regarding IK inclusion. The authors highlight that Indigenous Peoples have stewarded their environments for millennia through deep-rooted knowledge systems grounded in Natural Law. Despite this, state-generated climate policies often fail to meaningfully incorporate IK in decision-making. As such, the article seeks to compare the White House's guidance for federal agencies on Indigenous Knowledge policy with Canada's Indigenous Knowledge Policy Framework (IKPF), while also examining the broader policy implications for Indigenous Nations and communities. The authors propose five policy recommendations to enhance the rights-based inclusion of IK in Canada, emphasizing the need for Indigenous leadership, ethical engagement spaces, cooperative knowledge systems, reconciliation through Indigenous values, and stronger protections for Indigenous lands and knowledge. The article concludes that while policy inclusion of IK is an essential step, true effectiveness will only be achieved when Indigenous rights, relationships, and values are fully recognized and respected in climate governance.

Finally, **Pierson (2025)** explores the practice of visiting with land as an act of restful resistance. Adopting a Métis-feminist approach and autotheory methodology, the author stories

their experience and learning from a father who guided and modelled the practice of visiting with land. Such practice encompasses both care for land and the reciprocal healing for self, relationships and community. Storying includes critical reflection on different times in the life journey where capitalist, colonial concepts of land and productivity took prominence, and a disconnect from land was experienced. The narrative includes the way-finding back to relationality with land. These experiences underline how visiting with land resists colonial and capitalist expectations of 'productivity' and centres knowledge and relationships flowing from Indigenous ways of knowing and being. Rest as resistance, through visiting with land, it is argued builds and maintains sustainable communities and activism.

In summary, this special issue adds to Indigenist scholarship offering Indigenist solutions to global climate disruption. Collectively, the articles illustrate the rise of Indigenous thought and voice amidst climate disruption, with two shared themes strongly reflected across the contributions. First, there is an ontological grounding in the relationality between humans and the more-than-human. It is this ontology which surfaces hopeful solutions. Second, intersectionality is promoted in the analysis and response to climate disruption. Climate disruption responses must include critical linking between varied experience, between once-siloed disciplines, and across time and space. In the current moment, there is an urgent need to resist the perpetuation of coloniality which ultimately fuels climate disruption; it is timely to further cement our Indigenous solidarities.

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Disrupting the Climate Emergency through Indigiqueer Futurities

Lewis Williams
Western University

Sakihitowin Awasis
Western University

Jordan Ramnarine
University of Toronto

Abstract

The climate emergency poses particular challenges for gender and sexually diverse members of Indigenous communities, rooted both in the historical legacies of colonization and its ongoing forms. To date, there is a dearth of research documenting the climate change experiences of Indigiqueer peoples. Existing research demonstrates clear pathways between the social and Indigenous determinants of health and vulnerability to climatic shifts and extreme weather events for Indigenous and LGBTQ+ communities independently of each other. People at the intersection of these identities – those who are both Indigenous and have gender or sexual diverse identities – will inevitably encounter heightened challenges relative to each population. Furthermore, lived experience of climate impacts and saturation in "climate-vulnerability" discourse has prompted Indigenous and LGBTQ+ advocacy and action regarding the particular capabilities they can contribute to climate change science and strategy. However, within both Indigenous and LGBTQ+ communities, the unique challenges and potential contributions that Indigiqueer peoples might make to climate adaptation and mitigation strategies – and more broadly to Indigenous futurities and planetary well-being – are vastly under-researched and overlooked. Yet many Indigiqueer peoples are actually on the frontlines of climate justice movements, embodying unique cultural-ecological resurgent agencies that arise from intersecting identities and contributing to the epistemic diversity (multiple ways of knowing) of queer climate justice. Accordingly, this commentary by two Indigiqueer scholar-practitioners and one queer racialized scholar argues that Indigiqueer peoples have unique agencies with which to respond to the climate emergency. Just as significantly, we argue that these agencies, which are sometimes overlooked within Indigenous environmental justice frameworks, have broader relevance for the cultural-ecological restoration work which is so urgently needed for planetary health and wellbeing today.

Introduction

Human-caused environmental change is not new, but climate impacts – both dramatic and subtle – are now evident everyday (The Commonwealth Scientific and Industrial Research Organization, 2024). Despite the proliferation of climate justice debates, equity considerations remain predominantly western and human centric. These stand in stark contrast to Indigenous environmental justice perspectives, which address the well-being of all entities – including human and more-than-human (McGregor, 2018).

Indigenous peoples have long navigated and adapted to ecological collapse. Many now regard rapid climate change and the associated dispossession of cultural-ecological communities to be the result of colonialism's intensification (Guerrero, 2023; Whyte, 2017). Given the centrality of land to Indigenous wellbeing, as well as the accelerating impacts of global neoliberalism, ecological extractivism, and severe weather events, environmental dispossession is a key contributor to Indigenous health disparities (Richmond & Ross, 2009; Greenwood et al., 2018). These negative health impacts are arguably exacerbated further for Indigiqueer peoples, given their unique roles and responsibilities to the human and more-than-human communities of which they are part.

Despite extensive literature on Indigenous health disparities, there is comparatively little research on Indigiqueer wellbeing, especially regarding the climate crisis (Ramnarine, 2023). However, current evidence pertaining to climate health impacts on lesbian, gay, bisexual, trans, queer, and other sexual and gender minority (LGBTQ+[1]) communities – which can include Indigenous peoples – demonstrates clear pathways between the social determinants of health and the mitigation of these impacts on health outcomes (Goldsmith & Bell, 2022; Kilpatrick et al.,

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[1] We use the acronym LGBTQ+ to refer to lesbian, gay, bisexual, trans, queer, and other sexual and gender minority identities which are primarily rooted in Western epistemological perspectives.

2023; Kivioja et al., 2023). Given the health impacts of the climate emergency on Indigenous and LGBTQ+ communities independently of each other, it is reasonable to assume that those at the intersection of these identities (i.e., Indigiqueer peoples) will face increased risk compared to each group individually.

Current mainstream conceptualizations of queer climate justice[2] often centre Eurocentric epistemologies (Carr, 2023). Specifically, Carr (2023) argues that queer climate activism is uniquely positioned to challenge the hypermasculine cultural norms contributing to the extractive logics of planetary destruction, while Indigiqueer and Indigenous perspectives remain marginalized. The dominance of cis-heteropatriarchy in climate governance reflects oppressive structures that naturalize domination of land, resources, and bodies (particularly racialized femme, queer, and trans bodies). The imbrication of this ideology with settler colonialism and capitalism fuels environmental degradation through toxic hypermasculinity; this framing positions the earth as an object to be exploited, rather than a living network of relations, mirroring the violent erasure of Indigenous and gender-diverse epistemologies under colonial modernity. Emerging non-western queer perspectives have led to the application of anti-colonial thinking and practice within climate justice efforts (Aung, 2023). To this end, Aung (2023) advocates for the power of queer resistance to oppose colonial forces attempting to "wipe out the diversity of sexuality and gender" (para 18). Such approaches unsettle binary epistemologies of sexuality and gender through contesting and resisting normative structures that underlie interconnected systems of oppression (Marshall, 2021), revealing how cultural-ecological resurgence and climate justice are contingent upon dismantling the cis-heteropatriarchal and settler-colonial formations that condition ecological devastation.

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[2] Climate justice refers to the intersection of queer politics and human equity concerns

We further extend this analysis though emphasizing the interrelationship between the contributions of queer normativity (the normalization of difference) by highlighting the work of Beze Gray, an Anishinaabe/Lenape/Oneida Two-Spirit land defender, who explains how "protecting future generations" is a part of "what we consider Indigenous Law" (McSwain 2024, para 2). Furthermore, as we discuss later in this commentary, queer normativity is embedded in the sexual and gender-diverse epistemologies and cosmological frameworks of our Indigenous ancestors.

Throughout this article, we use the term resurgence and on occasion thrivance. This is deliberate. The roots of the term thrivance are apparent in the work of Anishinaabe scholar, Gerald Vizenor, who uses the term survivance to encapsulate both "survival" and "resistance" and describe "an active sense of presence, the continuance of narratives, not a mere reaction or survival." (1999, p. vii). Thrivance builds upon this concept to emphasize intersectionality and shift focus to Indigenous flourishing, joy, and wellness. Principles of thrivance include kinship relations, relational accountability, refusal, radical love, multiplicity, and transformative justice (Jolivétte, 2023). Resurgence further emphasizes Indigenous anti-capitalism, self-determination, land reclamation, and relational forms of governance (Simpson, 2017; Coulthard, 2014; Williams, 2022). Both verbs open the imaginative space for Indigenous Futurities, which foreground Indigenous epistemologies, realities, and temporalities in ways which are unfettered by the imposition of western separatist frameworks of capitalist accumulation and linear modes of time.

We contend that Indigiqueer perspectives challenge dominant climate justice framings, including non-Indigenous queer pluralities, in radically generative ways. As scholar-practitioners engaged in climate action and cultural-ecological restoration work, we look past the colonial

gaze - a colonial power dynamic in which the colonizer represents colonized people as "other" – which has pathologized Indigiqueer bodies, to offer our perspectives regarding the unique agencies and contributions of our communities to much needed cultural-ecological resurgence and climate justice. The climate crisis is a cultural emergency, and cultural-ecological resurgence can only be built by restoring practices of connectivity between human and more-than-human worlds (Williams, 2022).

Lewis Williams identifies as Takatāpui person of Māori, specifically Ngāi Te Rangi descent who is queer. Sâkihitowin Awâsis is an Anishinaabe-Métis Niizh Manidoo (Two-Spirit) of mixed descent from the Pine Marten Clan. Jordan Ramnarine is a queer Indo-Caribbean person, descending from Dalit indentured labourers that were forcibly migrated to Trinidad and Tobago. This commentary is informed by our own positionalities, as well as reflections arising from exploratory conversations between each other around these themes. Central to our methodology is the Māori-based concept of whakapapa - the genealogy between entities, living and non-living, seen and unseen – enabling us to draw on and share our respective epistemological and ancestral lineages which historically traverse continents and oceans. For example, Lewis Williams, through ancestral migration, has a long lineage of Takatāpui ancestors throughout the Pacific (including Samoa) through their genealogical connections to ancestral migration waka (canoes). Given the fragmented knowledge pertaining to pre-colonial Indigenous genders and sexualities, as well as their roles in Indigenous societies, the views offered in this commentary are not intended to provide a comprehensive discussion, but rather a jumping-off point for provoking Indigiqueer agency in enabling cultural-ecological resurgence and the thrivance of planetary kinship relations. The intersections between colonialism, climate emergencies/resilience, and the erasure/resurgence of Indigenous genders and sexualities are

vastly underexplored, yet there is much that can be learnt through bringing the epistemologies, traditional roles, and unique agencies of our Indigiqueer and otherwise-colonized ancestors to contemporary cultural-ecological challenges.

Historic and ongoing colonization of Indigiqueer peoples

Pre-colonization, Indigenous women and LGBTQ+ peoples had tremendous autonomy, often holding well-respected roles in our communities and governance systems. Colonial structures of power that imposed heteropatriarchy onto Indigenous communities contributed to the erasure of traditional gender variant roles and sought to control and pathologize Indigiqueer bodies.

Colonial powers throughout Aotearoa have vigorously sought to suppress precolonial expressions of Māori genders and sexualities (Hutchings & Aspin, 2007; Paora, 2019). For example, sexual organs in whakairo (carvings) were often removed (Aspen, 2019) with other whakairo depicting same sex relationships either destroyed or exoticized in the museums of colonizers. The removal of references to diverse gender and sexual identities within moteatea (chants) and waiata (songs) paralleled the criminalization of homosexuality and female impersonation by colonial governments. For takatāpui, colonization has been devastating, "resulting in marginalization, discrimination and fractured cultural identity" (Paora, 2019, p.14). Frequently encompassing widespread alienation from whānau (family), hapū (subtribe), and iwi (tribe), the resulting cultural and ecological dispossession for many takatāpui has been far reaching.

Today, within the Great Lakes and Plains of Mikinaak Minis (Turtle Island or North America), Indigenous peoples who exist beyond the colonial gender binary are often referred to as "Two-Spirit" or "a third/fourth gender" and can include Indigenous LGBTQ+ individuals.

Since contact, Two-Spirit and queer (2SQ) Indigenous peoples have been the target of intense colonial violence. As early as 1724, Jesuit missionaries were boasting about their perceived elimination of queer Indigenous peoples (Simpson, 2017, p.124). Subsequently, the Indian Act, residential school system, day schools, and sanatoriums further imposed heteronormativity, compulsory monogamy, and the colonial gender binary on 2SQ Indigenous peoples. Despite attempted erasure and ongoing colonial violence, 2SQ Indigenous peoples clearly existed and continue to do so.

Indigeneity in India was altered by the creation of the caste hierarchy to stratify groups of people based on privilege (Ambedkar, 2014). The lowest caste (Shudras) can be divided into Other Backward Class, Scheduled Class (Dalits), and Scheduled Tribes (Adivasis) - the latter two of which are the Indigenous peoples of India and often referred to as "untouchables" (Ambedkar, 2014; P. Chaurasia, personal communication, May 14, 2024). After the abolition of slavery in the 1800s, many Dalits and Adivasis were coerced onto ships and into indentured labour in the Caribbean under false promises of a better life (Anderson, 2009). Regarding queer/trans Indo-Caribbean identities, Chevannes (2001) discusses how queerphobia was largely absent in Indo-Caribbean culture due to a reconstruction of cultural identity that occurred during the transoceanic movement.

Climate emergency and unique agencies of Two-Spirit and Indigiqueer peoples

The umbrella term Two-Spirit(s) (Niizho Manidoo(k)) originates from Cree Knowledge Keeper Myra Laramee who proposed the term in 1990 during the Third Annual Inter-Tribal Native American, First Nations, Gay and Lesbian Conference held in Winnipeg, Manitoba. Another term for Two-Spirit, niizhin ojijaak, is used by Ojibwa/Cree Two-Spirit Elder Ma-Nee Chacaby (2016). Two-Spirit encapsulates how distinct gender roles are described in Indigenous

languages. For example, in the 1800s, Ozaawindib (Yellow Head) was a celebrated Anishinaabe leader and guide referred to as an Agokwa, who was born male and lived as a woman (Pyle 2019); Aazhawigiizhigokwe (Hanging Cloud) was a respected Ogichidaakwe (warrior woman) who attained ceremonial rights and leadership roles that were, at the time, usually only granted to men among Anishinaabeg (Filipczak, 2013). There are at least six ways of describing gender variance in nêhiyawêwin (Cree language), including âyahkwêw (a third gender) (Vowel, 2016). Nishnaabe/Métis Two-Spirit scholar Kai Pyle (2018) suggests "there was and is great variation in the words used for Two-Spirit people" (p. 583) likely due to differences among communities and individuals. Colonizers aimed to eliminate the relationships and values embodied by 2SQ Indigenous people in order to control Indigenous lands and bodies (Simpson, 2017).

Homo/transphobia and the colonial gender binary do not make sense within land-based ethical systems. While what can be interpreted as homosexuality is observed in the natural environment, homophobia takes place exclusively among humans, and the colonial gender binary is not practical for survival on the land because it restricts our relationships and actions (Simpson, 2017). Anishinaabe knowledge systems value consent, autonomy, variance, agency, and diversity for resiliency and sustainability; if we have a diversity of practices, we have greater knowledge available before problems even arise (ibid). In this sense, Anishinaabe knowledge can "be considered queer because it honours epistemic diversity" (Awasis, 2020).

Constantly evolving, in recent years the concept of Takatāpui – a traditional term referring to an intimate companion of the same gender which fell into obscurity following colonial contact, has been reclaimed to encompass all Māori Queer identities (Kerekere, 2017). Being Takatāpui is central to one's wairua (spirituality), ancestral inheritance, and whakapapa. Whakapapa centralizes diversity, inclusion, and interconnectedness. Within this worldview,

queerphobia does not come from tikanga (Māori protocol) but from colonized ways of thinking and being. Rather, gender fluidity is contained within Māori cosmology, as all Māori are uri descendants of Papatūānuku (the earth mother) and Ranginui (the sky father) and so embody both female and male elements (Paora, 2019). Furthermore, research on Māori sexualities with Elders suggests that genderfluid Māori have played "an important role both within the Takatāpui community and wider Māori society as holders and transmitters of ancestral knowledge" (Aspen, 2019, p.4).

Drawing on the intimate entwinement of Māori migration whakapapa with the lands and lifeways of Polynesia offers a way forward in drawing on the epistemologies of Lewis Williams's Takatāpui forebears where some of the precolonial cultural norms surrounding queerness has persisted. For example, Samoan climate activist and artist Yuki Kihara (Teaiwa et al., 2023) points out that Samoan society has four culturally recognized genders and that the reason why "Samoa has sustained as a resilient community over the past 4,000 years is because all of the four genders worked in unison" (para 24). In Samoa, the fluidity of gender roles such as fa'afafine and fa'atama (those assigned male and female identities at birth who subsequently express their genders in feminine and masculine ways, respectively) may mean that they are better equipped to deal with environmental emergencies because of the adaptive and reflexive capacities of these genders to take up tasks associated with both men and women; a view which has recently been put forward by the International Institute for Environment and Development (Carthy & Landesman, 2023). The adaptive capacities of Two-Spirit and Indigiqueer peoples in climate justice movements helps build connections between diasporic and emplaced Indigiqueer epistemologies that are facilitating the re-indigenization of nonbinary identities.

The potential of Indigiqueer agencies also have profound impacts in transnational contexts. Amidst the settler-colonial imposition of international disaster recovery measures within the Caribbean during severe climate events (Benjamin & Haynes, 2018; Stanley, 2021; Perry, 2023), translocal solidarities between Asian, Black, and Indigenous folks living on these islands emerge as forms of climate resiliency through intimate relations with local archipelagic ecologies to enable the resurgence of traditional and nascent knowledges from these communities (Jerez Columbié & Morrissey, 2023; Lowe, 2015). This dialogical exchange becomes an agentic site which facilitates the circulation of ideas, strategies, and resources; in doing so, it reinforces the interconnectedness of struggles against colonialism, thereby enriching the global repository of subjugated knowledges that becomes critical for addressing cultural-ecological restoration. By recognizing their radical potential, Indigiqueer agencies contribute to the epistemological pluralization necessary for effective climate action, cultural-ecological thrivance, and planetary well-being.

Conclusion

By mirroring the rest of creation, Indigiqueer individuals contribute unique capacities to climate justice movements that are rooted in queer normativity, gender fluidity, and sexual diversity. In this commentary, we have argued that Indigiqueer agencies make three main contributions to climate justice by centring: (1) land-based relationality and kinship, (2) a diversity of tactics and methodological praxis, and (3) a multiplicity of Indigenous cosmologies, epistemologies, and ontologies.

To conclude, we revisit the interrelationship between the contributions of queer normativity and climate activism by emphasizing the work of Beze Gray, which includes cultural restoration, such as sugar bushing and hide tanning, to "create a safe space for other Two-Spirit

people to learn more about land-based" ways of knowing and doing, especially considering how

"culture and revitalization is impacted by climate change" (McSwain, 2024, para. 17). This

distinct positioning, as outlined throughout our analysis, is what we propose allows Indigiqueer

individuals globally to radically (re)imagine identities in ways that are deeply interwoven with

embodied place-based relationships. Oji-Cree/néhiyaw Two-Spirit/Indigiqueer author, Joshua

Whitehead, in dialogue with Angie Abdou (2023) asks, "What does Two-Spirit mean?" and

responds:

> I know. And I don't know. The body remembers, the blood knows, it has a
> memory like water does... To animate 2S like a necromancer to fit cleanly and
> neatly in the present is a violent reanimating of our ancestors... It needs to mutate
> and change. Hence Indigiqueer. Hence, not knowing and knowing... That's the
> whole futuristic key of Indigenous sexual, and by relation, environmental
> sovereignty because to be undefinable is to be unknowable to colonial powers —
> that's radical freedom. (pp.17-18)

The resurgence of Indigiqueer ways of knowing and being – and, by extension, queer

normativity – offer critical insights into diversity, fluidity, agency, and variance.

Indigiqueer perspectives can help us reimagine our collective approaches to cultural-

ecological resurgence and Indigenous environmental justice, guiding us toward a more

just and liberatory future.

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Climate Crisis and Indigenous Well-being: Ancestral Land, Psychological & Ontological Impact, and Resilience in Fijian Communities

Kolaia Raisele
Ph.D. Candidate, Department of Social Inquiry, La Trobe University, Melbourne Australia

Malakai Waqa
Teaching Assistant, Department of Social Work, University of the South Pacific, Fiji

Rosiana Lagi
Senior Lecturer, Department of Education, University of the South Pacific

Abstract

This study investigates the impacts of the climate crisis (CC) on the ancestral lands of Indigenous Fijians, examining the associated psychological and ontological aspects. This study adopts an Indigenous methodology to demonstrate two Indigenous Fijian communities' intense connection with their ancestral lands, how CC has disrupted this relationship and their psychological reactions to these disruptions. Additionally, it investigates how CC has undermined the ontological security of Indigenous Fijian communities, affecting their collective epistemic identity. This research introduces the term 'pre-traumatic stress' to capture the anxiety and distress confronted by individuals in these Indigenous communities when faced with possible relocation due to CC. Data analysis revealed that in addition to psychological consequences like eco-grief, eco-stress, and solastalgia, the ontological foundation of these Indigenous communities is persistently disrupted. The study's findings offer valuable insights into the climate-related pre-traumatic stresses impacting frontier Indigenous communities and the ontological changes linked to CC. While some aspects are unique to the context of Indigenous Fijians, the insights provided can inform policies to enhance the psychological welfare of frontier Indigenous communities, preserve cultural integrity, and foster community resilience. This perspective will lead to the development of adaptation strategies that are culturally sensitive, sustainable, and equitable, while also recognising the significance of Indigenous knowledge in tackling the global climate crisis. Such a viewpoint broadens the climate crisis discourse to encompass both cultural and psychological dimensions.

Introduction

The ongoing climate crisis (CC) brings about a range of challenges that go beyond the immediate ecological consequences. It requires a holistic understanding and exploration, including the extent of these impacts on the psychological and cultural dimensions of climate-threatened communities. While many studies have focused on the impacts of the climate crisis and ways to mitigate, adapt, and build resilience, there hasn't been much exploration into the CC and mental health discourse (Hayes et. al, 2018). This study explores this area by focusing on the psychological well-being of two Fijian indigenous communities at the forefront of the climate crisis.

In doing so, this study aims to highlight not only the climate-related impacts on indigenous communities' ancestral lands but also the profound impacts on the psychology and ontology of the two indigenous communities. This study does not only seek to raise awareness about the complex impacts of CC on indigenous Fijian communities but also aims to expand existing research, policies and preparedness strategies, and to prioritize mental health and cultural preservation in CC frontier communities. It fills a research gap especially when it comes to Pacific Island indigenous communities by considering the psychological and ontological aspects of potential relocation due to CC.

Literature Review

Indigenous perceptions and experiences of the climate crisis

Indigenous communities globally are significantly affected by the climate crisis, which has profound impacts their traditional practices and livelihoods. Their in-depth environmental understanding, captured in their traditional ecological knowledge (TEK), has historically allowed them to adapt to climatic variations. This knowledge, rooted in generations of interaction with

the environment, highlights adaptive strategies to environmental changes (Berkes et al., 2000; Xu & Rana, 2005). In the Eastern Himalayas, the change of livestock grazing practices by the Lachenpas and Dokpas in response to changing climate conditions such as reduced snowfall demonstrates the dynamic nature of TEK (Ingty & Bawa, 2012). However, the relevance of TEK faces challenges from the unpredictability brought about by the climate crisis. Studies from diverse regions, including Himachal Pradesh in India and rural Ghana, show indigenous communities adapting their agricultural practices due to changing weather patterns, highlighting the ineffectiveness of TEK due to CC (Cobbinah & Kwadwo Anane, 2015). In Northern Alaska, research shows that recent climate changes exceed indigenous knowledge expectations, highlighting a mismatch between TEK and current environmental conditions (Carothers et al., 2014). While indigenous experiences often align with scientific understandings of climate change, there are notable inconsistencies. For instance, Quechua farmers in Bolivia view climate change through a moral and spiritual lens, diverging from scientific interpretations (Boillat & Berkes, 2013). This diversity in understanding highlights the complexity of TEK and the importance of integrating these rich perspectives into climate-related discourses and policies.

Small Island Developing States (SIDS) and Pacific Island Countries & Territories (PICTs) face greater vulnerabilities due to the climate crisis, with sea-level rise (SLR) posing significant existential threats (Martyr-Koller et al., 2021; Petzold & Magnan, 2019; Thomas et al., 2020). The geographical and environmental specificity of these communities highlights their acute vulnerability to climate impacts, including coral bleaching and native biodiversity loss. Kelman (2018) emphasizes the importance of acknowledging the unique experiences of island communities in the climate narrative, advocating for TEK-driven community-level adaptation and resilience strategies. Research within PICTs reflects a complex understanding of climate

impacts, with indigenous communities identifying drought, cyclones, and erosion among key

concerns (Nunn et al, 2024; Raisele & Lagi, 2023). The cultural emphasis on 'sharing and caring'

within these communities fosters adaptive strategies, highlighting resilience in the face of

climate crisis (Beyerl et al., 2018). Studies in Vanuatu and Fiji have illustrated the strong ties to

land and culture, with internal relocation preferred over cross-border relocation, stressing the

importance of land to identity and cultural continuity (Perumal, 2018; McNamara & Combes,

2015).

The psychological impacts of the climate crisis on indigenous communities

The climate crisis (CC) also bears significant psychological impacts on indigenous

communities, with the loss of land and cultural disruption leading to conditions such as

solastalgia and eco-anxiety (Albrecht et al., 2007; Cunsolo-Willox et al., 2013). These emotional

responses, rooted in the deep connection to land, highlight the need for further research on the

mental health implications of CC, particularly in the Pacific region where sociocultural systems

and heritage are intimately linked to the environment (Asugeni et al., 2015; McNamara &

Gibson, 2009).

The threat of the CC to cultural heritage is profound, with UNESCO and other

organizations emphasizing the need for global collaboration and adaptive management to protect

cultural sites (Bosher et al., 2019). The integration of traditional knowledge into disaster risk

reduction and climate adaptation strategies is highlighted as crucial for preserving both tangible

and intangible cultural heritage (Raisele, 2021; Raisele & Lagi, 2023) which plays a vital role in

maintaining community identity and resilience (Perkins and Kruse, 2018). This review sets a

foundation for exploring the complex impacts of the climate crisis on Indigenous Fijian

communities, focusing on the disruption of their ancestral lands and the ensuing psychological and ontological effects.

Methodology

This study investigates the psychological and ontological impacts of the climate crisis on two indigenous Fijian communities. Utilizing the Community Engagement Protocol (Raisele & Lagi, 2023) derived from the Vanua Research Framework (VRF) developed by Nabobo-Baba (2008) and the Na Bu ni Ovalau Research Framework (NBnORF) by Lagi (2015), which respects indigenous perspectives and traditions, this methodology aims to empower Indigenous peoples to reclaim their knowledge systems and narratives (Vunibola et al, 2024). The VRF and NBnORF guided this study, emphasizing traditional protocols, values and customs at the heart of the research process (Nabobo-Baba, 2008) bearing in mind that different *vanua*[1] communities may have variations in their traditional practices (Lagi, 2015).

This study focused on two Indigenous Fijian villages, Nukui and Vunisavisavi. These were chosen for their firsthand experiences with the climate crisis, including the challenges posed by rising sea levels, highlighting their status as frontier communities in the fight against climate change. Funded by the University of the South Pacific (USP), the study adhered to the ethical standards set by the USP Research Office, ensuring alignment with the Vanua Research Framework's (VRF) and Na Bu ni Ovalau Research Framework's (NBnORF) core values of respect, reciprocity, and community empowerment. This careful selection and adherence to ethical guidelines underscore the commitment to conducting research that is not only

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[1] Refers to land, sea, sky, spirit, people and how they are related to and with each other.

methodologically sound but also deeply respectful and beneficial to the communities involved.

Data Collection Approach

The study utilized the Indigenist Approach adhering to the Community Engagement Protocol (CEP) and *Veitalanoa*[2]. Community Engagement Protocol (CEP), rooted in indigenous Fijian methodologies, involves traditional ceremonies like *sevusevu*, where researchers seek formal consent from village chiefs through a gift of *yaqona* (piper methysticum), ensuring the team's commitment to ethical conduct (Raisele & Lagi, 2023). Following CEP, *Veitalanoa* (multilogue; free flowing conversations) sessions were conducted in the local language and facilitated in-person, guided by the research topics and ensuring respectful knowledge exchange. The *veitalanoa* sessions were conducted with the following focus group:

- 15 youth (ages 18-30)

- 15 women (age 30+)

- 15 men (age 30+)

Context

Nukui Village is located in the Rewa province on the southeastern coast of Viti Levu, Fiji's largest island. It faces significant environmental challenges such as coastal erosion and sea-level rise (SLR). On the other hand, Vunisavisavi is a village in the Cakaudrove province,

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[2] Multilogue, an Indigenous Fijians culturally accepted way of conversing or sharing of ideas in the local language. The rules of engagement are established during the *sevusevu* where who is to participate in the discussion, what is to be discussed, how and where is established.

situated below steep hills on the eastern coast of Vanua Levu—Fiji's second-largest island. This village is known as the ancestral home of the Tui Cakau, the Paramount Chief of the Cakaudrove province. Similar to Nukui, Vunisavisavi confronts its own environmental challenges, notably the impacts of sea-level rise. This comparison of two distinct yet environmentally challenged communities highlight the widespread and diverse nature of the climate crisis across Fiji's landscape.

Analysis Approach

In our analysis approach, the research team engaged youth, women, and men from both communities to ensure diverse perspectives. We recorded and transcribed *veitalanoa* sessions from each focus group, following the emphasis on data triangulation for validity (Carter et al., 2014). This process allowed each demographic to affirm their views within peer groups before broader discussion, capturing the complex experiences of these communities with CC. The team conducted a thematic analysis, synthesizing conversations into three key themes: impacts of CC on ancestral lands, psychological reactions, and ontological and epistemic shifts, highlighting how CC disrupts their connection to land and alters community identity and knowledge.

Findings

Table 1 below presents an overview of thematic themes along with codes derived from transcribed findings. These findings highlight a profound connection between CC and its diverse effects on the two indigenous communities.

Table 1: An overview of thematic themes and codes from veitalanoa sessions in Nukui and Vunisavisavi villages.

Theme	Nukui village codes	Vunisavisavi village codes
Effects of the climate crisis (CC) on ancestral lands and community	Sea level rise, changed weather patterns, saltwater intrusion into farms, destruction of ancestral burial sites.	Sea level rise, Resistance to relocation, concern over sacred sites being affected by SLR, emphasis on cultural heritage preservation.
Psychological reactions to CC effects	Stress, worry, solastalgia, fear of cultural dislocation and loss of traditional roles, and concerns over heritage sites.	Concerns about rising sea levels affecting sacred sites, fear of cyclones and saltwater intrusion, worries about future generations.
Ontological and epistemic shifts within the community	Identity tied to land and sea, existential threat to traditional role as *Gonedau* (traditional fisher-folk) role, potential loss of social and cultural identity.	Preservation of cultural heritage and sacred sites as central to community well-being and identity, resistance to relocation for heritage preservation and traditional role as *Sauturaga* (kingmakers).

1. Effects of the climate crisis on communities' ancestral lands.

Nukui Village: participants shared significant environmental changes, including sea level rise impacting farmlands and ancestral sites, and changing weather patterns affecting traditional weather forecasting.

"Na tubu ni iyalayala ni waitui. Uwa sa yaco mai vanua." [There is sea level rise. The shoreline has moved inland] (youth focus group)

"Iliu, oira na qase era se kila rawa na draki, era se rawa ni tukuna. Gauna qo, na draki sa sega soti ni tukuni rawa na drake." [In the olden days, our ancestors could forecast weather. Now we cannot predict weather changes compared to before] (women focus group)

Vunisavisavi Village: In contrast, Vunisavisavi residents emphasize the cultural impacts of SLR on sacred sites, prioritizing heritage preservation over relocation. Their refusal to move,

despite government advice, underscores the importance of safeguarding the chief's ancestral site

from SLR.

> "Na tiko na koro qo e dua ga na ka keimami lomaleqa tiko kina na tubu ni yalayala ni waitui sa vakacacana vakalevu na neimami yavu tabu." [In this village, the only thing that we are worried about is sea-level rise that is badly affecting our sacred site] (men focus group)

> "Ratou lako mai na matanitu me caka na toki, keimami sa qai vakarogotaka vei Tui Cakau sa qai tukuna o koya ena sega ni caka na toki vakaveitalia se cava e takoso e bibi tiko na kena tawani na yavu kei na vanua." [Government representatives came and told us to relocate and then we conveyed the information to our chief (Tui Cakau) he opposed the idea and told us that we will not move unnecessarily, what is more important is to stay and preserve our cultural heritage] (youth focus group)

2. Psychological reactions to these effects

Nukui Village: Nukui villagers report various stresses, including worry, sadness for their

village has changed drastically (solastalgia), and fear of relocation affecting their culture and

traditional roles. This is especially true for the Gonedau (chief's fisher-folk), for whom identity

and livelihood depend on their fishing grounds.

> "Na itavi ga, ike keimami kilai tani na gonedau. Qo na ka keitou kilai tani kina. Koya ga qo keitou leqataka, na yaco na gauna na ka ya sa na, sega ni macala na qai cava caka tiko." [Our traditional roles as traditional fisher-folk. This is our identity and what we are known for. This is what we are worried about, that a time might come, and we are not certain of what we will be doing] (youth focus group)

> "Rivariva bi taki tiko na vanua o Nukui baleta na loka. E sega ni dua na delana era na dro kina na tamata. Oya edua na ka au dau lomaleqataka tiko, ni na cabe mai na loka, sega ni dua na vanua na dro kina na lewenikoro." [We are quite worried about tidal waves, as there are no high grounds in this village for villagers to escape to] (women focus group)

Vunisavisavi Village: Residents worry about protecting their sacred sites and the

community's risk from severe weather, including cyclones and saltwater intrusion. They share a

common fear for their children's future and safeguarding cultural landmarks from natural

disasters.

> "Na tiko na koro qo e dua ga na ka keimami lomaleqataka tiko kina na tubu ni yalayala ni waitui sa vakacacana vakalevu na neimami yavu tabu." [In this village, the only thing that we are worried about is rising seas that is badly affecting our sacred site] (women focus group)

> "Na leqa levu talega keimami sa dau vakasamataka tu na qase e ra na qai lei toki I vei o ira na neimami gone kevaka me keimami sa na takali yani." [One of our biggest worries and concerns too is the future of our children. Where will they relocate to if the village becomes inundated and encroached with sea water] (men focus group)

3. Ontological and epistemic shifts within the community

Nukui Village: For Nukui villagers, land and sea are crucial to their identity, tradition, and livelihood, providing ontological security. Climate crisis-induced relocation threatens these connections, risking a significant shift in their cultural continuity and self-identity. The *Gonedau's* (traditional fisher-folk) dependence on their *iqoliqoli* (fishing grounds) illustrates the potential loss of their social and cultural identity if relocation were to happen.

> "Na vuna beka ga au kaya kina na via dredre na toki baleta ga na vei yavu makawa etu. Kevaka keimami na toki sa na sega ni vaibalebale tu na neimami tu, na ka keimami kilai kina na neimami yavu makawa. Kena ikarua keimami qara ga iwai, sa matau tu ga vei keimami na bula mai kina, na sasalu ni waitui. Ni keimami na toki sega ni macala keimami na toki ivei. Sega ni macala keimami na lai vulica tale beka se cava na ka keimami na bula kina na vanua keimami na toki kina. Sa na via taura tale toka dua na gauna. Sega ni vaka na tu ike, sa lako tu ga mai." [The reason relocation will be a challenge is that we have our ancestral sites here. If we are to relocate, our life becomes meaningless, as what we're known for, and our ancestral sites are no longer. Secondly, our livelihood will be always tied to the sea. If we relocate, we don't know where we will relocate to. We are not sure if we are going to have to learn again how to survive in the new place. This will take a lot of time] (women focus group)
> "Na marama era sega ni dau vakararavi vei ira na watidra. Era dau rawata ga na nodra bula, ia era sa dau vakararavi tu ga ena veika e rawa mai waitui. Edua ga na vanua ni vaqaqara, iwai ga. Ke mani yaco mai na gauna me keimami toki, sa na sega ni macala me vaka keimami sega ni kila na vanua keimami na toki kina. Mai liu mai liu, keimami sa bula ga mai wai." [Women here do not depend on their husband. They can survive on their own and they always depend on the sea for their survival. The sea is our only source

of living. If a time comes for relocation, we are not sure as we do not know the new land. From the earlier times, we have always relied on the sea for our survival] (women focus group)

Vunisavisavi Village: Participants emphasize protecting cultural heritage, viewing the land as a guardian of history, traditions, and community welfare. Their resistance to relocation highlights a commitment to preserving ancestral legacies and their spiritual relations to their land. Prioritizing sacred site preservation reflects the community's deep connection to their roots, crucial for their spiritual and material well-being.

> "Keitou maroroya tu qo na delaniyavu na Lalagavesi kei na nona sautabu. Keimami sa kila na vinaka ni muri lewa me keimami mai tawana tiko ga na vanua qo veitalia se cava se cava." [We are preserving our paramount chief's sacred site and his burial site. We have experienced the benefits of obeying chiefly advise for us to remain on this land regardless] (men focus group)

> "E levu na ka e tu na koro qo koya keimami maroroya tiko e vurevure tiko ni neimami bula vinaka kei na bula sautu." [There are a lot of cultural sites in this village that we are preserving which is our source of wellbeing and good fortune] (youth focus group)

Both communities show a deep bond with their environment, significantly affected by CC across cultural, psychological, and ontological aspects. Nukui villagers highlighted how climate threats endanger their livelihoods and identities, while Vunisavisavi focused on protecting their cultural heritage from climate impacts. Their stories illustrate the intricate relationship between CC and cultural identity, mental wellbeing of indigenous communities, showcasing their united resilience through a strong connection to their *vanua*.

Resilient Strategies

Participants from both villages shared resilience strategies rooted in their deep cultural, social, and traditional connections to their *vanua*, showing strong resistance to relocation. Their identity is closely tied to their *vanua*, leading them to employ adaptive and mitigative strategies

against CC. This reflects their strong dedication to maintaining their way of life, ancestral lands, and heritage.

Nukui village resilience strategies

Environmental Conservation: Villagers are actively planting mangroves to control coastal erosion and tackle SLR, demonstrating their commitment to environmental protection.

Infrastructure and Preparedness: They have built seawalls using local materials to reduce seawater intrusion and formed a natural disaster committee, working with the Red Cross on emergency preparedness, showcasing proactive measures for safety.

Community Mobilization: Sharing weather updates community-wide ensures everyone is informed and ready to respond to natural disasters promptly.

Vunisavisavi village resilience strategies

Cultural preservation: Prioritizing the protection of cultural sites, especially the ancestral land called *Tui Cakau Yavu-Lalagavesi*, highlights the community's commitment to their identity and prosperity.

Community support and healing: The village strengthens its community bond through collective efforts like solesolevaki (working together) and using spaces like the church for supportive conversations, aiding in post-disaster rebuilding and emotional recovery.

Solidarity in recovery: A unified approach to disaster recovery, engaging the entire community in helping affected families, showcases their solidarity. The church's leadership in these efforts

emphasize the role of spiritual support in enhancing resilience. Testimonies from Vunisavisavi include:

> "Keimami dau cakacakavata kei na solesolevaki me vakataucokotaki/vakacokotaki kina na bula se na veika era sa yali me keimami veivuke vei ira era vakaleqai." [We work together in rebuilding the lives of those that were affected and families that are in need] (men focus group)

> "E levu na gauna sa dau vakayagataki na lotu me liutaka na cakacaka baleta e dau yaga sara vakalevu ena kena dau caka na veivakayaloqaqataki kei na kena dau sagai me vakalesui mai na nodra vakasama na tabagone, gone kei na qase." [In most cases we have been utilizing the church to lead the rehabilitation process after disasters because the church is important in the lives of our people to heal the trauma and the struggle in our families in times of crisis] (youth focus group)

Both villages show strong adaptive responses to CC, weaving contemporary and traditional methods to boost resilience. Nukui prioritizes environmental and infrastructural solutions, while Vunisavisavi focuses on preserving cultural heritage and adopting spirituality as a resilience strategy. Their strategies highlight innovative approaches to mitigating and adapting to CC and a profound relationship with their *vanua* environment and traditions. This illustrates resilience's complexity, involving physical, cultural, and psychological aspects, and highlighting the importance of holistic communal collaboration in addressing CC.

The impacts of CC on the two Indigenous Fijian communities reveal significant disruptions to their ancestral lands, psychological well-being, and ontological security. Through an indigenous methodology, this study has highlighted the profound connections these communities have with their ancestral lands and the severe challenges posed by CC, including the onset of pre-traumatic stress associated with the anticipation of forced relocation. In the discussion section, it will examine the implications of these disruptions, focusing on pre-traumatic stresses associated with CC, eco-grief, eco-stress, and solastalgia, and how they undermine the ontological foundations and collective epistemic identity of these communities.

The discussion will extend to examining how these findings can inform policy development, ensuring that adaptation strategies are culturally sensitive, sustainable, and equitable. This approach aims to highlight the necessity of incorporating indigenous perspectives into global climate action, advocating for policies that support the psychological health, cultural preservation, and resilience of indigenous communities at the front lines of the climate crisis.

Discussion

The impacts of the CC on the ancestral lands, psychological well-being, and ontological security of Nukui and Vunisavisavi villages, as identified above, demonstrate the extent of CC impacts. The adoption of the Vanua Research Framework (VRF) and Na Bu ni Ovalau Research Framework (NBnORF), indigenous paradigms respecting the communities' traditions, enabled the discovery of the diverse impacts of CC in Nukui and Vunisavisavi. The *veitalanoa* sessions within these communities highlighted their strong connection to their *vanua*, which is significantly impacted by CC.

The psychological impacts of the climate crisis on indigenous communities have emerged as a critical area of concern in this study. In Nukui and Vunisavisavi villages, pre-traumatic stress, eco-grief and solastalgia are already being experienced by the villagers. Eco-grief, according to Ágoston et al (2022), is an umbrella term for which emotional distress and anxieties related to climate change fall under. Pre-traumatic stress disorder associated with CC can be moderate to extreme anxiety relating to an impending environmental crisis (Gifford and Gifford, 2016). In Nukui and Vunisavisavi, villagers are beginning to worry about the impacts of SLR on their heritage sites. Translated excerpts from Nukui's transcribed data revealed:

- Stressful & worrisome to Nukui villagers as SLR continues to inundate their village, decrease in the number fish & sea creatures caught. These are crucial as sources of food & income.

- Their whole livelihood is dependent on their *iqoliqoli* (fishing grounds). The notion of relocation is an added stressor & worry as throughout their lives, they have depended on their *iqoliqoli* (fishing ground). Living and farming on a foreign land for their livelihood will be a new experience. They may need to learn new skills and traditional knowledge, take on new traditional roles and consequently identity.

- Villagers are also expressing solastalgia (distress from environmental transformation) as their land is beginning to be transformed from CC. Sea-level rise has contributed to saltwater intrusion to their subsistence farmlands and homes and coastal erosion increasingly becoming a common occurrence encroaching into their homes.

- They are also worried that there might come a time when they will forget their traditional roles and obligations as *Gonedau* (traditional fisher folk) due to a decrease in fish numbers in their *iqoliqoli* and ultimately there would be no fish left. Also, the notion of relocating due to SLR would affect their traditional roles as *gonedau*.

Similarly, the villagers of Vunisavisavi express deep-seated concerns over the intensifying impacts of the climate crisis, notably SLR and the impacts on their environment and sacred ancestral site the *Yavu-Lalagavesi.* Their testimonies reveal a community grappling with the immediate threats of saltwater intrusion, intensified sea waves, and the potential destruction brought on by cyclones, which not only threaten their ancestral lands but also pose existential questions about the future and safety of their children and future generation.

Amid these challenges, the villagers are proactively suggesting measures like planting mangroves to fortify their shores, yet the pervading sense of worry highlights a reality where the anticipation of climate-induced relocation and its effects has become a daily concern. This collective anxiety, articulated through the voices of the Vunisavisavi community, vividly illustrates the phenomenon of pre-traumatic stress, highlighting the real and present distress experienced by indigenous Fijian communities in the face of looming climate crises.

The insights from the villagers of Nukui and Vunisavisavi illuminate a profound reality: eco-grief and eco-stress are not abstract concepts but lived experiences for these indigenous Fijian communities facing the brunt of the climate crisis. The psychological landscape here is marked by pre-traumatic stress, a term Gifford and Gifford (2016) describe as ranging from moderate to extreme anxiety about impending environmental crises. This aligns closely with the villagers' expressed fears over SLR affecting their heritage sites and the viability of their traditional livelihoods, such as fishing, which are foundational to their identity and survival.

This study's findings resonate with the broader discourse on eco-grief and eco-stress, as explored by scholars like Cunsolo and Ellis (2018), who detail the emotional toll of environmental loss and change. The villagers' experiences of solastalgia—a term introduced by Albrecht et al. (2007) to describe the distress caused by environmental alterations in one's home environment—further highlights the complex psychological impact of the climate crisis. The narratives from Nukui, where villagers articulate stress and worry over the loss of fish and the transformative impact of SLR on their land, exemplify this distress. Similarly, the concerns in Vunisavisavi about the future of their children and the protection of sacred sites such as *Yavu-Lalagavesi* from SLR highlight the intersection of eco-grief and the anticipatory stress of potential relocation.

Moreover, the proactive steps suggested by villagers, such as planting mangroves, while indicative of their resilience, also speak to a pervasive anxiety about the future. This aligns with Clayton (2020), who discusses the importance of recognizing and addressing the mental health impacts of the climate crisis. The actions and worries of these communities reflect an engrained eco-stress, where the environmental crisis threatens not just physical well-being but also cultural heritage and identity.

Therefore, integrating the lived experiences of the Nukui and Vunisavisavi villagers into the broader academic discussion on eco-grief and eco-stress not only validates these concepts but also highlights the urgent need for culturally sensitive policy interventions. These should aim not only to mitigate the environmental impacts of climate change but also to support the psychological resilience and well-being of Indigenous communities deeply connected to their ancestral lands. The realities faced by these communities highlight the critical role of indigenous knowledge and practices in formulating responses to climate challenges, advocating for a holistic approach to climate adaptation that encompasses both environmental and psychological well-being.

Ontological security and epistemic identity

Testimonies from Nukui and Vunisavisavi villages vividly illustrate how the climate crisis is not just an environmental issue but embedded with these two indigenous communities' ontological security and collective epistemic identity. Ontological security is a concept that involves material, social, and cultural security reassuring a sense of identity, stability, continuity, and order in one's life (Campbell, 2019). It is crucial in understanding how individuals and communities perceive their existence and identity within the world (Farbotko, 2019; Hawkins & Maurer, 2011; Pileggi & Lamia, 2020). The insights from Nukui and Vunisavisavi villages

highlight the disruption of ontological security as their physical and cultural landscapes are threatened by the climate crisis, thereby impacting their collective epistemic identity — the shared knowledge and understanding that form the basis of their communal identity (Alcoff 2010; Osbeck and Nersessian, 2017). Ancestral lands, fishing grounds, farmlands, and heritage sites are part of these communities' epistemologies, and when disrupted by the CC impacts, their epistemic identity is also disrupted.

For Nukui villagers, the *iqoliqoli* is not merely a fishing ground; it represents their ontological security, providing a sense of purpose, identity, and continuity. The role of Gonedau (traditional fishermen) transcends an occupational status, embedding within it the social and cultural structure of the community. This identity, tied to the *vanua iqoliqoli* and the land, faces existential threats from climate-induced environmental changes, notably SLR. The prospect of relocation due to these changes signifies not just a physical displacement but a profound dislocation of their ontological and epistemic foundations. This echoes the findings in environmental psychology literature, such as those discussed by Devine-Wright (2013), which examine place attachment and identity in the context of environmental change, emphasizing how disruptions to physical environments can lead to a crisis of identity and belonging.

Similarly, the villagers of Vunisavisavi articulate a deep connection to their ancestral lands, viewing them as repositories of history, culture, and *mana* (spiritual power). The resistance to relocation, as advised by government representatives, highlights a collective prioritization of cultural heritage over physical safety, highlighting the integral role of these lands and sites in their ontological security and epistemic identity. This stance aligns with the broader discourse on Indigenous peoples' rights and environmental justice, which advocates for

the recognition and preservation of Indigenous lands and cultures as essential components of their identity and well-being, as explored in works of Whyte (2017) and Tauli-Corpuz (2016).

The narratives from both villages contribute to the growing body of literature on the psychological and cultural impacts of the climate crisis on Indigenous communities. By examining these experiences through the lens of ontological security and epistemic identity, this study highlights the deep implications of environmental disruptions on the very essence of community identity and continuity. As articulated by Albrecht et al. (2007) in the concept of solastalgia, the distress caused by environmental change in one's home environment can lead to a diminished sense of belonging and identity. These findings from Nukui and Vunisavisavi not only elaborate on the reality of such distress but also call for an in-depth understanding of the impacts of the climate crisis, transcending physical loss to encompass the loss of cultural, social, and ontological security.

In summary, engaging with the broader discourse on eco-grief, eco-stress, and solastalgia, the experiences of the Nukui and Vunisavisavi villagers illuminate the intricate ways in which climate change disrupts ontological security and challenges collective epistemic identities. This emphasizes the need for CC policies and interventions that are culturally sensitive and inclusive of Indigenous knowledge and perspectives, ensuring the preservation of both the environment and the cultural and epistemic continuities of Indigenous communities.

Policy Recommendations

The study is proposing the following key policy recommendations:

1. Mental Health Support and Services: Given the documented eco-grief, eco-stress, and solastalgia experienced by the Nukui and Vunisavisavi communities, it is imperative for

policies in Fiji to establish mental health support services tailored to the unique cultural contexts of these communities. Such services should aim to address the psychological impacts of CC, recognizing the importance of cultural sensitivity and the integration of indigenous healing practices. Collaborations with local community leaders can ensure that mental health programs are respectful of and integrated with traditional knowledge and practices.

2. Land Rights and Cultural Heritage Preservation: The extensive connection between Indigenous communities and their ancestral lands necessitates policies that prioritize land rights and the protection of cultural heritage. This includes legal frameworks that recognize and protect indigenous lands from climate-related and developmental threats. Policies should facilitate the active participation of indigenous communities in land management and decision-making processes, ensuring their autonomy over land use and conservation efforts. Additionally, mechanisms should be established to document and preserve cultural heritage, especially in cases where relocation becomes a necessity, to maintain the continuity of cultural and epistemic identities.

3. Indigenous-Led Climate Adaptation Initiatives: Supporting and funding indigenous-led climate adaptation projects is critical. Policies should encourage the weaving of indigenous knowledge and practices in broader climate adaptation efforts, recognizing the value of such knowledge in developing effective and sustainable strategies. This includes recognizing and integrating TEK in environmental monitoring, resource management, and conservation practices. Furthermore, policy frameworks should facilitate the co-creation of adaptation strategies with indigenous communities, ensuring that such strategies are aligned with community values, needs, and aspirations.

4. Weaving Indigenous knowledge and practices for CC adaptation and mitigation into the national school curriculum is essential. This approach not only prepares the younger generation to cope with the impacts of climate change but also equips them with the skills necessary to develop culturally sensitive interventions. By incorporating these traditional insights, students gain a comprehensive understanding of sustainable practices and are empowered to contribute effectively to community-based responses to environmental challenges.

The integration of these policy recommendations into national and international climate action plans would not only address the immediate needs of Indigenous Fijian communities facing the climate crisis but also serve as a model for inclusive, culturally sensitive, and sustainable climate governance. By prioritizing mental health, cultural preservation, and indigenous knowledge, these recommendations aim to foster resilience and well-being among indigenous populations, ensuring their voices and rights are central to climate crisis responses.

Conclusion

This study has demonstrated that the climate crisis significantly impacts the ancestral lands, psychological well-being, and ontological security of indigenous Fijian communities, notably Nukui and Vunisavisavi. Through indigenous methodologies, it has illuminated the intricate ways these communities experience and respond to environmental changes, revealing a deep-seated eco-grief, eco-stress, and solastalgia. The findings of this study highlight the necessity of integrating indigenous knowledge and perspectives into climate adaptation strategies to ensure they are culturally sensitive and supportive of the communities' psychological health and cultural continuity. By highlighting the resilience strategies of these communities, this study

contributes to the broader discourse on climate crisis, advocating for policies that prioritize the

well-being and ontological security of indigenous peoples. In essence, it calls for a holistic

approach to climate action, one that recognizes and values the interconnectedness of culture,

identity, and the environment in the face of global environmental challenges.

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Indigenous Eco-Relational Engagement and mental wellbeing among American Indian and First Nation adults: Applying the Indigenous Traditional Ecological Knowledge framework

Kyle Hill*
School of Public Health, University of Minnesota

Helen Russette*
Johns Hopkins University, Center for Indigenous Health

Rachel Steinberg
Johns Hopkins University, Center for Indigenous Health

Angela Fernandez

Co-first authors

Abstract

Addressing Indigenous determinants of health includes understanding the interconnectedness among Indigenous health and wellbeing, relationship to place and Mother Earth. Though persistent challenges exert a disproportionate burden on Indigenous communities, many experience an intersecting risk profile that includes a history of settler-colonial subjugation and historical loss, while navigating loss and damage due to climate change which further impinges on their mental health. Traditional, spiritual, and cultural activities operate as functional observations of Indigenous Traditional Ecological Knowledges (ITEK) and are increasingly recognized as necessary components of adaptation and mitigation to climate change and sustainability of otherwise delicate ecosystems. In addition, corresponding traditional and cultural activities have been associated with improved mental health. The present investigation utilizes land-based cultural and traditional activities, as well as indicators of language revitalization in a composite variable – Indigenous Eco-Relational Engagement (IERE) to determine the relationship to positive mental health among Anishinaabeg in the United States and Canada. The results suggest that IERE shares a positive relationship with positive mental health among Anishinaabeg adults. Results of the present investigation help us to reconcile the relationship between Indigenous and planetary health, such that both may be supplemented through the active observation of ITEKs vis-à-vis engagement in traditional cultural, spiritual activities and language revitalization efforts.

Indigenous Affiliations

Kyle X. Hill, PhD, MPH, is an enrolled citizen of the Turtle Member Band of Chippewa, and lineal descendant of the Sisseton-Wahpeton Oyate (Dakota), and Cheyenne River Sioux Tribe (Lakota).

Helen Russette, PhD, MPH, is an enrolled citizen of the Chippewa-Cree Tribe and raised on the Rocky Boy Reservation in Montana.

Angela R. Fernandez is a citizen of the Menominee/Omāēqnomenēw Nation.

Introduction

Indigenous communities around the world have sustained ecosystems since time immemorial and continue to maintain Indigenous Traditional Ecological Knowledges (ITEK) systems that are culturally and spiritually connected to their traditional lands. ITEKs are representative of Indigenous epistemologies (i.e., systems of thinking and knowing) and ontologies (i.e., theory of the nature of reality) that are community-based, holistic, ancestral, orally transmitted, and share a deep relationship with land and place (Whyte, 2017; Redvers, 2023). Furthermore, ITEKs and corresponding cultural, traditional, and spiritual practices remain essential stewards and determinants of Indigenous health and planetary health, together (Redvers, 2023; Gray & Cote, 2019; Whyte, 2017).

Impacts of Colonialism on Indigenous Health

American Indian and Alaska Native (AI/AN) communities continue to contend with the disruption and enduring legacy of settler-colonialism that has culminated in a near total (98.9%) dispossession and loss of co-extensive lands, coupled with an average forced migration distance of 239 km to contemporary reservation lands (Farrell et al., 2021). The cumulative impacts of settler-colonialism and corresponding historical federal-Indian policy on social and health inequities of Indigenous communities are comprehensive and further challenged by inadequate, culturally misaligned, and chronically underfunded healthcare infrastructure (Warne and Frizzell, 2014). Historically, settler-colonialism can be traced according to federal-Indian policies that served as the architecture of land dispossession, forced assimilation, removal of AIAN people from traditional territories, genocide, and disenfranchisement that continue to profoundly impact individual, family, and community health (Gone & Trimble, 2012; Roubideaux et al., 2018; Indian Health Service (IHS), 2014; Sawchuck et al., 2016; Warne & Wescott, 2019). This awareness of Indigenous Peoples' interdependence and cultural and spiritual connection to traditional lands has led to an enhanced understanding of the collective burden on mental health many Indigenous communities experience in the context of disconnection of culture, spirituality and kinship to place, such as ecological grief and historical loss, both of which are uniquely attributed to the changes or forced removal from our traditional lands and ecosystems (Cunsolo et al., 2018; Walls et al., 2020).

Indigenous Traditional Ecological Knowledge and Indigenous Health

As a remedy to the devastating effects of historical loss and human-caused climate change consequences, ITEKs and associated traditional, cultural, and spiritual practices are

increasingly recognized as necessary components of Indigenous health and wellness, while also cited as critical to climate change adaptation and mitigation (Gone & Trimble, 2012; Gray & Cote, 2019; Snowshoe et al., 2017; Ford, 2012; Consulo, 2018; Ford et al., 2020). For example, the harvest of Manoomin (wild rice) among Great Lakes Anishinaabeg functions to both re-seed rice beds in the area's lakes and rivers, while also providing a sustainable and nutrient dense food-source for these Indigenous communities and local waterfowl. Equally important, Manoomin has a special place in Anishinaabeg ontologies or traditional creation and cultural stories that recognize this annual traditional and cultural activity as critical to community health. In summary, applying an ITEK lens requires us not to see plants and animals as "wild" or someone's "property", but to honor them as "sovereign persons" so that we follow more protective traditional harvesting practices. We receive these knowledges through stories passed down by traditional knowledge holders that are often told in our first language as Indigenous Peoples. These unwritten guidelines, or "original instructions", provide ethical and practical knowledge to govern our consumption by avoiding overexploitation and protecting the future of the plants and animals, including humans (Nelson & Schilling, 2018). The importance of Indigenous lifeways, cultural, and traditional spiritual activities in attenuating or decreasing the harmful effects of historical, intergenerational, and complex trauma, as well as associated symptomology are well documented in several areas of Indigenous health (i.e., substance use, distress, suicidal ideation, type 2 diabetes, etc.) (Gray & Cote, 2019; Gone & Calf Looking, 2011; Roubideaux et al., 2018).

Indigenous Eco-Relational Engagement

In the present investigation we recognize the implicit strength of language, as well as the unique contribution of place, in the active engagement of the ITEK framework (see Appendix A), while taking note of the inherent difficulty in measuring cultural identity within American Indian and Alaska Native samples (Whitesell et al., 2014; Walls et al., 2016a; Gonzalez et al., 2022). In efforts to examine the importance of traditional and spiritual practices as land-based practices, and traditional language use as a place-based determinant of health within an ITEK framework, the current study advances the concept of Indigenous Eco-Relational Engagement. Indigenous Eco-Relational Engagement (IERE) represents an opportunity to understand the health implications of active engagement in ITEKs by the following variables that are critical to such practices: land-based traditional cultural activities, land-based spiritual activities, and language dimensions. Consistent with this definition of IERE, language revitalization and engagement in land-based traditional and spiritual practices are place-based and central to concepts of wellness, health, and resilience within Indigenous communities (Gray & Cote, 2019; Gone & Trimble, 2012; Snowshoe et al., 2017).

Influences on Mental Health

Self-reported mental health has been positively associated with indicators of cultural connectedness (i.e., identity, traditions, and spirituality) (Gray & Cote, 2019). Similarly, Snowshoe and colleagues (2017) found that an abbreviated measure of cultural connectedness was associated with positive mental health in First Nations youth. Along similar lines, in a literature review on protective factors within American Indian communities, Henson et al. (2017) found cultural connectedness operated as a multi-level protective factor when represented by

three components: involvement in traditional activities, identification with American Indian culture, and involvement and importance of traditional spirituality (Henson et al., 2017).

In efforts to illustrate the importance of culture to concepts of wellness within Indigenous communities, Kading et al. (2019) measured the relationship of good health or "living in a good way" and cultural teachings within Anishinaabe young adults. Their analyses revealed that participants' multi-dimensional conceptions of positive well-being and good health reflected traditional and cultural values and teachings within the Anishinaabe youth sample (Kading et al., 2019). To date, few studies have investigated cultural and spiritual activity engagement and practices while re-centering concepts of wellness within Indigenous place-based knowledge systems. Previous literature exists on the protective role of cultural and traditional activities for wellness of American Indian and First Nations (AIFN) youth; however, discrimination and historical loss have been found to also affect well-being, perhaps even negating the protective effects of cultural engagement and spirituality (Walls et al., 2016a; MacDonald et al., 2013). Furthermore, Walls et al. (2016a) found in initial models that spirituality was associated with poor psychological health outcomes, particularly depression, anger, somatization, and interpersonal difficulties – which may lead to premature, inaccurate conclusions about relationships between culture and health without attending to considerations of trauma and loss associated with historical trauma, subjugation, and violence. Critically, however, these effects were attenuated (decreased) once historical loss and perceived discrimination were accounted for in statistical models (Walls et al., 2016a). Such findings guide the research community to account for variables that moderate relationships between culture and measures of wellness, especially in establishing spirituality and culture as protective in the wake of devastating collective and historical loss via settler-colonialism. Relatedly, Whitbeck et al. (2009) found that

adolescents thought daily about historical loss at similar rates to their adult caretakers. Reminders of cultural loss are salient and active in the realities of living life on reservations, especially as communities grapple with endangered tribal languages, health inequities, poverty, and a sense of persistent cultural erosion or cultural discontinuity (Whitbeck et al., 2009).

Considering the critical importance and relationship of Indigenous languages to land and place, we elected to utilize language use as a determinant of relationship to local ecosystems, in addition to cultural and spiritual activity engagement. Indigenous languages are often recognized as conduits of ITEKs, sharing an intimate relationship to place. In this respect, several studies attest to the importance of language maintenance and revitalization to Indigenous health and well-being (Gonzalez et al., 2017; Whalen et al., 2016). Accordingly, Indigenous languages, cultural and traditional spiritual activities are key facilitators of ITEKs in their capacity to assist in a harmonious and spiritual relationship to land and place.

Altogether, the present study contributes to existing literature on the relationship of culture, spirituality, and language to place and the natural environment within Indigenous communities, as well as well-being (Gonzalez et al., 2017; Kading et al., 2019; Lines et al., 2019). In particular, this study seeks to recognize how Indigenous eco-relational engagement (IERE) is related to Indigenous concepts of wellness. This aim is consistent with prevailing interests by Indigenous communities and stakeholders to explore the strengths-based contributions of culture, language, and traditional activities associated with Indigenous community health (O'Keefe et al., 2023). Our study proposed to measure the connection between IERE and positive mental health among AIFN adults with the goal of providing evidence to prioritize climate change-related mental health consequences. Importantly, we sought to further substantiate the health-related associations and collective importance of the eco-centric and

relational belief systems that are central to Indigenous ways of knowing within a sample of Anishinaabeg from both the United States and Canada. Therefore, we asked the following question: Is increased participation in land-based traditional and spirituality activities and place-based language use associated with positive mental health among AIFN adults? Finally, we expected to find that gender and socioeconomic status will impact these relationships between adjusted and unadjusted models (Wilson & Rosenberg, 2002; Bethune et al., 2019).

Methods

This study utilized data from the Healing Pathways (HP) Project, an ongoing longitudinal community-based participatory research (CBPR) study initiated in 2002 in the upper Midwest and Canada, conducted through partnerships across eight reservation (U.S.) and reserve (Canada) communities. The original longitudinal panel study began in 2002 and consisted of eight annual interviews with the adolescents and at least one caregiver (Waves 1–8). The second part of the study was a 3-year follow-up (Waves 9–11) with the original adolescent participants, now adults. Wave 9 occurred between 2017 and 2018 and collected data from 453 participants between the ages of 24 to 27 years. Additional study design details are published elsewhere (Walls et al., 2020; Whitbeck et al., 2014).

Participants

All participants were American Indian or First Nations (AIFN) from four U.S. reservations/Nations and four Canadian First Nations that share common cultural values, language, beliefs, and traditions. Data was collected to examine culturally specific risk and protective factors for mental health among Indigenous youth/adolescents. Tribal resolutions were

sought prior to the study. Each community included co-researchers in the form of study-supported Community Research Councils (CRC). Members of CRC were involved in every stage of the study and provided feedback on earlier drafts of this manuscript, offered suggested revisions, and gave approval prior to submission for publication. The current analysis used Wave 9 data. Of the original 453 HP participants, 445 were included in these analyses. The participants had a mean age of 26, about three-quarters of participants reported a past year income less than $24,999, over half were female, about a third resided on a reserve or reservation, and about a quarter reported not finishing high school.

Measures

Exposure measure: Indigenous eco-relational engagement (IERE) is a fixed composite measure comprised of the following summed recoded binary ("Yes", "No") indicators of past year participation in: 1) Nine community-identified nature-based traditional activities (i.e., ricing, spear fishing, collected maple sugar or syrup, picked berries, hunting, gathered birch bark, gathered Ka-nik-a-nik or Asemaa (tobacco), snared rabbits, trapped, collected herbs or medicine); 2) two traditional spiritual activities (i.e., offered tobacco, participated in a sweat lodge); and 3) four language variables (i.e., understands some Anishinaabe language, easily understands spoken Anishinaabe, speaks some Anishinaabe, speaks Anishinaabe conversationally). We computed a standardized Cronbach's alpha to determine internal consistency among the 15 listed IERE items. Internal consistency of the IERE measure was $\alpha = 0.754$ (95% CI: 0.709, 0.795).

Outcome measure: The flourishing scale is composed of 8 likert-scale items ranging from 0 (strongly disagree) to 4 (strongly agree) that measure self-perceived success with a high score

representing that a person has many perceived psychological resources and strengths (Diener et al., 2009) (see Appendix B). The flourishing scale has been validated across age groups and applied cross-culturally in International Indigenous contexts (Hone et al., 2014; Ritchie et al., 2014). For this study, positive mental health was measured as the sum of the recoded versions of the 8 flourishing scale variables that ranged from 4 to 32.

Covariates: Income and gender were the demographic characteristics controlled for in this study. Income is a binary variable that consists of a person's total income either being above or below $24,999. Gender consisted of either being female or male.

Statistical analysis

We applied a linear regression with robust standard errors to estimate the association between IERE and positive mental health in both unadjusted and adjusted models. All statistical analyses were done in R version 4.1.3 (R Core Team, 2021).

Results

Increased participation across all three focal measures that comprise IERE occurred across higher agreement with positive mental health statements. Descriptive statistics and zero-order correlations are provided in Tables 1 and 2. Table 1 shows positive mental health organized into equally distributed low (4-22), medium (23-26), and high (27-32) levels to draw comparisons by either mean and standard deviation or count and percentage across each predictor variable, including focal variables that comprise IERE. The mean positive mental health score for all participants was 24 (max of 32). Just over half (58%) of the participants reported being female and nearly three-quarters reported having total combined annual incomes

below $24,999. Zero-order correlations indicated that only nature-based traditional activities and

the IERE composite measure were positively associated with positive mental health. All three

focal IERE variables were positively correlated with each other.

Table 1: Sample characteristics by levels of positive mental health among Healing Pathways Wave 9 participants, 2017

| | Full Sample | Positive Mental Health | | | |
| | | Low | Medium | High | |
Characteristics	No. (%) or Mean ±SD	No. (%) or Mean ±SD	No. (%) or Mean ±SD	No. (%) or Mean ±SD	p^a
All	445 (100.0)	127 (28.67)	207 (46.73)	109 (24.6)	…
IERE					
Nature-based traditional activities	1.74 ± 2.03	1.61 ± 2.094	1.71 ± 2.016	1.99 ± 1.993	0.049
Nature-based spiritual activities	0.90 ± 0.702	0.84 ± 0.717	0.92 ± 0.692	0.94 ± 0.711	0.268
Language	1.65 ± 1.146	1.62 ± 1.091	1.62 ± 1.130	1.76 ± 1.239	0.106
IERE composite	4.30 ± 2.963	4.07 ± 3.003	4.25 ± 2.950	4.69 ± 2.946	0.025
Demographics					
Gender: Female	250 (57.5)	59 (48.4)	128 (63.1)	61 (56.5)	0.849
Income: < $24,999	314 (71.4)	108 (85.7)	141 (69.1)	63 (58.3)	<0.001

IERE = Indigenous eco-relational engagement; b = Adjusted for gender and income; $a = p$ values were determined by analysis of variance (continuous) comparing positive mental health (flourishing) as a continuous measure by each variable of interest.

Table 2: Zero-order Correlation Matrix

	1	2	3	4	5
1. Positive Mental Health	1				
2. Traditional activities	0.093*	1			
3. Spiritual activities	0.053	0.362***	1		
4. Language	0.077	0.260***	0.379***	1	
5. Indigenous Eco-relational Engagement	0.106*	0.872***	0.632***	0.654***	1

Both unadjusted and adjusted models in Table 3 demonstrated a significant positive association between increased participation in IERE and positive mental health (confirming the significant zero-order correlation observed in Table 2). Reporting lower income was the only significant covariate, which was found to be negatively associated with positive mental health.

Table 3: Linear regression of the association between IERE and positive mental health.

	Unadjusted (n=443)				Adjusted (n=428)			
	β	*std. Error*	*CI*	*p*	*β*	*std. Error*	*95% CI*	*p*
(Intercept)	23.30	0.41	22.49, 24.10	**<0.001**	25.22	0.48	24.28, 26.15	**<0.001**
IERE	0.16	0.07	0.02, 0.31	**0.023**	0.15	0.07	0.02, 0.29	**0.030**
Gender: Male					-0.20	0.43	-1.06, 0.65	0.645
Income: below $24,999					-2.50	0.43	-3.34, -1.67	**<0.001**
IERE = Indigenous eco-relational engagement; b = Adjusted for gender and income.								
R2 / R2 adjusted	0.011 / 0.009				0.073 / 0.066			

Discussion

This study explored the connection between nature-based traditional and spiritual activity participation, the use of traditional language that comprises Indigenous health and Indigenous Eco-Relational Engagement (IERE), and positive mental health. Our findings demonstrated that IERE participation is significantly associated with positive mental health in both adjusted and unadjusted models. These findings are consistent with previous literature on the important role of cultural and traditional activities, language facility, and cultural connectedness as key factors to Indigenous mental health and well-being (Gray & Cote, 2019; Snowshoe et al., 2016; Gonzalez et al., 2021; Kading et al., 2019; Lines et al., 2019). Importantly, endorsement of annual income less than $24,999 was negatively associated with positive mental health (i.e., the relationship between income and mental health is negative) is similar in scope to previous findings (Wilson

& Rosenburg, 2002). Again, such findings are indicative of the inherent complexity of measuring culture as a protective factor within Indigenous communities (Walls et al., 2016b).

This study contributes to the gap in literature by examining the relationship between land, place-based cultural engagement, and positive mental health as it pertains to Indigenous-based determinants of health, particularly as an integral determinant of planetary health (Redvers et al., 2023). Furthermore, the current findings begin to explore how engagement in land and place-based cultural and traditional activities share associations with positive mental health. Such results might help guide research at the intersection of ecology and Indigenous health, particularly considering that there is an absence of studies on eco-anxiety from an Indigenous perspective, or with an Indigenous sample (Coffey et al., 2021). We introduced the novel concept of IERE, which inherently relies on a foundation of ITEKs as a central framework - a deep and embedded land-based relationship between humans and nature, by measuring engagement of Indigenous traditional cultural and spiritual activities, as well as language use.

In many ways, this study is an important recognition of the dynamic interplay between traditional cultural, spiritual activities and language as facilitators of ITEKs and the ways in which Indigenous ontologies (knowledge ways of being or existence) import critical ecological pedagogies based on sustainability and relationship to land (Hayes et al., 2019; Consulo, 2018; Ford, 2012). Our study is but one attempt to reclaim Indigenous concepts of health and wellness and explore the interdependence on our cultural and spiritual relationship to land and place, which has suffered a profound disruption, owing to a history of human and civil rights violations via-a-vis settler-colonialism (Vecchio et al., 2022; Gone & Trimble, 2012). Critical investigations have provided clear evidence that historical loss is tied to poor mental health among Indigenous Peoples (Whitbeck et al., 2004; 2009; Walls et al., 2016a). Therefore, it is

only natural to shift to measuring promising protective factors that buffer against poor mental

health outcomes among Indigenous populations. Like other strengths-based studies, we also

found positive connections between traditional and spiritual practices, traditional language use,

and mental wellbeing (Gonzalez et al., 2022), with the added nature-based component. Further

substantiating the remedial role of engagement in cultural, spiritual activities and language

revitalization is important for tribal and urban community health, particularly in efforts to

ameliorate health inequities and redress the legacy of settler-colonialism (Gone & Trimble, 2012;

Brockie et al., 2015; Warne & Wescott, 2019). Many Indigenous groups, as is outlined within the

United Nations Declaration on the Rights of Indigenous Peoples (United Nations, 2007)

recognize the concept of relationship and connectedness to the land as a principal component of

health, wellness, and sovereignty. Based on the findings herein, as well as existing literature on

cultural connectedness and health, it is important for institutions and governments alike to assist

in efforts to restore ITEKs at individual, family, and community levels for Indigenous and

planetary health. In this case, the return to culture, traditions, spirituality, and language are

recognized as foundational elements in the efforts to understand and ameliorate the

corresponding effects of settler colonialism, as well as historical loss, while moving toward

individual and collective healing and cultural continuity (Gone & Trimble, 2012; Nelson &

Wilson, 2017; Walls et al., 2012; Warne & Wescott, 2019; Bethune et al., 2019).

Limitations

This investigation is not without its limitations. The positive mental health measure has

limited variability which may have hindered our ability to detect differences. Due to the

heterogeneity between the 574 federally recognized tribes and more than 600 First Nations

groups in Canada, these findings represent only the communities sampled, limiting generalizability to other Indigenous groups. Given that this is a cross-sectional study design, we cannot infer causation, however, this study provides a unique exploration of the utility of culture, language and spirituality as a "proxy" of ITEK, and how the engagement of ITEK, which is primarily translated through stories and first-person observations, can share a robust relationship with positive mental health. Finally, language as a variable associated with place is unique for Indigenous communities, as many Indigenous languages are endangered in the United States and Canada (Whalen et al., 2016). Efforts to introduce language as a place-based indicator or health or well-being is aspirational in its ability to capture the places where these languages are taught, spoken and learned. Critically, much of this work is ongoing, however, existing literature on language as a place-based determinant of health within American Indian/Alaska Native and First Nations communities is promising (Whalen et al., 2016; Gonzalez et al., 2017).

Future Directions

Consistent with the findings of the connection between IERE and positive mental health, there are several implications for the impact of engagement in nature-based traditional and spiritual activities and practices at the individual, family, and community levels. Of course, the findings herein further reinforce calls for cultural, spiritual, and language initiatives as place-based determinants of Indigenous health, and important for climate adaptation/mitigation programs, more broadly. As an asset-based approach to inform health policies, Indigenous and non-Indigenous policymakers are encouraged to advocate for adequate resources and support for the sovereignty of Indigenous communities to actively engage spiritual, cultural, and language practices on their lands. Importantly, these findings support recognition of the importance of

Indigenous Traditional Ecological Knowledge(s) to climate adaptation and mitigation programs, particularly as Indigenous communities grapple with the concept of loss and damage that underscores environmental policy development. For example, environmental and climate policies may well include directing local, federal, and state funding streams toward AIAN community health care reform, practices, and programming that utilize IERE as adjunctive preventative treatments to any combination of mental and/or physical health maladies or comorbidities. Such efforts would also broaden the scope of climate adaptation programs and open avenues for evaluation of Indigenous-led sustainability practices and land-based pedagogies.

Future investigations and community-based research can apply ITEK by incorporating stories and first-person observations using a mixed-method study design to determine long-term health impacts of land and language-based traditional and spiritual activities, particularly when ecological determinants are studied together (i.e., water access/quality, access to greenspace, access to land where traditional activities take place). With respect to the findings that those who identify as low-income reported a negative relationship with flourishing, this is an area of significant concern as Indigenous communities report lower incomes, on average, than non-Indigenous counterparts (Bethune et al., 2019; IHS, 2014; Warne, 2019; Public Health Agency of Canada, 2018; National Collaborating Centre for Aboriginal Health, 2013). Finally, integrating, framing assessment, and treatment planning with IERE practices holds promising practice implications as well as development of IERE and culturally relevant climate adaptation toolkits for Indigenous communities in healthcare and public health programming, with particular attention to managed care organizations and third-party payors.

In closing, an important indicator of Indigenous health is the health of Mother Earth, and the health of Mother Earth is an important indicator of Indigenous health. Such intimate and ancestral interdependence and shared relationship is the bedrock of Indigenous Peoples' recognition of place. As such, climate change and associated environmental impacts, a key determinant of health for all, are among the most pressing public health challenges for Indigenous communities (Watts et al., 2019; Consulo, 2018; Ford, 2012; Intergovernmental Panel on Climate Change (IPCC), 2019). High-heat days, drought, lower ice coverage and melting sea ice, ocean acidification, loss of ecosystems and habitats, increases in vector-borne illness (e.g., malaria), and food and water insecurity are substantially greater in communities that rely on their immediate environments and ecosystems for their livelihoods (Ford et al., 2020; Romanello et al., 2022). Furthermore, these climate-related negative consequences affect to an even greater degree communities that experience social and health inequities, systems of structural oppression, racism, and legacies of colonialism (IPCC, 2019; Romanello et al., 2022; Whyte, 2017). For these reasons, Indigenous communities are at particular risk for loss and damage from climate change due to floods, wildfires, melting sea ice, drought, and more that directly impact their lifeways and sense of being associated with Mother Earth and sense of place (Romanello et al., 2022; Whyte, 2017; Consulo & Ellis, 2018). Indigenous Eco-Relational Engagement stands as an important conceptual framework that will contribute important scientific findings to the global community on the convergence of human health and planetary health, a relationship that we all share.

Conclusion

Indigenous Peoples are caretakers of 80% of the world's biodiversity, while only representing 5% of the global population, and inhabiting only 20% of the earth's surface (Redvers, 2022; World Bank, 2008). Although the urgency and scope of this global environmental health crisis is difficult to comprehend on a community level, we know that Indigenous communities are particularly vulnerable to the health impacts of climate change due to the cumulative and disproportionate burden of health inequities, enduring social and ecological determinants, as well as a deep relationship and dependence on land and place that define culture and lifeways (Ford, 2012; Hayes, 2018; Consulo, 2018). Yet, the results of the present investigation help us to reconcile the relationship between Indigenous mental health and planetary health, such that both may be achieved through the observation of ITEKs vis-à-vis engagement in traditional cultural, spiritual activities and language revitalization efforts (Whalen et al., 2016; Ford et al., 2020; Redvers, 2023; Gonzalez et al., 2017).

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*In memoriam

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Appendix A
ITEK Framework

Appendix B
Brief Screening Instruments

Flourishing Scale
Source: adapted Diener et al. 2009

- 1. Strongly disagree
- 2. Disagree
- 3. Neither agree nor disagree
- 4. Agree
- 5. Strongly agree
- 99. DK/REF

WxM5a ....I lead a purposeful and meaningful life
WxM5b ....My social relationships are supportive and rewarding
WxM5c ....I am engaged and interested in my daily activities
WxM5d ....I actively contribute to the happiness and well-being of others
WxM5e ....I am competent and capable in the activities that are important to me
WxM5f...........I am a good person and live a good life
WxM5g ....I am optimistic about my future
WxM5h ....People respect me

Rebuilding a KINShip Approach to the Climate Crisis: A Comparison of Indigenous Knowledges Policy in Canada and the United States

Danya Carroll, PhD, MPH,
Schulich School of Medicine and Dentistry, University of Western Ontario, London, Ontario, Canada

Nicole Redvers, DPhil, ND, MPH,
Schulich School of Medicine and Dentistry, University of Western Ontario, London, Ontario, Canada

Deborah McGregor, PhD, MES
Faculty of Science, University of Calgary, Calgary, Alberta

Abstract

Indigenous Peoples have developed Indigenous knowledge systems that have been fundamental to stewarding their territories for millennia. Yet, there remains a continued need for more recognition and the development of frameworks that equitably promote Indigenous knowledges and their vital role in addressing the ongoing climate crisis. Given the evolving policy landscape for Indigenous Peoples in relation to their Indigenous knowledges, it is important to monitor and reflect on how these policies may impact Indigenous communities. To support further policy discourse, we conducted a policy study to compare Indigenous knowledge policy and frameworks in Canada and the United States including their similarities, differences, and gap areas. We more specifically aimed to formally analyze key Indigenous knowledges policies in both countries to reflect on the Canadian Indigenous knowledges policy landscape while also proposing key policy recommendations. Findings from our policy review demonstrate that Indigenous knowledges policy in both countries is still fairly new, with a lack of clarity on the success of operationalizing these policies across jurisdictions and regions. Furthermore, the current state of policies and frameworks exemplifies the continued need to acknowledge the contribution of Indigenous knowledges from a rights-based perspective, alongside Western science, in addressing climate change —including how it impacts Indigenous Peoples.

Introduction

Indigenous Peoples represent culturally rich and highly knowledgeable societies that have adapted to numerous changes throughout time. Through understandings of Natural Law that has existed since time immemorial, Indigenous Peoples have coexisted for thousands of years with all living beings in balance and harmony (Redvers et al., 2020). Understandings of Natural Law are foundational to Indigenous cultures and lifeways that have been built on a profound respect, reverence, and responsibility for Mother Earth (Martuwarra et al., 2020). Yet, there is a continued underappreciation of how Indigenous Peoples continue to steward their

environments through their Indigenous knowledges (IK) and practices that are rooted within living and understandings of Natural Law (Redvers et al., 2020). State generated climate change solutions that meaningfully incorporate IK are therefore still lacking in meaning and practice (Hernandez et al., 2022), particularly in policy spaces (Reed et al., 2021b). As climate change continues to disproportionately impact Indigenous Peoples and their territories worldwide, it is imperative that Indigenous Peoples and their laws, governance, and knowledges are at the forefront of addressing the climate change crisis within research, policy, and practice (Redvers et al., 2024).

Climate change impacts within Canada and the United States (US) are being experienced at multiple health levels (i.e. physical, mental, spiritual) within Indigenous communities. For example, wildfires are becoming more severe and leading to poor air quality and increased risk for respiratory health impacts in northern communities (Howard et al., 2021). Indigenous communities disproportionately experience vulnerability to climate change due to their deep connectedness with their environments and ecological systems (Macfarlane et al., 2022; Vogel & Bullock, 2021). These communities are culturally and economically tied to their environments through subsistence lifestyles and livelihoods, so disruptions to their environment have broad

impacts. Climate change is therefore having vast and deep transnational impacts on Indigenous health and knowledges in both Canada and the US.

In late 2022, the White House Office of Science and Technology Policy and the Council on Environmental Quality (WHOSTPCEQ) issued a *Guidance for Federal Departments and Agencies on Indigenous Knowledge* Memorandum Policy to ensure that IK was included in US federal agencies' decision making, research, policy, and management. Prior to this, an IK initiative was launched during the 2021 White House Tribal Nations Summit. Consultation with Tribal Nations informed the development of the Memorandum. The Memorandum also recognizes that IK are vital to addressing the climate change crisis (WHOSTPCEQ, 2022). The White House IK Policy provides an overview of IK, stating that it is "a valid form of evidence," implying that other knowledges do not need to validate IK (WHOSTPCEQ, 2022, p. 4). The Policy further states that the "…guidance is founded on the understanding that multiple lines of evidence or ways of knowing can lead to better-informed decision making" (WHOSTPCEQ, 2022, p. 5). The White House IK policy operationalization process, if implemented properly, may provide valuable insight on how governmental policy may be leveraged to support and promote IK while potentially serving as an example to other countries on meaningful engagement and recognition of Indigenous Peoples and their IK.

Given the changing and evolving policy landscape for Indigenous Peoples in relation to their IK, it is important to monitor and reflect on how these policies may impact Indigenous communities. For the purpose of this article, we will compare the White House's *Guidance for Federal Departments and Agencies on Indigenous Knowledge Policy* and the Government of Canada's *Indigenous Knowledge Policy Framework* (IKPF) and their broader policy implications for Indigenous Nations and communities. It must be highlighted however, that there is currently *no* Canadian federal mandate like the US White House IK Policy that requires all federal

agencies to ensure IK are informing research, policy, management, and decision making. The

Canadian framework differs from the US policy that *requires* federal agencies to include IK as

the Canadian framework states only the need to *consider* IK in their processes. We also discuss

the policy implications of potential mandated federal inclusion of IK for Indigenous communities

impacted by climate change in Canada. Finally, we will propose key policy recommendations for

respectful inclusion and collaboration with Indigenous Peoples and their IK within the Canadian

climate policy landscape.

Positionality Statement

The authors position themselves as Indigenous scholars committed to the health and

wellbeing of Indigenous Peoples and Mother Earth. The first author (DC) is from the Diné and

White Mountain Apache Nations in the US. The second author (NR) is a member of the Deninu

K'ue First Nation in northern Canada. The senior author (DM) is Anishnaabe from the Whitefish

River First Nation in the Great Lakes.

Background Review

Indigenous Knowledges and Worldview

Indigenous knowledges have been developed and applied since time immemorial by

Indigenous Peoples. IK comes from IK systems that include methods of inquiry, analysis,

dissemination, and mobilization (Reed et al., 2024). Acknowledging that IK come from diverse

IK systems is vital as it shows the educational, historical, governance, and legal structures

existing in heterogeneous Indigenous societies that have fostered IK (McGregor, 2021). IK

includes long-term ecological information, which contrasts with Western science, which often

lacks a long-term perspective (Kimmerer, 2002). IK systems have continued to exist because of

the culturally rigorous processes that Indigenous Peoples have applied for millennia to ensure that younger generations were being taught IK (Simpson, 2004). IK are intimately connected to and from the land, therefore, ongoing environmental destruction and exploitation are a direct attack on IK (Simpson, 2004).

Indigenous knowledges represent ways of life that are "embedded in systems supported by and in support of Indigenous societies" (McGregor, 2021, p. 2). IK is associated with values and worldviews that include "reciprocal respect and obligations between humans and the nonhuman world," and where nature is subjective not objective (Kimmerer, 2002, p. 434). A significant divergence between Indigenous and Eurocentric worldviews is that Indigenous Peoples' worldviews generally place emphasis on having a kincentric relationship (i.e. nature viewed as kin) with Mother Earth (Jacobs & Narváez, 2022). Kimmerer (2002) also states that IK can provide a cultural framework embedded within human values when addressing environmental issues such as climate change. IK may include various terminology used across different disciplines (see Table 1).

Table 1: Indigenous Knowledges Terminology Points

- Indigenous knowledges are described using various terms including examples such as 'Traditional Knowledge' (TK), 'Indigenous Traditional Knowledge' (ITK), 'Traditional Ecological Knowledge' (TEK), and 'Indigenous Traditional Ecological Knowledge' (ITEK).
- Indigenous Peoples may also refer specifically to their knowledges in their own Indigenous languages such as *Inuit Qaujimajatuqangit* (IQ), Inuit knowledge, or epistemology from the Arctic (Tagalik, 2010).
- Indigenous Peoples in Canada include First Nations, Inuit, and Métis communities with diverse knowledges. There are over 630 First Nations in Canada, all with their own unique knowledges. Therefore, substantial diversity among Indigenous Peoples means there are unique and distinct knowledges and practices that exists that cannot be homogenized.

Indigenous worldviews are based on collective understandings and the holistic wellbeing of people and the planet, in contrast to Western worldviews, which are often individualistic and de-emphasize reciprocal relationships with the environment (Lefthand-Begay et al., 2024). Jacobs and Narvaez (2022) state, "Kincentrism is the first step toward returning to an earth-based consciousness" (p. 3). Indigenous scholars assert that Western science assumes and behaves in a Eurocentric hegemonic manner, which can result in the disconnection from broader ecosystem dynamics and relational approaches to climate change (Lefthand-Begay et al., 2024; Reed et al., 2024).

Ethical and respectful incorporation of IK continues to remain intangible, particularly in the Canadian environmental governance context (McGregor, 2021). A scoping review done by Macfarlane et al. (2022) found a lack of research in how Indigenous Peoples and their knowledges are contributing to climate change adaptation in Canada. Historically, IK has been viewed by the scientific community as bringing 'supplemental' value to Western science that can be 'integrated' or used to fill gaps in scientific methods (McGregor, 2021; Whyte, 2018). McGregor (2021) also asserts that IK have been and continue to be extracted from Indigenous Peoples through various methods including a piecemeal approach where only the desired "pieces or bits of relevant knowledge" are taken without considering their deeper ontological meanings and the IK systems they come from (p. 3). Simpson (2004) asserts that while there has been interest in IK to address environmental issues such as climate change, the foundations of IK including Indigenous values and worldviews are "of less interest because they exist in opposition to" Western worldviews (p. 374).

Canadian Policy Landscape and Indigenous Knowledges

The *Indigenous Knowledge Policy Framework for Project Reviews and Regulatory Decisions* from the Government of Canada (2019) was created after legislation was passed on four different Acts including the *Impact Assessment Act, Canadian Energy Regulator Act, Fisheries Act*, and the *Canadian Navigable Waters Act.* The IKPF states that the Canadian government is "committed to reconciliation with Indigenous Peoples through a renewed, nation-to-nation, and government-to-government relationship" (Government of Canada, 2019, p.4). Additionally, the *United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) Act of Canada* is highlighted. Indigenous knowledge systems are "considered equally alongside other knowledge, including Western science" in the Framework (Government of Canada, 2019, p. 6). Guiding principles are outlined for applying IK provisions in the various Acts, however, the operationalization of these principles has yet to be evaluated in the Canadian context. The Framework is also limited to project reviews and regulatory decisions. Existing Canadian IK guidance, includes the *Species At Risk Act* of 2002, in which, "Aboriginal Traditional Knowledge" (ATK) informs species assessments with a sub-committee comprised of Indigenous representatives to provide advice and oversight (Committee on the Status of Endangered Wildlife in Canada [COSEWIC], 2017).

Climate change and IK policies situate themselves at various levels in Canada including at the federal, regional, and Indigenous governmental levels. Below are some of the Canadian policies that may promote and/or hinder the consideration, use, and protection of IK.

UNDRIP

UNDRIP addresses fundamental aspects of IK including the support and protection of Indigenous Peoples' self-determination and "right to control, protect, and develop their cultural heritage, traditional knowledge and traditional cultural expressions" (United Nations [UN], 2007, p. 22). UNDRIP also recognizes that respecting "Indigenous knowledges, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment" is imperative (UN, 2007, p. 4). The 2015 Truth and Reconciliation Commission (TRC) report called upon the Canadian government to fully adopt and implement UNDRIP (Mitchell, 2019). In 2021, Canada passed *Bill C-15* which is intended to ensure that Canadian law is consistent with UNDRIP ("Bill C-15: An Act Respecting the United Nations Declaration on the Rights of Indigenous Peoples," 2021). Through UNDRIP and *Bill C-15*, Canada is obligated to support Indigenous Peoples in Canada including ensuring the protection of their IK (McGregor, 2021). The only province that has codified UNDRIP so far is British Columbia (BC) (Macfarlane et al., 2022).

Although UNDRIP has received royal assent in Canada, little progress has been made in the implementation and harmonization between UNDRIP and Canadian law (Mitchell, 2019). For example, with over half of the world's mining companies based in Canada, Indigenous Peoples continue to be pressured and exploited for resources in Canada and beyond without their direct free, informed, and prior consent (Mitchell, 2019). Indigenous Peoples in Canada still must assert and defend their rights on policies that directly impact their traditional territories in the Canadian legal system (Mitchell, 2019). Mitchell (2019) argues that land negotiations with First Nations communities in Canada amidst great social and economic need do not meet basic requirements for free, prior, and informed consent. With this, UNDRIP continues to be an

ambitious and non-binding document that has been inconsistent with Canadian law for over a

decade (Mitchell, 2019). Contextualizing the IKPF within UNDRIP is concerning due to the

broad inconsistency of UNDRIP implementation in Canada.

Regional-level Indigenous Knowledge policy

Inclusion of IK among Canadian provincial and territorial governments varies. The

Government of the Northwest Territories (GNWT) has a Traditional Knowledge (TK) policy that

recognizes that IK provides valid information on the importance of human and land

relationships, and the use of natural resources (GNWT, 2005). The GNWT Policy states that IK

"should be *considered* in the design and delivery of government programs and services"

(GNWT, 2005). The GNWT TK Implementation Plan aims to operationalize the policy including

coordination, collaboration, and promotion of IK in government wide initiatives (GNWT, 2009).

The GNWT also has a *Best Practices Guide*, as well as various departmental reports and work

plans (Keats & Evans, 2020).

Indigenous knowledge policy, such as the NWT Traditional Knowledge policy, is crucial

in a region where over half of the population is Indigenous with strong continued relationships

with the land and their ways of life. Challenges have been identified, however, by Indigenous

communities, researchers, and regulatory boards in how to appropriately balance IK with

environmental decisions and actions in the NWT context (Keats & Evans, 2020). Variances

between different knowledge systems, disciplines, epistemologies and how to navigate these

differences have been reported as areas of understanding that must be improved.

Indigenous-led Knowledge Governance and Conservation

Indigenous governments and communities in Canada have also developed policies and initiatives to protect and preserve their IK and the lands that they come from. Indigenous governance broadly encapsulates Indigenous Peoples' laws, values, and practices worldwide (Artelle et al., 2019). The Gwich'in government passed a TK Policy in 2004, which states that Gwichi'in TK has come from "living on the land for many millennia" and that their TK is for "the benefit of future generations and all humanity" (Gwich'in Social & Culture Institute [GSCI], 2004, p. 2). Furthermore, the policy states that the Gwichi'in Tribal Council is committed to and will manage, monitor, and safeguard Gwichi'in TK (GSCI, 2004). Through Gwichi'in governance, the TK policy ensures that Gwichi'in TK is used ethically and alongside Western science through a rights-based approach. Indigenous Peoples in Canada have developed their own IK/TK/TEK guidance over the past two decades (McGregor, 2013).

Other Canadian examples of Indigenous-led conservation efforts and policy relevant to IK include the Great Bear Rainforest region (BC), Thaidene Nëné National Park Reserve (NWT), and the Tsá Tué Biosphere Reserve (NWT) (Artelle et al., 2019). In 2016, the Tsá Tué Biosphere Reserve, through a Sahtu Dene government-led effort was designated a United Nations Educational, Scientific and Cultural Organization (UNESCO) Biosphere Reserve (Xiaorong, 2023). The Reserve encompasses the largest pristine lake entirely in Canada (i.e., Great Bear Lake), and aims to strengthen continued stewardship by Sahtu Dene Peoples. Indigenous land stewardship is vital to the protection and longevity of IK as IK comes from the land. Indigenous land guardian programs have also emerged as effective holistic, intergenerational and monitoring stewardship strategies (Reed et al., 2021a). These programs support stewardship and management of Indigenous Protected and Conservation Areas which

move beyond conventional colonial conservation policy (Moola & Roth, 2019). These initiatives

are examples of effective Indigenous-led conservation approaches and practices by the very

Peoples that have inhabited these areas since time immemorial, that are directly connected to

climate change mitigation and adaptation efforts.

In terms of climate change policy that is relevant to IK, Indigenous governing bodies in

Canada have developed their own policies. The Inuit Tapiriit Kanatami (ITK) have developed

their *Inuit Priorities for Canada's Climate Strategy: A Canadian Inuit Vision for Our Common

Future in Our Homelands* report, which prioritizes advancing Inuit capacity and knowledge in

climate decision-making including ensuring that the best climate data is available (ITK, 2016).

ITK further promotes that Inuit knowledge is equitably used with other knowledges.

Analysis

Comparison of Canada's IKPF with US Federal IK Guidance Policy

There are similarities and differences between Canada's IKPF and the US White House

IK Policy. The IKPF and the US White House IK Policy both provide context on other policies

that influence IK in their respective countries. The IKPF highlights UNDRIP and the TRC Calls

to Action, while UNDRIP is not highlighted in the US White House IK Policy. The IKPF and

US White House IK Policy both include sections where guiding principles are provided

including an emphasis of respecting IK. Both also include strategies for federal agencies to seek

meaningful and respectful relationships with Indigenous Peoples and their governments.

Further discussion on the historical context of federal policy in both countries is also

covered briefly. The Canadian IKPF briefly mentions that the maintenance and development of

Indigenous Peoples' IK systems has been affected by colonial history and ongoing systemic

barriers. The US White House IK Policy also briefly mentions that federal agencies should acknowledge history including the past injustices of their agencies and the overall government towards Indigenous Peoples.

Elements of Indigenous data sovereignty are briefly mentioned in both the Canadian IKPF and US White House IK Policy. The IKPF mentions respecting Indigenous data sovereignty through the *First Nations Principles of Ownership, Control, Access, and Possession (OCAP)*, *National Inuit Strategy on Research*, and other relevant protocols for Indigenous communities (Government of Canada, 2019). The US White House IK Policy encourages agencies to align their policies to any existing Tribal policies regarding IK protection and protocols. Both the IKPF and US White House IK Policy state that consent is necessary before IK is included in any federal processes. Free, prior, and informed consent is explicitly mentioned in the Canadian IKPF with its broader implications for aligning with UNDRIP, whereas in the US it is not.

Both the Canadian IKPF and US White House IK Policy include sections on the importance of early consultation and respectful engagement with Indigenous Nations and communities. The Canadian IKPF promotes communication and engagement with Indigenous Peoples to discuss opportunities for sharing IK for project reviews and regulatory decisions. The White House IK Policy requires federal agencies to "engage in regular, meaningful, and robust consultation with Tribal Nations" (WHOSTPCEQ, 2022, p. 9).

There are also notable differences between the Canadian IKPF and the US White House IK Policy. Unlike the US White House IK Policy, the IKPF is not a government-wide mandated policy. The main emphasis of the IKPF is the *consideration* only of IK and its potential to improve outcomes in project reviews and regulatory decisions. The US White House IK Policy requires IK consideration in all federal processes including grant review, policies, and research.

The US White House IK Policy provides an extensive Appendix with examples of collaborative approaches and application of IK between US Tribal Nations and the federal government. For example, the Arctic Rivers Project is a project that includes both Alaska Native Tribes and First Nations dedicated to preservation of the Yukon River watershed.

Formalized recognition of Indigenous worldviews varies between the Canadian IKPF and US White House IK Policy. The US White House IK Guidance Policy includes a brief section that highlights the importance of respecting Indigenous worldviews including culturally embedded ways of knowing and being. There is no mention of IK systems in either the IKPF or US White House IK Policy. The US White House IK Policy states that, "Knowledge co-production is a research framework based on equity and the inclusion of multiple knowledge systems" (WHOSTPCEQ, 2022, p. 12). Indigenous research methodologies are outlined in the US White House IK Policy including responsibility, approach, relevance, representation, respect, and relationship. Federal US scientists are further recommended to "consider using Indigenous methodologies and incorporating Indigenous metrics and indicators" (WHOSTPCEQ, 2022, p. 16). In contrast, the Canadian IKPF only briefly mentions that there is a need to support the capacity of Indigenous Peoples in data collection and "analysis of Indigenous knowledge" (Government of Canada, 2019, p. 11).

The implementation outcomes of both the Canadian IKPF and US White House IK Policy are unclear. Few research studies have been published on the impacts of both in terms of federal processes and IK. The US White House IK Policy has been acknowledged by federal agencies such as the Department of Interior (DOI). The DOI continues to seek input from US Tribal, Alaska Native, and Native Hawaiian Leaders on a DOI policy that would equitably promote IK throughout the Department. Interagency efforts have also included a memorandum of understanding that aims to improve Indigenous Sacred Sites protection through incorporation

of IK across several agencies (DOI, 2021). In the Canadian context, previous reviews have also been conducted of earlier iterations of IK in legislation (Eckert et al., 2020) including the *Species at Risk Act*. These reviews critically highlighted how IK has been implemented in practice (Beaulieu-Guay, 2022).

Gaps in Canadian and US Indigenous Knowledges Policy

There is a gap in research on the implementation of the IKPF and the four specific Acts it encompasses. McGregor (2021) highlights several key considerations of the IKPF including the lack of acknowledgement of the legal, political, and governance systems of Indigenous Peoples. Canadian environmental assessment (EA) processes have been increasingly criticized for their inability to include the best environmental knowledge including IK (Eckert et al., 2020). Research has cited that epistemological obstacles exist when outside entities attempt to engage IK in the EA process (Eckert et al., 2020). The IKPF, including the *Impact Assessment Act*, are argued to be extractive of IK for external governmental purposes (Lajoie-O'Malley et al., 2023; McGregor, 2021). While there are attempts to dismantle the hierarchy between Indigenous and Western knowledges, there is still a lack of epistemic recognition of IK in environmental Impact Assessments (Lajoie-O'Malley et al., 2023). IK continues to be scrutinized by Western science with a frequent tendency to attempt to 'validate' it through Westernized means before it is accepted as legitimate to the Impact Assessment process (Lajoie-O'Malley et al., 2023).

Research exists in other areas where collaborative resource co-management and responsibility is shared between Indigenous and non-Indigenous partners and governments in the Northwest Territories. The *Species at Risk Act* was developed by all co-management partners and fosters consensus building and decisions around species conservation in the region (Singer et al., 2023). The Act requires that there is inclusion of the best information (i.e., both Indigenous

knowledge and Western science) available to inform decision making and implementation

processes around ecosystem and species conservation (Singer et al., 2023). The species

assessment process specified within the *Species at Risk (NWT) Act* has been refined to "help

ensure each knowledge system's autonomy, uniqueness, and validity are represented and

respected" (Singer et al., 2023, p. 3). The Act's system was built with direct input by Indigenous

knowledge holders and practitioners within the NWT. Cross-cultural learning, communication,

and working through disagreements are facilitated through the Act's process.

A significant gap in the Canadian IKPF is that federal health agencies are not included

and required to also consider IK. Persistent health inequities impacting Indigenous Peoples in

Canada have been well documented (Fridkin et al., 2019). Despite Canada's national health

insurance system and the federal government's responsibility to provide health care to "Status"

First Nations persons and recognized Inuit persons, Indigenous Peoples still face numerous

challenges in accessing culturally safe healthcare due partly to jurisdictional complexity (Fridkin

et al., 2019). Inclusion of IK in healthcare, health promotion, and community health

programming are vital to enhancing Indigenous health in Canada. Furthermore, there is an

inextricable link between the health of Indigenous Peoples and the health of the land (UNESC,

2023). Climate change policy and discourse must also recognize that the determinants of

Indigenous health are directly related to the health of the land and planet (UNESC, 2023). We

highlight this significant gap in the IKPF as it has potential to perpetuate the exclusion of IK in

Canadian health systems including those serving Indigenous Peoples (National Collaboration

Centre for Indigenous Health [NCCIH], 2022).

As stated previously, the US White House IK Policy is still relatively new as

demonstrated by the paucity of research or evaluation on the impacts of the policy on IK

inclusion on the ground. Additionally, there are also some notable gap areas that may be

highlighted in the policy. There is inadequate discussion in the US White House IK Policy on Indigenous worldviews, which highlights the ontological divide between Indigenous values and Western science and how this might create barriers within operational processes. Although the US IK Guidance Policy is the first executive policy in the US with intentions to improve Tribal Nation-to-Nation collaboration, the uptake of the policy in federal agencies is unclear. Research has shown that policy can be susceptible to changes in political leadership and agendas, which can impact further support and funding (Warne & Frizzell, 2014). It should also be noted that non-federally recognized US Tribal Nations are also excluded from formalized consultation and engagement with US federal agencies, which has significant implications for overall engagement and recognition of their IK.

Discussion

Current research surrounding the inclusion of IK in Canada and the US demonstrate that there are still vast and deep challenges in creating meaningful inclusion and bridging processes that platform IK with Western science from a rights-based approach (Keats & Evans, 2020; Lefthand-Begay et al., 2024; McGregor, 2021; Singer et al., 2023). Although there is some progress in increasing the inclusion of IK from governments in Canada and the US, a meaningful effort that promotes Indigenous worldviews, rights, and collaboration is still needed. As climate change continues to impact ecosystems and health globally, it is imperative that Indigenous Peoples are included as leaders in the development and implementation of climate change-related policy and solutions. There is much opportunity for Indigenous-led approaches that facilitate and create spaces where knowledge sharing, and meaningful engagement can occur.

Policy Recommendations

We have identified five policy recommendations for enhancing the rights-based inclusion of IK in Canadian governmental processes including climate change policy that are outlined below. These recommendations are based on the policy landscape specifically in Canada as it relates to Indigenous Peoples and their IK.

1. Centering Indigenous Peoples and their worldviews and values is necessary for respectful rights-based inclusion of Indigenous knowledges in climate change, health, and conservation policy spaces.

Governments and settler institutions must recognize that IK are inherently embedded in IK systems which are holistic knowledge systems (Latulippe & Klenk, 2020). Indigenous Peoples' knowledge systems are uniquely rooted within notions of environmental sustainability and have promoted adaptive capacities throughout history; they can also contribute to restoring balance with the natural world (Kimmerer, 2018). Indigenous Peoples are self-determining Nations that continue to steward their lands and knowledge systems (Latulippe & Klenk, 2020). Therefore, Indigenous Peoples are the experts of how, when, and where IK should be applied alongside Western science. Increasing recognition of Indigenous Peoples' and their knowledge systems as living knowledge systems is tantamount to changing and improving consultation and collaborative processes between Indigenous Peoples and governments.

2. More ethical spaces must be created where respectful engagement and sharing on climate change challenges and solutions can occur between Indigenous Peoples and non-Indigenous entities.

Western-based policy and scientific approaches towards Indigenous knowledges have been extractive in the past and in the present (Latulippe & Klenk, 2020; Lefthand-Begay et al.,

2024; McGregor, 2021). Latulippe & Klenk (2020) assert that Indigenous ways of knowing, being, and doing will only flourish within existing research structures if Indigenous-led relational ethical spaces are established (*making room*) that foster collaboration, understanding, and equity. Decolonization is vital for not only making room but ensuring adequate space for IK, signifying that Indigenous Peoples have full decision-making authority over their territories and knowledge systems (Latulippe & Klenk, 2020). Furthermore, *moving over* means that barriers that impede IK practices and transmission are removed (Latulippe & Klenk, 2020). Although Indigenous and Western knowledge systems & worldviews differ greatly, there are ample opportunities to facilitate spaces and approaches that can platform IK. The *Northern Research Leadership and Equity* report (Council of Canadian Academies [CCA], 2023) provides a framework on how to operationalize these spaces and approaches.

3. Western science and research must recognize that IK emerges from Indigenous worldviews that are kincentric, therefore, creating mutually beneficial symbiotic spaces where both Indigenous and Western knowledge systems are cooperative not competitive.

Mother Earth provides many valuable teachings and models of symbiotic relationships in which two different species can both thrive side by side. Ecological research strongly supports that older trees share and redistribute resources with other trees that need extra support for growth—this phenomenon is termed the mother tree hypothesis (Henriksson et al., 2023). We see Mother Trees like our Indigenous knowledges (see *Figure 1*), which have been characterized as longer-term, older knowledge systems that can support and teach younger knowledge systems (i.e. Western science). They also contain valuable wise practices and approaches that promote eco-centric relationality. Mother trees (i.e., Indigenous knowledges) and younger trees (i.e., Western science) both contribute to ecosystems and are equally valued. The roots of IK represent Indigenous values that are inherently embedded in IK and therefore cannot be detached. Simple

inclusion of IK within climate change and governmental policies & processes is ineffective if these systems continue to disregard the roots of IK and continue to platform colonial hegemonic structures. Just as our tree relatives thrive in healthy environments, Indigenous knowledge systems thrive in environments where Indigenous self-determination and governance (i.e., soil where roots sit) and overall Indigenous data sovereignty (see Table 2) are cultivated and platformed. The area where the roots of both trees touch and support one another represents mutually beneficial knowledge exchange where IK and Western science contribute to addressing issues such as climate change. To summarize, we propose that IK must be approached through a *Kincentric* worldview centered in understandings of the *Interconnectedness* of systems and processes, that can foster *Nurturing* respectful environments and *Symbiotic* spaces (i.e., "KINS").

Table 2: Indigenous Data Sovereignty Elements

- Indigenous data sovereignty is described as Indigenous Peoples' rights to govern the collection, ownership, and application of their own data (Kukutai & Taylor, 2016).
- UNDRIP reaffirms Indigenous Peoples' control and self-determination over their data.
- The *CARE (Collective Benefit, Authority to Control, Responsibility, Ethics) Principles for Indigenous Data Governance* (Carroll et al., 2020) and *First Nations Principles of OCAP* ([FNIGC], 2024) promote data governance that is by, for, and with Indigenous Peoples.
- As non-Indigenous entities continue to place pressure on Indigenous communities to share their knowledges, Indigenous data sovereignty and governance through various methods (i.e. data sharing agreements) will become increasingly important.

Figure 1: KINShip Model for Platforming Indigenous Knowledges
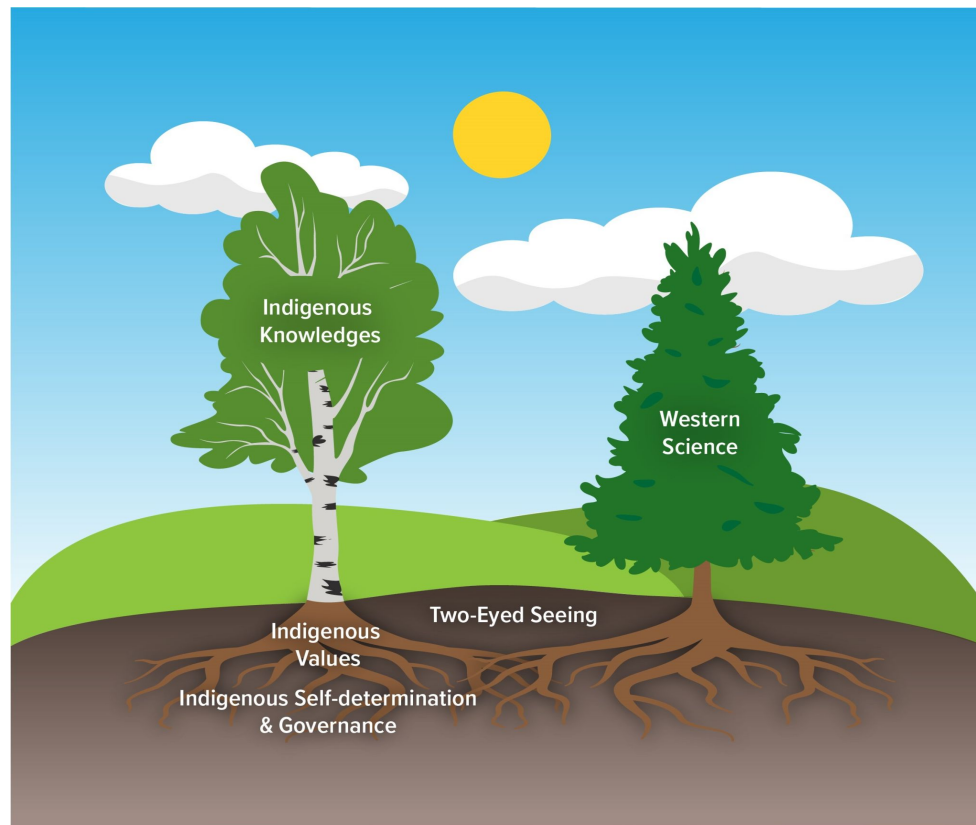
4. Leveraging the Truth and Reconciliation process can increase awareness on the importance of shifting towards KINShip centered value systems and approaches to restore relationships with Mother Earth.

The Truth and Reconciliation process including Calls to Action provide an important framework (when operationalized appropriately through rights and distinction-based approaches) that can enhance inclusion and leadership of Indigenous Peoples' and their knowledge systems in Canada on various issues including climate change. Rights-based reconciliation may also facilitate a shift in worldview that centers Earth-based relationships through Indigenous values and place-based philosophies (Borrows, 2018). McGregor (2019) states, "…we must reconcile with the Earth, not just with each other, or reconciliation remains incomplete and our collective

future uncertain" (p. 144). Reconciliation means moving away from an anthropocentric worldview lacking reciprocity where we continually extract from the Earth without giving back. Indigenous Natural Law, worldviews, and values foster approaches towards sustainable living and ensuring healthy environments for future generations. Borrows (2018) states, "Living within our limits demonstrates affection for our children. It also shows our respect and love for the Earth" (p. 62). In Canada, living within limits are found in treaties, which can influence how Indigenous Peoples secure healthy, sustainable living and overall ways of life (Borrows, 2018). Treaties contain promises that the Crown must provide Indigenous Peoples for "as long as the grass grew, the river ran, and the sun shone" (Fumoleau, 2004, p. 74). Therefore, restoring a healthy balance to Mother Earth is integral not only for the health and self-determination of current and future generations of Indigenous Peoples in Canada, but for all.

5. Non-Indigenous entities need to further recognize and support the rights-based protection of Indigenous Peoples' IK and their territories as they are pivotal to Indigenous and Planetary Health.

The 'Health of Mother Earth' has specifically been identified as an Indigenous determinant of health by Indigenous scholars and the United Nations (UNESC, 2023). Favorably supporting the Indigenous determinants of health and the determinants of planetary health depends greatly on the knowledge systems of Indigenous Peoples (Redvers et al., 2022; UNESC, 2023). Indigenous Elders as well as the languages they hold, are also key keepers and transmitters of Indigenous health knowledges including planetary health (Redvers et al., 2022). Indigenous Elders are the foremost teachers that may provide important guidance on ensuring relational protocols and values surrounding IK are being met for Indigenous and Planetary Health. Additionally, dispossession of Indigenous Peoples from their lands continues to occur globally despite their long-established record of stewarding and protecting their land (Gentry et

al., 2019; Kokunda et al., 2023). The continual demand for resources and lands fuels extractive

practices that contribute to climate change at macro scales (Mitchell, 2019). Indigenous

knowledges are significant to addressing climate change at multiple scales, which further

demonstrates that the protection of Indigenous Peoples' lands is synonymous with IK protection.

Table 3: Summary of Policy Recommendations for IK Inclusion in Canada

1. Centering Indigenous Peoples and their worldviews and values is necessary for respectful inclusion of Indigenous knowledges in climate change, health, and conservation policy spaces.
2. More ethical spaces must be created where respectful engagement and sharing on climate change challenges and solutions can occur between Indigenous Peoples and non-Indigenous entities.
3. Western science and research must recognize that IK emerges from Indigenous worldviews that are kincentric, therefore, creating mutually beneficial symbiotic spaces where both Indigenous and Western knowledge systems are cooperative not competitive.
4. Leveraging the Truth and Reconciliation process can increase awareness on the importance of shifting towards KINShip centered value systems and approaches to restore relationships with Mother Earth.
5. Non-Indigenous entities need to further recognize and support the rights-based protection of Indigenous Peoples' IK and their territories as they are pivotal to Indigenous and Planetary Health.

Conclusion

Indigenous knowledges are inextricably connected to Indigenous worldviews & values

that foster sacred relationships with Mother Earth. Globally, Indigenous Peoples and their

knowledge systems are fundamental to addressing climate change as they provide a cultural

framework and worldview to restore respect, relationships, and balance with the Earth. Federal

policy that aims to recognize and include IK from a rights-based perspective in both Canadian

and US contexts represent an entry point to transforming climate change policy. Policies and

frameworks will only be truly effective when relationships, rights, and values important to

Indigenous Peoples and their IK are respected and platformed.

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Rest as Resistance: Visiting with Land as a Method of Rest

Dani Pierson
University of British Columbia Okanagan

Keywords: • Rest • Feminism • Activism • Land • Wellbeing • Visiting

Abstract
As part of my ongoing research articulating a Metis-feminist theory of rest as resistance, this paper explores the practice of visiting with Land as an act of restful resistance. A theory of rest as resistance responds to the exhausting ways that the settler state attempts to devastate Indigenous communities. This response sees rest not as succumbing to these oppressive powers but as a method to actively resist them. In this paper, I argue that visiting with Land is a practice of rest as resistance as it first refuses colonial and capitalist standards and expectations of what it means to be "productive." Second, it centres knowledge and relationships not valued by colonial capitalism. Finally, it engages in slow practices of well-being focused on relationality and reciprocity that offer space and freedom to understand ourselves and our communities. I will root my considerations of this resistance in a practice of autotheory that reflects on my own practice of visiting with Land, both in my Métis Territories and as a visitor in Syilx Territory. Understanding this practice of visiting with the Land as restful resistance is essential as it centres and supports the concept that resting is part of the work when we are attempting to build and maintain sustainable communities and activism.

Introduction

When I was young, I used to traipse around the bush in Treaty 8 Territory behind my dad, marvelling at the ways he seemed to sense everything occurring around us. At the time, I did not see the way that my dad was showing me the different pace required to build a relationship with Land that holds and cares for us. I did not understand that my dad's attunement to bush was showing me a path to a way of living restfully with the Land that I would so desperately crave later in my life. My dad was showing me the ways that building relationships with Métis values at the centre requires a slower pace and deep reverence. My research articulates a Métis-feminist theory of rest as resistance that works to express a way to respond to the deeply exhausting ways that the settler state has (historically and presently) attempted to harm Indigenous communities.

This response sees rest not succumbing to these oppressive powers but as a method to actively resist them. The concept of rest of resistance was recently popularized by Tricia Hersey through her ongoing project *The Nap Ministry* and book *Rest Is Resistance*. Hersey writes as a Black womanist and activist deeply concerned with dismantling the white supremacist, capitalist, and patriarchal expectations of productivity (2022, p. 40). In these terms, productivity is valorized and our value as beings is tied to how much we can produce. Think of all the ways we are encouraged to do more – optimization of the self is always the goal. To reject this, and rest, is thus an act of resistance. This follows Audre Lorde's famous proclamation that self-care "is an act of political warfare" (1988, p. 125). As I have worked to shift my relationship to value through a practice of rest, I have relied on an expansive understanding of rest that allows for the manifold manifestations of pauses that comfort our physical, spiritual, mental, and emotional selves. These methods of rest do not retreat from the world to escape feeling but gives oneself the space to process the feelings the world brings.

Having this understanding of rest has allowed me to trace two tenets of a Métis restful resistance. First, following Black feminist theories of rest as resistance, rest becomes resistance when it refuses colonial and capitalist standards and expectations of productivity. What is distinct for Métis people specifically and Indigenous peoples more broadly as we untangle ourselves from the morals of colonial capitalism is the ways we must grapple with harmful colonial narratives that stereotype Indigenous peoples as lazy and the reality that we are working extraordinarily hard for our communities. Part of extricating ourselves from colonial capitalism's unrealistic expectations is to remind ourselves we cannot be everything for everyone. As Kim Anderson prompts, "Acting on responsibility to family or nation doesn't mean that we deny our own needs or undermine our responsibility to take care of ourselves" (2016, p. 207). When I

reflect on this statement, I think about how disentangling these notions of value and productivity are often offered more easily to our more-than-human relations who we know have more value than colonial capitalism's resource approach assigns them. Yet, we continue to struggle to bring this acknowledgement inward and truly know and feel that we are worth more than what we do.

The second tenet of a Métis restful resistance asks that we centre knowledge and relationships that colonial capitalism attempts to devalue or discredit. A version of rest that centres relationality acts as an antidote to the hyper-individuality that colonial capitalism fosters. When we rest in ways that connect us to other beings and the multitudes of ways we hold knowledge, we make room for contemplation and reverie that is more holistic. As Métis Elder Rose Richardson reminds, Métis people have long carried knowledge in and through plants and art (Belcourt, 2007, p. 10). We can find pathways for self-care and wellbeing when we come back to these forms of knowledge.

Ways of Doing

Approaching this research with the intent to live this topic and commit to an active practice of resting, I enact the methods of resting that I reflect on in this article – the restful act of visiting with the Land. To accomplish this, I utilize a narrative voice that reflects the feminist methodology of autotheory. Autotheory is a feminist methodology where theory is combined with and emerges through personal stories (Fournier, 2021, p. 7). I am cautious of the ways this method of writing seems to reflect (and perhaps co-opts) well-established Indigenous practices of storytelling – Opaskwayak Cree scholar Shawn Wilson describes the storytelling practices I utilize as storying personal experience or experiences of others to support the learning of others (Wilson, 2008, p. 98). Cree-Métis scholar Deanna Reder explains that "autobiographical practices are in our culture" and this becomes clear when "we recognize the importance of

declaring our position on the land on which we are situated" (2022, p. 133). Simultaneously, autotheory provides a useful way of phrasing what the personal nature of this research is intending to accomplish. This form of writing combined with practiced-based research methods illuminate a way to enact visiting with Land as a restful method of activism.

Enacting this method asks that I first make clear what I mean by both "visiting" and "Land." The kind of visiting I invoke here follows the Métis methodology of visiting. Métis scholar Janice Cindy Gaudet explains how "keeoukaywin [visiting] was, and still remains, at the heart of how my mother, grandmothers, aunties, and sisters anchor a sense of belonging, a sense of self, and sense of responsibility to family, community, and land" (2018, p. 51). The act of visiting is the "process of meeting together over tea, listening to, and talking with, one another, and understanding each other's point of view" (Flaminio et al., 2020, p. 58). A form of knowledge translation that foregrounds the responsibilities we have in our relationships, according to Gaudet, "visiting creates and fortifies connections that unify and build community from the ground up. It is how humour, silence, news, concerns, pain, knowledge, ideas, and arguments are disseminated at a grassroots/ground level." (2018, p. 53) As Gaudet makes clear, visiting is certainly active work (2018, p. 48). Simultaneously, though, I understand a visiting methodology to be a restful practice as it centres ways of doing research that prioritize relationships and are not based in extraction and productivity.

This methodology is one that is embedded in family and community structures – every time I visit my Métis grandmother, she anchors my understanding of belonging in family as she tells stories and makes little quips about cousins, aunts, uncles, and other relations. It is through visiting that I come to understand my place in our family and community despite the distance that often obscures my sense of belonging. Visiting as methodology and practice reflects and

honours the profound power and impact Métis women have on family, community, and culture

(Gaudet, 2018, p. 54). Visiting as methodology asks that we consider how we are responsible for

tending to the spirits of all our relations through connecting with them (Gaudet, 2018, p. 48).

While the considerations and theorizations of a visiting methodology often are rooted in human-

to-human visiting, what I employ here is human-to-Land or human-to-more-than-human visiting

to consider the agency and knowledge that comes from all relations. Visiting with Land as a

restful methodology prompts a contemplation of how Land and more-than-human relations care

for our spirits and wellbeing in radical ways.

This approach to visiting prompts that I make clear what Land means to me. First and

foremost, I think of Métis author Maria Campbell's explanation of Wahkotowin:

> Today it is translated to mean kinship, relationship, and family as in human family. But at one time, from our place it meant the whole of creation. And our teachings taught us that all of creation is related and inter-connected to all things within it. Wahkotowin meant honoring and respecting those relationships. They are our stories, songs, ceremonies, and dances that taught us from birth to death our responsibilities and reciprocal obligations to each other. Human to human, human to plants, human to animals, to the water and especially to the earth. And in turn all of creation had responsibilities and reciprocal obligations to us. (2007, p. 5)

This kinship network informs how I understand Land – relationships breathe life into the world.

Care and respect for the Land was the first and most important teaching my dad shared with me

and my siblings. I hold very tenderly my memories of traipsing through the bush behind my dad

as we harvested firewood and spent time with the trails that were sometimes new friends,

sometimes old. In these moments, as we would pester my dad with questions and wait for him to

point out all the beings whose home we were in, he made sure that we knew we were responsible

for acting with love and care toward the Land. While he welcomed our curiosities and

acknowledged the propensity kids have to screw around, he made sure we understood that those

inquisitive behaviours never infringed on our responsibility to act with care. In fact, the only

time my dad ever gave me real trouble was when he found out I had used a glow-stick as a trail marker on a camping trip. He made me walk my sorry arse back to this "special" tree to collect the glow-stick with an admonishment that if I truly cared for the tree I would remember it without a glow-stick. I did – and I do. It is through this relationship with Land that my dad instilled in me that I first began to understand the ways that visiting with Land is a restful act of care. My dad offered us the space to slow down with the Land and spend time with all the beings enveloped in the Land's care. While my dad never used the word Wahkotowin to describe the deep relationships he has with the world around him, he acted and parented in ways that always centred this notion.

Much to my dad's chagrin, though, I became a bit of a city kid as I got older. A busy (and self-centred) teenage life meant I did not prioritize camping trips and drives into the bush with my dad. As teenagers are wont to do, I distanced myself from my family as I sought out an identity not predicated on being a daughter or a sibling (I am sure both you and I know that this independent identity is never quite possible, nor is it something very comforting, but keep that to yourself because my teenage self needs to get there by herself). In these city-kid identity searching projects, I fell into the colonial trap of separating capital-L Land and the city. I think of Emily Riddle's explanation of the prairie propensity to forget that the city is Territory – is Land – too (2022, p. 54). Land, worthy of care, was out in the toolies – out in the bush. It was not the sprigs of grass and rogue dandelions that forced themselves through concrete cracks or even the cedar tree in the front yard of my suburban home. I defaulted on my responsibilities to this precious relationship my dad had centred in our lives. Sometimes I like to imagine that the trees reassured my parents as they waited with a knowing hope for my return to these relationships.

Similar to Emily Riddle, it was my experience living on unceded xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish) and səlilw̓ətaʔɬ (Tsleil-Waututh) Territory that first shifted my understanding of city as Land (2022, p. 54). These Nations' powerful presence in the city demanded that I reimagine what Land means. This shifting was further shaped by my experience living on unceded Syilx Territory. I have been an extraordinarily fortunate student in this territory as I have had many opportunities to learn from Syilx teachers and Knowledge Keepers (like Dr. Bill Cohen, Dr. Jeannette Armstrong, Coralee Miller, and many others) who generously shared the ways that Syilx Lands and people have cared for each other since time immemorial. I think of Jeannette Armstrong's insistence that "Land as language surrounds us completely, just like the physical reality of it surrounds us" (1998, p. 178). These words remind me that this place, called Ki-low-na, is *all* Syilx Land – whether I am surrounded by the bush or concrete.

Alongside this shift in my understanding of Land through the lived experience of being a visitor on unceded Syilx Land/cities are Métis scholar Erin Konsmo and Cree scholar Karyn Recollet's insistence that we disentangle ourselves from purity narratives that denote some Land (the bush) as "good" and other (the city) as "bad" (2018, p. 239). Their words ask us to consider who (as in people and more-than-human kin) gets left behind*, and hurt*, when the only "good" Land is inaccessible bush Land (2018, p. 240). They explain that these purity narratives also spill over into how we view and engage with people who do not fit into purity narratives themselves – as in cis-heteronormativity, able-bodiedness, whiteness, etc. (2018, p. 243). Thus, they prompt that "we need to reimagine not only our cities, but also bodies of all abilities as being good on the land/water. We can reimagine these plant medicines that persevere in the ruins of environmental devastation as part of our kin, and ultimately still valuable in assisting our bodies

and spirits" (2018, p. 243). This prompt is in conversation with nēhiyaw poet and community

organizer Erica Violet Lee's "In Defense of the Wastelands: A Survival Guide," where she

describes what it means and how it *feels* to live in and be "the wastelands" (2016). She writes:

> the heart of wastelands theory is simple. Here, we understand that there is nothing and no
> one beyond healing. So we return again and again to the discards, gathering scraps for our
> bundles, and we tend to the devastation with destabilizing gentleness, carefulness, softness.
> For those of us in the wastelands—for those of us who are the wastelands—caring for each
> other in this way is refusing a definition of worthiness that will never include us. To
> provide care in the wastelands is about gathering enough love to turn devastation into
> mourning and then, maybe, turn that mourning into hope. (2016)

Wastelands – city Lands – are Indigenous Lands that deserve to be approached with the same

love, care, and tenderness that the bush deserves.

As I join these scholars and writers in their calls to see city Land as Land worth caring

about and caring for, I recognize that a tension emerges through the heightened settler-colonial

surveillance that occurs in cities. This surveillance harms Indigenous kin and other marginalized

folks in different ways from the social histories we inherit – I think about Filipina-American

writer Jenny Odell's reflection that some bodies are read "as an invitation to violence" when they

exist in public spaces and how this inhibits the ability to fully rest (2023, p. 100). For Indigenous

peoples in particular, though, Cree-Métis-Saulteaux scholar Jas M. Morgan writes that in prairie

cities, this surveillance works to "criminalize Indigenous presence in the city on behalf of white

prairie families" (2020, para. 11). Through Morgan's words, I understand how even the presence

of Indigenous bodies threaten the colonial family structure that depends on a belief in terra

nullius. While Morgan theorizes this surveillance from the lens of houseless youths engaged in

projects of basic survival, I also think about how settler city surveillance seeps into projects of

cultural connection.

The fear of settler city surveillance leaches into my attempts to come back to my responsibilities I have to more-than-human kin and their spirits. I think of the first time I tanned a deer hide and needed to return the parts I was not using to the Land. For me, hide tanning is a restful, meditative practice as it requires repetitive action and opens space for reflection. Hours of love, care, and laughter goes into sloughing off deer hair and membrane as I worked to make rawhide with friends and mentors. It can be an enchanting process – watching a hide go from smelly and slimy to strong and flexible. It is mesmerizing to know that my hands that did this work hold the knowledge and memory from my Great-Grandmother Fee who used to do this work too. Here, I think of Narungga scholar Natalie Harkin's words that "our bodies too are archives where memories, stories, and lived experiences are stored, etched and anchored in our bloodlines deep. They ground our creativity in what become personal and political acts of remembering, identity making and speaking back to the State" (2014, p. 4). The beauty of tapping into this intergenerational bodily archive was dampened with the reality of doing this work in the middle of Okanagan white suburbia.

As we began the hide tanning process in my aunt's backyard in Vernon (shared Secwépemc and Syilx Territory), her neighbours would walk by and gawk, and I felt a niggling sense of discomfort. When the time came to return the deer's hair and spirit to the Land, I was afraid of inquisitive and policing settlers reprimanding me for enacting a teaching so central to the work but feels unwelcome under settler colonial surveillance. So, under the cover of nightfall, my roommate drove far into winding Okanagan hills and parked along an empty trail as I sheepishly hauled a Rubbermaid of deer hair out of the car and sprinkled it back into the trees. In this act, I hoped that my unease would not outweigh the reverence I held for the deer that gave up their life. As I reflect on this experience, I think of Morgan's insistence "that surveillance and

violence against us is a way of continuing to remove us from the land" (2020, para. 3). Morgan is

writing from the particular experience of being Indigenous and trans while being surveyed by

white settler colonialism. The threat of surveillance and what it produces inhibits our ability to

engage with city as Land. Settler surveillance requires that Métis folks, particularly queer and

trans Métis folks, and other Indigenous kin, act with hyper-vigilance – we must always be aware

of, and fear, the repercussions of transgressing settler expectations of appropriate public

behaviour. Lee considers this reality as she narrates the way that settler surveillance impedes the

ability to rest, to dream (Lee, 2016). As my whiteness bolsters me with unearned privileges and

protections in the city, I think deeply about what responsibilities I have to enact interventions

into settler colonial narratives that do not see cities as Indigenous Land. ts'élî-iskwew scholar

Anita Lafferty's words anchor these thoughts:

> Ask yourself: What happened on this land long ago? Whose footprints were here before
> mine? Where were the grandmothers and what knowledge did they share back then? What
> is important today that reflects their teachings? Bring forward your footprints with
> intention as you unpack the past, the traumas, the notions of heteropatriarchy that exist.
> Make new trails upon old trails. I know matriarch Dene footprints existed and still exist
> here, maybe relatives or maybe not. I honour those pathways as the wise paths, as the
> forgotten paths and now I remember them as I (re)establish my own pathways that allow
> me to exist here too. (2022, p. 58)

I hold all these intricacies of Land and relations together as I enact a practice of visiting with

Land as an act of restful resistance.

These days, I like to call myself a recovering city kid – not to devalue the city as Land

but to renounce the ways that being a city kid is mired in colonial conceptualizations of Land and

value which damage our relations with the more-than-human world. I continue to live in cities –

either as an uninvited visitor to Syilx Territory or on (sort of) homelands in Grande Prairie – but

I work to repair my relations with Land and all the beings it cares for. Inevitably, as I work to

slip back into these webs of relations, I feel all the profound ways that the Land cares for me,

too. As I allow myself to be engulfed in this care, I think about how this follows a long tradition of going to Land to care for oneself (Anderson, 2016, p. 106). Engaging in this sort of care is an act of restful resistance as I prioritize relations with more-than-human beings and centre knowledge that colonial capitalism attempts to destroy.

Woodhaven

These days, I live and work in a park on unceded Syilx Territory that is colonially named Woodhaven. Over the course of my master's degree, Woodhaven (its Lands, Waters, and More-than-Human beings) has cared for me in profound ways. As I am a Métis visitor to these Lands and recovering city-kid, building a relationship to this Place has been a privilege. I am reminded of Métis scholar Janice Cindy Gaudet's reflection that there is a "complex combination of having both privilege and traditional responsibilities that comes with being Métis and living on a land that is not part of their territory" (2018, p. 51). As I wander around Woodhaven, chatting with the trees and bees, peppering in the few words of nsyilxcən I know, I attempt to return the care. I take seriously Syilx scholar and Knowledge Keeper Jeannette Armstrong's words that "all my elders say that it is land that holds all knowledge of life and death and is a constant teacher. It is said in Okanagan that the land constantly speaks. It is constantly communicating. Not to learn its language is to die" (1998, p. 176). I will never be quite sure if my slow shuffling and reflective routines is enough to reciprocate Woodhaven's care, but I try. And in this trying, I feel our relationship deepen, strengthen, shift.

There is a specific rock that I sit on near Bellevue Creek that runs behind the house. At this rock I often read, write, contemplate, and dip my toes into the water to remind myself of the feeling of this relationship. This rock, this creek, holds me as I return tear-y waters to the Land

while I make space for the difficult parts of life. I am reminded of Armstrong's poem

"Grandmothers," where she writes:

> I nestle
> and draw nourishment from
> voices speaking to me
> in early morning light
> glinting off water
> speaking to me in fragile green
> pushing upward
> groping sun and warmth. (Armstrong, 1998, pp. 176–177)

In so many moments, having this relationship with Woodhaven was the only thing that carried

me through.

The day my grandfather passed away, I paid a long visit to the creek. My grief filled body

was drawn to the creek with the reminder from Métis therapist and scholar Cathy Richardson

Kinewesquao "that the antidote to stress can be found outside, in nature. The energy offered by

the waters, trees, lands, forests restore mind, body and soul" (2023, p. 41). I watched as the

slowly increasing spring freshet dipped into crevices that were usually stagnant and slow. I

watched a little squirrel skitter across the rocks and climb the slope behind me. As I followed its

movement up, I noticed the little family of deer that often hung around Woodhaven came to

mourn with me. These deer, which I lovingly call my roommates and friends, certainly grew

braver around me as my time at Woodhaven lengthened. They no longer fled from the yard when

I came outside and would let me sit and watch them as they munched on leaves outside my big

living room windows. Every time the deer visited, I reacted with a childish joy – greeting them

with sheepish words and revelling in the way they meandered across the Land that bore my

footsteps, too. So, on this day that I received devastating news with no family around to grieve

with, the deer appearing felt spiritual. I thought of Métis scholar Zoe Todd's insistence that

"grief is shared across human/non-human boundaries" (2017, p. 133). While Todd writes about

the collective grief we share with more-than-human kin that emerges from the violence of colonial projects, I believe that when we act with relationality and honour the agency that more-than-human kin hold, we can build relationships that recognize each other's spiritual wellbeing. This belief reflects Métis scholar Monique D. Auger's finding that central to wellbeing is interconnectedness and reciprocity (2021, p. 19). As I wept, the deer stayed – gently peering down at me. They stuck around in the yard for hours that day – an unusual act for these deer that seemed to use this yard as a place to travel through. In the evening, they were still around, poking their heads out as I said see you later when I left for my aunt's house.

Mourning is tricky work. It is difficult to stay in those heavy feelings, yet they need significant room to be worked through. As I near the sixth month mark of my grandpa's death as I write this, I continue to be flooded with grief. I find relief and solace in the moments I retreat to the water and Land – feeling deeply Auger's assertion that it is "healing and grounding" (2021, p. 19). The comfort I find in the Land also reflects Métis poet Aron Skworchinski's statement that "when I feel the land's presence, the search is over. It's like finding the missing piece. When I make that connection, it's like we are working to sew back together the torn-up pieces of ourselves. It's the pieces we know are a bit frayed and jagged" (2023, p. 2). I also think about how it is through my position as a student with an extraordinary supervisor and wonderful mentors that I was able to take time for myself to grieve. Similar to reflections from Black feminists Karla D. Scott (2016, p. 129), Layli Maparyan (2012, p. 44), and bell hooks (1995, p. 126), Métis scholars Anna Corrigal Flamino, Janice Cindy Gaudet, and Leah Marie Dorion emphasize that Métis women struggle to find time and space for acts of self-care (2020, p. 62). It is through my and my committee's collective belief in living this project that I have been able to have so much time to dedicate to visiting with the Land. My mentors' insistence that I rest from

the relentless work of graduate school was a radical intervention into the pace of capitalistic

academia that I could not have taken on my own (Black, 2018, p. 24). We rely on community,

both human and more-than, to find ways to rest during the heavy moments.

The Black Path

I began missing the care that Woodhaven offered when I was visiting family back up

north this summer. Feeling abashed about my lack of relationship with the Land around me, I

thought about what places were around me that I could tend to. I pondered over Gaudet's

assertion that "I needed to do the hard work—to slow down, take time, make the effort, knock on

the door, sit down, listen, share, go to the land, meditate, empty myself, and be present, as my

research on land-based wellness had taught me" (2018, p. 48). I thought first of a path just down

the road from my family's house in the town of Sexsmith. For my family and friends, this path

had been named the "Black Path" – a reference to the dark asphalt that paved it and perhaps

reflective of the dark, spooky, and nefarious vibes that my mother ascribed to the path. As a

child, I was not allowed to visit the path. Best to stick to visible and brightly lit sidewalks rather

than mingle amidst the dense trees and troublesome teenagers that laid claim to the path. Even

now, as I'm an adult, my mother chastises me when she learns I've been to see this path. Thus,

the Black Path has always been a bit of a mystery – or perhaps a stranger – to me, despite our

proximity. I have managed some glimpses over the years, though.

The path walks along a creek that has experienced unforgettable amounts of harm over

the years. My dad says it used to flow from a swamp that is now home to a fancy subdivision. To

make room for this subdivision, the water from the swamp was diverted into this creek that flows

through the town. In the spring, we act surprised when it floods as the swamp attempts to take

back its territory in the basements of these houses. I asked my dad if this creek has a name – he was sure there was but no maps or town plans or friends of his know it. Sometimes, I imagine that the heavy spring freshet that pours through is the creek reintroducing itself – a name I can't quite understand, but feel, nonetheless. When I hear the creek's water rushing, I think about how "the land speaks to you in ways words and written language cannot" (Métis Centre, National Aboriginal Health Organization, 2008, p. 84).

I used to love to ride my bike down the Black Path. It was the only place in town with *hills*. It was exhilarating – to sneak my bike into the path and speed through, over rolling hills and around soft bends, hoping that when I'd peak through on the other end, my mother would not be there to catch me breaking this one rule she had for me. My relationship with the Black Path was fleeting. My time spent with it was always predicated on some rule breaking, and thus required vigilance and brevity. I did not spend a lot of time noticing or visiting with the path when I was younger. So, when I came home in the summer, I was pleasantly surprised to meet more-than-human relatives I had only ever known in other places.

I escaped to the Black Path often while writing my literature review. Stuck in the heaviness of reading and re-reading the beautiful and thought-provoking theory that informs the necessity of seeing rest as resistance, I needed time and space for contemplation, reverie – *rest* (hooks, 1995, p. 126). Seeking this space, I wandered toward the Black Path thinking about Kim Anderson's statement that "foundations of resistance" includes "a close relationship with the land" (2016, p. 95). Coming back here felt a bit like the awkwardness of reintroducing yourself to someone you've met multiple times but are not sure if they remember you. In the thick of the path, I began to meet relatives and kin I had never noticed in my childish, speedy encounters.

Particularly striking were the fireweed blooms tucked away in the Black Path. I could see their bright flowers and tall stalks, but I could not reach them. I saw their distance as a reminder to keep mine. These blooms were for me to visit, to befriend, but not to harvest. I knew of these blooms because of friends who introduced me to the plant, but like Métis Elder George McDermott says, "I can introduce you to a plant and tell you what it is. It is up to you to get to know it, to talk to it, to give it an offering" (Métis Centre, National Aboriginal Health Organization, 2008, p. 24). Popping up in different spots among many other plants, lonely fireweed stalks waved softly in prairie winds, allowing me to become familiar with their leaves and flowers. I spent many restful moments getting to know this medicine. My budding relationship with fireweed reflected Christi Belcourt's statement that knowing the spirit of plant medicines allow her to feel whole, healthy, and able to show up in her relationships (2007, p. 3).

As I began forming a relationship with fireweed, I also pestered my family with what I had learned. Similar to Anita Lafferty,

> While I am on the Land I often think about the future generations. What footprints will follow mine? Will my grandchildren and their children feel the Land as I do? Will they hear the same stories? I seek to understand the Land as a place of knowledge and wisdom, a place where matriarchs and ancestors live among the sights and sounds of the landscapes. Like the breath in my bones, the Land is where the wisdom grows and expands. (2022, p. 55)

So, I told my family what fireweed looks like and the other places it is likely to call home – like "in open fields, pastures, and particularly burned-over lands" (Barkwell, 2013, p. 1). This is typical behaviour for me – to inundate my family with newly gained knowledge whether they want it or not. Amidst their gentle teasing of my new-found obsession with fireweed were reports of their own encounters with it. What began as a simple walk to take a writing break turned into a familial reorientation to Land and life as we collectively took the time to meet and greet all the fireweed we came across. As Elder George McDermott explains, "that plant's life is a whole new

world to people not familiar. It is a different life altogether, it is a different world view" (Métis Centre, National Aboriginal Health Organization, 2008, p. 24). When my sister and I travelled to Amiskwacîwâskahikan (Edmonton) in July, it became a bit like the game punch buggy as we raced to spot and name the patches of fireweed that grew along the highway. We encountered this road that was so familiar to us in new ways as we took the time to notice the beings and medicines that called these Lands home. We began to follow the trails of fireweed that travelled through the places that I have called home.

One afternoon, as I took a much-needed writing break to spend time with my nieces, I noticed a singular stalk of fireweed in their backyard. Finding this friend in my sister's flowerbed-turned-weed garden was a joyous surprise. My sister lives in the heart of suburbia with none of the typical fireweed dwellings close by. We marvelled at this serendipitous bloom and watched as it grew and changed over the summer and I thought about how Auger explains that "Métis people remain adaptable and determined to find creative ways of connecting with the natural environment" (2021, p. 22). I stood in awe as fluffy fireweed seeds slowly cracked open and blew away – beginning to understand the possibility of this friend making its home alongside us; reminding me once again that colonial notions of property will never quell the propensity for all relations to find homes in ours. It remains mysterious to me the ways that seeds which scatter in the fall proceed to enliven again in the spring. Perhaps, spending months being held and protected by Land and snow gives these seeds the power to sprout and bloom. Do the seeds find reverie in this time? Do they relinquish the ever-pressing desire to grow in that time so that they can conserve energy? Do they relinquish control so they can feel deeply the wind blowing them to new homes – new relations? I will have to visit them again to spring to hear – perhaps feel – what they think about rest.

As the fireweed seeds began cracking open in Grande Prairie, the Syilx Lands where I attend school were experiencing devastating forest fires. These fires asked that I postpone my typical late-August return to this territory as I somberly hoped for safety and extinguishment. This delay meant I had an unexpectedly longer stay in Treaty 8 Territory. For the first time in eight years, I got to see all the leafy trees in the place I call home turn orange and crispy. It was unexpectedly emotional – seeing these leaves change reminded me that these Lands change, too. A simple reminder lost in my self-obsessed musings on the ways I always come home feeling different. As I took the time to watch leaves fall in blustery prairie winds, I felt a moment of understanding with these trees – there is a spirit of resilience in the ways we change and shed as we bolster ourselves for resistance (to colonialism and cold weather alike). In spending time with these sunset-coloured trees after many years of missing their transition, I thought of Métis scholar Hanna Paul's statement that "intentionally coming back to ourselves exhibits strength and groundedness" (2023, p. 79). Feeling this strength in my relationship with Land connects with Lafferty's assertion that "with each inhale of knowledge, it connects me to the Land, and, as I exhale, the fear that contains a dark history is slowly withering away" (2022, p. 55). Through reflecting on Land and life with these trees, this path, and fireweed as my collaborators – or perhaps mentors – I felt, very deeply, the ways that resting with Land impacts our wellbeing.

Walking On…

These stories I share about visiting with Land reflect the way Métis communities understand the Land as nourishing for the soul (Métis Centre, National Aboriginal Health Organization, 2008, p. 89). It is profound to recentre this relationship to Land while submerged in a centuries-long project to sunder it. It is profound to act with care towards the Land and

ourselves. As Plains Cree scholar Cash Ahenakew states, "our lands, bodies and minds are not empty, not terra nullius. They belong to the land (to all our relations)" (2023). Resting with Land is an act of resistance because it steadfastly refutes the notion that the only "good" uses of our Lands and bodies are ones that invest in colonial capitalist standards of productivity. From my understanding, though, this relationship to Land is valuable simply because it exists – it prioritizes the maintenance and care of all beings on Land.

As I reflect on these stories, I offer grace to the teenage version of myself who was so eager to disentangle myself from webs of relations. As I grappled with my queer identity in a colonial Catholic town with a desperation to see myself as something outside of *just* the youngest member of the family who didn't seem to fit, I unknowingly damaged the relations eager to care for me. Reflecting on these moments now, I am grateful to Opaskwayak Cree scholar Alex Wilson writing on "coming in" to community as a queer person:

> Our encounters with racism, homophobia, and sexism may disturb our balance and we sometimes lose our place in the circle. For those of us who lose our place, our traditions, history, memories, and collective experience of this world will still guide us. Two-spirit identity is about circling back to where we belong, reclaiming, reinventing, and redefining our beginnings, our roots, our communities, our support systems, and our collective and individual selves. (2008, p. 198)

Alex Wilson's concept of "coming in" helps me work through the ways that I found comfort and confidence in myself and my family when I came back into these relations as a queer person. While coming back into these relations was not always easy, I continue to find comfort in the ways my family reaches out and reaffirms these relations – like in the pictures of trees my dad sends to me while I am away in Kelowna. This digital version of visiting with Land reminds me of the networks of care and responsibility I am firmly planted in even while I am away on other territories.

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