MAI Journal A NEW ZEALAND JOURNAL OF INDIGENOUS SCHOLARSHIP

DOI: 10.20507/MAIJournal.2025.14.1.11

AS WE HAVE ALWAYS DONE

Sharing Māori, Anishinaabe and Gàidheil responses to climate challenge

*Lewis Williams**

Abstract

Indigenous peoples throughout the world are under considerable cultural and ecological pressure in the face of a rapidly warming world. While contexts and Indigenous knowledge systems are specific, there is much that can be learned from knowledge exchange and collaborations with other Indigenous communities. This article reports on a growing conversation across diverse cultural biospheres (Aotearoa New Zealand, Turtle Island, and Alba/Scotland) regarding inclusive Indigenous-led strategies of multigenerational resilience addressing human-environmental wellbeing. Drawing on indigenist research methodologies, it integrates recent research pertaining to each geo-cultural context, with online international Wisdom Councils collectively participated in by the three regions. Māori systems of healing, Anishinaabe renewable energy-harvesting protocols, and Gàidheil "cultural darning and mending" climate challenge strategies are discussed, including the potential of their cross-context relevance. Attention to non-binary ways of conceptualising Indigenous identities (human and more-than-human), including attention to diverse gender and sexual identities within Indigenous-led climate emergency responsiveness, are also discussed as a critical cross-cutting strategy.

Keywords

climate, Indigenous, intergenerational, resilience, non-binary identities, gender-diverse

Introduction

Throughout the world, many economically developed countries are racing to achieve net zero carbon emissions by 2050 within the business-as-usual narrative of economic growth. As a result, neocolonial corporate-driven extractive approaches to renewable energy (Contreras et al., 2023; United Nations, 2022) and Western human-centric approaches to climate justice predominate (Parsons et al., 2021). For peoples still Indigenous to place, these threaten whole cultural biospheres, lifeways, and related intimacies of ancestral connection as well as Indigenous approaches to intergenerational knowledge transmission (Climate Action Network International, 2023; Herman-Mercer et al., 2016). Yet Indigenous peoples throughout the world are resisting these neocolonial pressures while asserting innovative placed-based approaches to

* Ngāi Te Rangi. Associate Professor, Indigenous Studies Program and Department of Geography and Environment, University of Western Ontario, Canada; Founding Director of the Alliance for Intergenerational Resilience. Email: Lewis.Williams@uwo.ca

climate and cultural-ecological resilience (Black, 2021; Johnson et al., 2023; Richmond et al., 2024; Williams, 2022a).

These place-based knowledges are shared across generations and grow from a complex relational system that view the Earth as alive and emphasise the reciprocal responsibilities between humans and the rest of the natural world (McGregor, 2021; Panelli & Tipa, 2007). In essence, they shape cultural identity and belonging and help people come to know that they have responsibilities to act in ways that demonstrate reciprocity and interconnection (Chiblow & Meighan, 2023; Johnson et al., 2023). Despite the disastrous impacts of the fossil fuel industry and related climatic changes on Indigenous communities and their ecosystems, Indigenous lifeways have persisted. Accordingly, the place-based knowledge systems of Indigenous peoples have a much-needed potential to be a key grounding influence for Indigenous wellness and healing (Lipsham, 2023), and climate adaptation and mitigation.

In recent years, the global push to net zero and resulting politics of renewable energy—that is, the combined efforts of governments and multinational corporate entities to rapidly decarbonise and accelerate the accumulation of capital wherever possible—has threatened to effect new forms of erasure on Indigenous communities. Energy colonialism (Batel & Devine-Wright, 2017; Contreras et al., 2023) is now widespread. Global corporate entities in collusion with nation-states proclaim the virtues of renewable energy while "intensifying neo-extractivism and inequalities in populations and territories of the Global South and the peripheries of the Global North" (Contreras et al., 2023, p. 2), including the Indigenous communities described in this article. Energy colonialism threatens entire linguistic and cultural systems as the scale of land transformation required by renewable energy infrastructure often results in ecosystem destruction, possibly intensifying climatic change (Persson et al., 2022). For the most part, such climate mitigation projects adopt a centre-periphery relationship whereby Indigenous lands provide ecosystem services for the economic and social benefit of the wealthy multinationals and the entities and communities they service.

Climate justice movements are increasingly being led by young Indigenous peoples to draw attention to the significance of restoring relationships between people and place as a pathway for healthy planetary futures (MacKay et al., 2020; Williams, 2022a). However, Indigenous lifeways, including those of the communities discussed here, are also threatened by disassociation from the land due to confiscations and subsequent occupation of ancestral lands by the wealthy elite, depopulation and lack of employment and housing opportunities, and urbanisation and intergenerational disconnection from the forests and seascapes (Awatere et al., 2021; Black, 2021; Menzies et al., 2022). While there are many excellent examples of Indigenous youth utilising technology for environmental activism purposes, over-reliance on online communication is contributing to environmental distancing (Herman-Mercer et al., 2016) and learning about traditional ecological knowledge is further challenged by rapidly changing climates and ecosystems. Yet, Indigenous youth are also resisting these pressures by retrieving, reasserting, and making anew the ways of their ancestors (Black, 2021; The IEJ Project, 2022). As research findings directly related to this article testify, this also includes resistance to colonial norms of blood quantum theory and Western heteropatriarchy, as well as generational shifts of non-binary ways of relating to Indigenous, gender, and sexual identities, which have important implications for climate emergency leadership (Carthy & Landesman, 2023; Williams et al., in press).

This article reports on a conversation across diverse cultural biospheres—Tauranga Moana, Aotearoa New Zealand; Deshkan Ziibi, Southwest Ontario, Turtle Island; and the Gàidhealtachd (Gaelic-speaking Highlands and Islands of Alba/Scotland)—regarding inclusive Indigenous-led strategies of multigenerational resilience addressing human-environmental wellbeing. These dialogues are concerned with building collaborations and knowledge sharing in ways that can inspire and assist local Indigenous efforts to address the climate emergency. Supported by an evidence pathway of secondary and field research (semi-structured interviews and Wisdom Councils [WCs] or focus groups), past and current research is presented. Aligning recent research findings from three distinct studies by the author in Tauranga Moana, Deshkan Ziibi, and the Gàidhealtachd to inform new possibilities for regional climate challenge strategies, the article then builds further on these findings through focusing on a series of multigenerational WCs participated in by the same regions, centred around place-based knowledge in contemporary contexts of climate and cultural-ecological challenge. Following descriptions of key concepts and research contexts, the current placed-based strategies of rongoā Māori, Indigenous energy-harvesting protocols, and the "cultural darning and mending strategies" being

asserted in each context respectively are discussed. Relevant findings from the WCs relating to the significance of non-binary identities to climate and cultural-ecological resilience are then discussed.

The article concludes by discussing the potential of each regional strategy to offer insights into Indigenous-led climate strategies within the other geo-cultural contexts while advocating the importance of non-binary approaches to Indigenous identities as a critical cross-cutting strategy. The main title of this article draws on the name of Anishinaabe scholar-activist Leanne Betasamosake Simpson's (2017) book *As We Have Always Done: Indigenous Freedom through Radical Resistance*. In this vein, the climate challenge strategies suggested here are not new but rather a *renewal* of Indigenous ways of being which hold newfound relevancies for contemporary times.

Key concepts

Three key concepts underpin the theory and practice described in this research. The first, *Indigenous intergenerational resilience*, refers to the human-ecological resilience necessary for collective planetary wellbeing through Indigenous-led practices that nurture human intergenerational and interspecies knowledge transmission and connectivity. Its focus on kincentricity aligns with Indigenous environmental justice (McGregor, 2021), which centres the reciprocity and flourishing of all beings of creation, including all living beings and entities that broader society does not consider to be alive. Furthermore, Indigenous intergenerational resilience practice views our human-planetary predicament as not just an environmental challenge but also a cultural-ecological crisis (Williams, 2022a) that has accepted commodification of the Earth (McGregor, 2021) and related axes of oppression such as white supremacy, growing economic and power disparities, heteropatriarchy, and gender-based violence (Perkins, 2019; Williams, 2022a). Addressing cultural-ecological crisis therefore requires cultural restoration work which remakes or heals the fractured whakapapa between all kin.

Significant to cultural restoration and Indigenous intergenerational resilience practice is the second key concept underpinning this research: *the re-naturalisation or re-indigenisation of non-binary gender, sexual, and Indigenous identities*. This is consistent with Indigenous environmental justice (McGregor, 2021), which seeks to acknowledge and reconcile the rights and responsibilities of *all* entities—animate and, in the Western sense, inanimate. Contrastingly, in writing about how colonial systems presume racialised distinctions between "primitive" and "civilised" gender and sexuality, decolonial scholar Scott Morgenson (2012) points out that colonisers have attempted to indigenise Western colonial norms of heteropatriarchy and binary sex gender "onto new lands to prove the premise that the totality of life can conform to them" (p. 13). Conversely, Indigenous knowledge honours creation in its diversity—difference is not treated as deviance but as normal. In this sense, Indigenous knowledge can "be considered queer because it honours epistemic diversity and multi-temporalities" (Awasis, 2020, p. 840). These connections between emplaced queer epistemologies and identities are important as they facilitate the re-naturalisation of non-binary identities (including those of some of the WC participants; see below) across a range of Indigenous (human and more-than-human) gender and sexual identities.

The work of Indigenous intergenerational resilience in the context of the climate emergency is closely linked to the third key concept in this research: *environmental repossession* (Nightingale & Richmond, 2022; Richmond et al., 2024). Broadly describing global Indigenous resurgence activism, this concept recognises that as communities draw on their own processes, protocols, and knowledge systems to apply repossession, individual place-based efforts are "adapted to each geographical and cultural context" (Nightingale & Richmond, 2022, p. 2). These can range from treaty claims and Land Back occupations to practices which reconnect Indigenous peoples to ancestral lands, lifeways, and worldviews.

Research contexts and climate challenge

In the following sections, I describe each Indigenous community context in relation to climate change and colonialism together with a brief description of key elements of Indigenous worldviews of each.

Colonialism and changing climates

Tauranga Moana is an ecologically diverse area which runs from the Kaimai Range to the Bay of Plenty coastline of the North Island of Aotearoa, encompassing native forest, wetlands, and tidal estuaries. At the time of colonisation, it was a rich and fertile area. As a result of colonial invasion in the 1850s and 1860s and subsequent land confiscations and "development", Tauranga Moana Māori increasingly struggled to be in control of their ancestral landscapes (Waitangi Tribunal, 2010), experiencing reduced access to bush and seascapes. Vast tracts of Indigenous forests were

cleared during the 1880s. Through a series of legislative assaults by the Crown, in 2010 Māori-owned land in the Tauranga Moana amounted to less than a quarter of the land they held in 1886 (Waitangi Tribunal, 2010). Flooding, ocean-warming, and acidification and knock-on effects of environmental impacts on taonga species are among climate change impacts affecting the area (Tauranga City, 2023). Today, a substantial number of the city's urban Māori—who make up 17% of Tauranga's population—are alienated from their traditional lands, foods, and lifeways, with some experiencing food insecurity (Beavis et al., 2019; Graham et al., 2022).

Deshkan Ziibi (meaning "deer-antlered" in Anishinaabemowin) refers to the river system and surrounding woodlands which lie at the heart of Southwestern Ontario, Turtle Island. The First Nations of this territory, which runs adjacent to the Great Lakes, have been heavily impacted by the fossil fuel industry, including Chemical Valley, which contains more than 60 chemical plants and oil refineries, and the installation of oil pipelines through their territories (Awasis, 2021). These industries, together with historical and ongoing forms of colonisation; including dispossession of lands, environmental impact assessments, and structural racism, have all contributed to the health and wellbeing disparities experienced by Anishinaabe and other groups Indigenous to this area (Ramnarine, 2023; Wiebe, 2016). Climate change has resulted in additional wellbeing pressures, including new forms of energy colonialism (Contreras et al., 2023) as global corporate entities negotiate large-scale implantation of renewable energy infrastructure in ways which largely ignore Anishinaabe traditional knowledge and lifeways. Other climate change–related impacts include decreased ice flows and increased algae blooms in the river system (Ramnarine, 2023).

The Gàidhealtachd encompasses mountainous and coastal regions of Scotland, including the Inner and Outer Hebrides, and is home to 17% of the Scottish population. It experienced colonisation from the 1600s onwards which intensified through the Land Clearances of the 18th and 19th centuries (Gibson, 2023) and associated practices of racialisation, such as banning of the Indigenous language Gàidhlig and key cultural practices. This resulted in intergenerational disconnection from the matrix of land and language. It also decimated various Indigenous lifeways, including fishing and peat and medicinal harvesting practices. The authority of clan chiefs was broken, and thousands of Gàidheil were forcibly put on boats and shipped to British colonies (Williams, 2024), contributing to the widespread Gàidheil diaspora—many of whom are now caught up in the structures of neoliberalism—in Aotearoa and Turtle Island. The impacts of colonisation are ongoing in terms of socioeconomic and ecological challenges faced by Gàidheal today (MacKinnon, 2018). Accompanying changes in weather systems, other key climate change impacts include the displacement of local crofting communities and ecological degradation through corporate renewable energy initiatives (Dick, 2023; Eilean Mo Ghaoil, 2023; Williams, 2024).

Epistemologies of interconnectedness

While Indigenous worldviews are specific to place, they share a common epistemological orientation and a kincentric approach to life (Salmòn, 2000) in which all beings have agency, are deeply interconnected, and "the land is alive and thinking" (Watts, 2013, p. 4). For Māori, whakapapa lies at the heart of their worldview, representing "cosmologically derived kinship relations between the spirit, natural and human world based on common descent" (Johnson et al., 2023, p. 3). Whakapapa forms the fundamental ontological principles of how to live well and is actively enacted through whakawhanaungatanga, the active establishment or maintenance of kinship relations through cultural practices.

Anishinaabek Gkendaasowin is similarly embodied, and land-based traditional knowledge is lived and experienced through kincentricity (Awasis, 2020). Gkendaasowin is enacted through listening and learning from the spirit, natural, and human worlds, and informs Anishinaabe people that all of life is interconnected (Chiblow & Meighan, 2023).

The Gaelic concept of dùthchas is understood as an "ontology and methodology which expresses the interconnectedness of people, land, culture, language, and an ecological balance among all entities, human and more than human" (Chiblow & Meighan, 2023, p. 7). As a practice, dùthchas forms the basis of traditional ecological knowledge (Mhathúna, 2021) and was also a system of law or native title associated with the traditional clan society, collective rights, and land practices (MacKinnon, 2018, p. 284). Today, throughout the Gàidhealtachd, dùthchas as a concept and practice is being revitalised as a wellspring of transformative energy for place-based revitalisation (Dziadowic, 2022).

Methods

Based on Wilson's (2007; see also Concordia University, 2016) concept of indigenist research, which prioritises Indigenous epistemologies and philosophies, the methodology applied in this research recognises that Indigenous worldviews share broad ontological, epistemological, and axiological principles (Wildcat & Voth, 2023) while respecting the specificity of these to places and communities (Kovach, 2021; Smith, 2021). My positionality in relation to this research is shaped by both my Ngāi Te Rangi (Ngāi Tukairangi hapū ki Tauranga Moana, Aotearoa) and my Gàidheal (Nan Argeantaich, Eilean Arainn, Alba) whakapapa. I am of also of takatāpui identity and have spent much of the last 20 years living and working on the traditional territories of Plains and Woodland Cree, Coast Salish, Anishinaabe, and Haudenosaunee Nations on Turtle Island. In keeping with an indigenist research framing which emphasises the efforts of the researcher/s to align with the Indigenous worldviews of a place, rather than whether one is Indigenous to a particular place or not, in each study I have drawn on my experiences of these positionalities, while acknowledging that I can never fully know the experiences of those who are Indigenous to another place.

Drawing on qualitative inquiry, this study utilises semi-structured individual interviews and focus groups—here called Wisdom Councils [WCs]—as data collection methods and an inductive approach to data analysis (Kovach, 2021). The research uses critical pedagogical approaches to knowledge production, developed by scholars in Indigenous education and research methods (Restoule, 2019; Restoule & Snow, 2023). It prioritises holistic ways of knowing, placing equal emphasis, for example, on knowledge gathered through empirical cognitive methods or intuitive ways such as dreaming, sensing, and feeling.

The first subsection of the Findings section below relates to three studies conducted from 2019 to 2024 with each of the regions represented in the WCs. While the potential value of each regional strategy to another region was not the focus of the subsequent WCs per se, these activities nevertheless informed the contexts from which participants spoke. These earlier projects, together with their respective Human Behavioural Ethics Boards approvals, are as follows:

1. Toitū te Taiao—Toitū te Tangata (Tauranga Moana, Project ID 2019_42, Aotearoa Research Ethics Committee)
2. The Cultural and Generational Dimensions of Climate Crisis (Deshkan Ziibi, Project ID 2020_193, University of Saskatchewan)
3. Climate Change and Contemporary Expressions of Gàidheil Place-based Knowledge (the Gàidhealtachd, Project ID 123591, University of the Highlands and Islands)

An Anishinaabe summer student was hired to undertake an inductive qualitative research approach to analysing the findings from WCs 1 and 2, with members checking the emerging themes for accuracy. Ethics approval was not required for these WCs as they were deemed to be occurring in a public space. However, on the advice of the Non-Medical Research Ethics Board, University of Western Ontario, we asked participants to sign a two-staged consent form for the video recordings of these sessions in advance of their open access publication on the website of the Alliance for Intergenerational Resilience (AIR), a Canadian-based not-for-profit organisation whose focus is Indigenous-led approaches to social-ecological resilience. Names are used alongside quotes in the Results section from these first two WCs as the videos are publicly available on YouTube. Ethics permission was obtained from the Non-Medical Research Ethics Board for the Queering Climate Crisis WC Series (Project ID 12295).

Wisdom Councils

Building on a previous international land-based learning forum (Williams, 2022a) engaging youth and elders Indigenous to Aotearoa, Turtle Island, and Alba, WCs emerged out of a need to keep place-based knowledge exchange practices active during the COVID-19 pandemic. These were held under the auspices of AIR in partnership with Vancouver Island University and Western University in Canada. Engaging youth and elders between 16 and 78 years of age from the aforementioned countries, these gatherings drew on holistic methodologies including ceremony, film, and arts-based and dialogical practices.

Utilising participatory and process-orientated methods (Wilson, 2007), each online WC requires a combination of individual and group meetings as part of their preparation and includes joint decision-making with prospective participants around content and process. These discussions also include particular modalities (e.g., dialogue, poetry, song, traditional stories) of wisdom sharing. Engaging in ceremony led by an Indigenous elder at the beginning, each WC aims to create

a container which enables spiritual, emotional, and analytical depths to be reached during the gatherings. In part an attempt to disrupt the settler foundations of education and society and Western normative approaches to online learning (Tessaro & Restoule, 2022), the WCs deliberately engage head (intellect), heart (spirit, intuitive knowing, and emotion) and hand (practical action) in holistic learning and wisdom distillation.

WC 1, "The Language of the Land" (February 2021) and WC 2, "Climate Crisis and Multigenerational Resilience" (March 2022) engaged Indigenous youth and elders from Tauranga Moana, Aotearoa, and Vancouver Island, Canada; and Deshkan Ziibi, Vancouver Island, and Alba, respectively. Participants were asked to respond to one of the following questions:

- How do you experience the language of the land? (WC 1)
- What are the Indigenous and traditional perspectives and practices that can strengthen intergenerational relationships and resilience in these times of climate crisis? (WC 2)

In April 2023, work started on a related but distinct series of WCs (3 and 4) on "Queering Climate Crisis Response" (QCCR). For reasons too lengthy to go into here, this research is undergoing methodological revision, two WCs having been held to date. This series of WCs asks Indigiqueer youth and elders to respond to the question "What do you consider to be the impact of and unique agencies that Indigiqueer people may have in response to climate and cultural-ecological crisis?"

All WCs held thus far have been recorded. WC 2 was shown at an online public dialogue forum, and the recordings of WCs 1 and 2 are publicly available through the AIR website.

Findings

Context-specific approaches to climate and cultural-ecological emergency

Rongoā Māori. Māori climate response plans in the Tauranga Moana and the wider Bay of Plenty are in their early stages. However, Māori community leaders are undertaking work to reconnect whānau and hapū to the land, including growing traditional foods and plant medicines (see, e.g., Ngāpeke Permaculture, n.d.), including the restoration of rongoā Māori (Williams, 2022a; see also Titoki Education, n.d.). Rongoā Māori encompasses values, protocols, and healing practices that are Indigenous to and have been practised in Aotearoa for more than a thousand years. It is ultimately an Indigenous environmental philosophy and set of practices which engender a reciprocal relationship of care with te taiao, including the cosmos (Williams, 2022a). These connections are fundamental to wellbeing and promote medicinal practices that can heal both people and the land, strengthening people's relationship with the land (Awatere et al., 2021). Furthermore, while Indigenous species are slower growing than fast-growing exotic pines—which are commonly utilised by multinationals for carbon credits—they are more efficient in terms of stopping soil erosion and keeping sediment out, providing cover to younger flora, and have longer-term viability regarding carbon sequestration over time (Blundell, 2019). Rongoā Māori, then, is a potentially powerful practice with which to address the climate and cultural-ecological emergency.

Indigenous energy harvesting. Anishinabek Gkendaasowin has significant potential for informing climate mitigation strategies on Indigenous lands of renewable energy governance (Chiblow & Meighan, 2023) that are now occurring across Canada on significant scales (Hoicka et al., 2021). Yet the implementation of renewable energy across Canada has been fraught with conflict and in the case of Indigenous communities highlights the tensions between settler and Indigenous institutions and legal orders (Williams, 2022a). Research by Hoicka et al. (2021) claims that, at best, there has been increased equity for Indigenous peoples in terms of community benefit and coownership with private entities. However, some Anishinaabe oil pipeline opponents and scholars (e.g., Awasis, 2021) are proposing the application of Anishinaabe harvesting protocols (reciprocity, relationality, responsibility) to energy governance, rather than the predominant colonial subjugation of more-than-human life in renewable energy arrangements. These honour the winds, waters, and sun, for example, as having unique responsibilities to all beings as well as rights. Listening to the needs of these more-than-human beings has strong potential for "renewable energy to be honourably harvested if the rights and responsibilities of non-humans are not infringed upon and benefits are shared in an equitable manner" (Awasis, 2021, p. 18). While it is early days, Indigenous and, in this case, specifically Anishinaabe harvesting protocols have significant potential for climate justice action that is restorative for Indigenous cultural ecologies.

Cultural darning and mending. A resurgence of Gàidheil culture is underway, with the revitalisation of Gàidheil lifeways being increasingly applied to issues of climate and cultural-ecological resilience (McFadyen & Sandilands, 2021; Williams, 2024). While clans continue to occupy and reoccupy their ancestral lands (see, e.g., Urras Oighreachd Ghabhsainn, n.d.a) throughout the Gàidhealtachd, the severance of clan governance by colonisers poses significant sovereignty challenges for the Gàidhealtachd (MacKinnon, 2018). Despite these challenges, there are increasing numbers of strong examples of successful community buyouts of land from corporate entities and the restoration of Indigenous lifeways, including moves for community control over renewable energy initiatives (Williams, 2024; see also Urras Oighreachd Ghabhsainn, n.d.-b). However, the intergenerational disruption and colonial denial of access to "the matrix of belonging through land and culture" (McFadyen & Sandilands, 2021, p. 169) for others across the Gàidhealtachd has resulted in the employment of various "cultural darning and mending strategies" (McFadyen & Sandilands, 2021), which invite disconnected Gaelic peoples to reconnect with their own culture and language, redeveloping an ethical relationship with the land (see, e.g., An Àirigh | The Shieling Project, n.d.). Another example is the use of traditional storytelling as means of learning local Gàidheal toponymy and the rich layers of Indigenous meaning within Gàidligh place names (McFadyen & Sandilands, 2021). Repairing colonial lacerations within the fabric of Gàidheal being and thinking in these ways makes vital contributions to rebuilding contemporary Gàidheil collective identities grounded in the wellbeing of place. These are of critical importance in terms of providing the basis for Indigenous-informed approaches to the climate and cultural-ecological emergency that can resist colonial technological approaches grounded in profit rather than place and people.

Wisdom Council findings: Resisting colonial binaries

This section focuses on the significance of resisting colonial binaries in the context of re-indigenisation of non-binary interspecies, gender, sexual, and Indigenous identities within climate and cultural-ecological resilience work. This theme spontaneously arose in the first two WCs and is being expanded upon within the ongoing QCCR WCs.

Resistance to colonially imposed binary categories or sharp divisions between human and more-than-human and Indigenous and non-Indigenous identities has been powerfully evident in our WCs. These forms of categorising are seen by participants as weakening relationality between life forms in ways that run counter to our vision of multigenerational resilience. For example, the Indigenous practice of honouring kinship across human and more-than-human realms, including recognition of humans as among the younger earthly kin, was evident in the sacred Māori creation waiata "Te Pū", sung by Ngāti Ranginui/Ngāti Porou panellist Christina in WC 1 (AIR, 2021, 17:21), which bridges the spiritual and material realms. It closely weaves together unfolding stages of creation and their co-constituent elemental entities, including more-than-human lifeforms, making up the entire te taiao, including the cosmos. From an Indigenous perspective, singing waiata animates the mauri of the entities within it, beyond Western linear conceptualisations of time and space (Awasis, 2020). The resulting *affect* speaks to the *whole being* of the listeners, going well beyond discursive exchange and mind-body duality.

In the second WC, within the context of connecting to her Cree ancestry, a young Two-Spirited participant named Carmin talked about the importance of honouring their whole being, including more holistic rather than truncated connections with human and more-than-human ancestors. Elaborating on this, Carmin said: "Also, in that like all the interconnection pieces of the land and what our responsibility is and just honouring my whole being and sharing that humility and all of the different ancestral ties that I do carry" (Williams, 2022b, 1:04:39).

Towards the conclusion of the same WC, to further illustrate their point, Carmin, who is also an artist, showed their painting *Interconnections* (see Figure 1 on p. 91) to the other participants. In Carmin's words:

> This spirit painting symbolises the interconnections between all beings … the roots connected to sprit, fire, ancestors, land, community, and my Woodland Cree culture. Finding my way, all elements are important in understanding who I am, where I am from and where I am going … my journey. (Williams, 2022b, 1:07:08)

In the same WC, a young Anishinaabe man named Dion raised the limitations imposed on the reclamation of Indigenous identities and lifeways by the ongoing fixations with blood quantum within Canadian society:

> Over here there's a big thing with blood quantum and how much to get your status card and all of these different issues that stunts people's exploration into being an Indigenous person … that they're only 5% or whatever. They feel like they're less-than and can't really reach out for those supports. (Williams, 2022b, 1:01:54)

Notwithstanding the still pervasive influence of blood quantum on Indigenous identities in Canada, the relational ways of emphasising genealogical connections to people and place that Dion is alluding to have been for some time gaining ground both within Tauranga Moana and the Gàidhealtachd (Williams, 2022a, 2024). For example, in recent years Ngāi Te Rangi have begun running wānanga on Ngāi Te Rangi whakapapa and traditional knowledge for uri in the large urban centre of Auckland (three hours from their traditional territory). In terms of climate challenge, these initiatives are significant as they make opportunities available for people of Indigenous descent to come to know and potentially operationalise their ancestral Indigenous cosmologies within their own lives, thereby potentially strengthening climate and cultural-ecological resilience.

The presence of openly identifying Two-Spirit and Indigiqueer youth on the WCs raised the profile of issues regarding the impacts and unique agencies of these groups in relation to cultural-ecological and climate emergency. This led to the development of the aforementioned QCCR WC series, with participants consisting of the research team (six members who either identify as Two-Spirit or Indigiqueer) as participant-researchers. Two online WCs have been held to date. In these discussions, Two-Spirit and Indigiqueer peoples are both vocal about experiences of homophobia in their communities, as well as the importance of including their voices in Indigenous climate change initiatives. For example, before the commencement of the QCCR WCs, one Two-Spirit participant had the experience of being asked by a Two-Spirit elder to help make a Two-Spirit Eagle Staff (the Eagle Staff is a symbol of Anishinaabe culture and clan system) and dance it into their home community powwow. However, the First Nation Powwow Committee, which was elder-led but comprised of all heterosexual members, denied the Eagle Staff entry into the powwow on the basis that a Two-Spirit Eagle Staff was not considered suitable for the ceremony. The Two-Spirit QCCR WC member interprets this action by the Powwow Committee to be due to the result of the incursion of colonial heteronormativity into Anishinaabe society, whose traditional cultural lifeways have previously valued the place and role of Two-Spirit people. In the subsequent QCCR WC, while speaking about the exclusion of some Indigenous people from ceremony (including 2SLGBTQI+), they made the following observation:

> [I]t wasn't until I aligned myself with my Two-Spirit elders and mentors that they said that's [i.e., exclusion] exactly the opposite of our teaching. They say come as you are, come as you are, and if we look at creation … that's not [exclusion] what the land teaches us.

The prevalence of climate emergency discourse positioning queer and Indigiqueer people as "vulnerable" rather than having unique agencies in relation to climate crisis was raised by the QCCR WC participants, a view which is also expressed in recent literature (Carthy & Landesman, 2023; Kihara, 2023). One participant also alluded to the negative impacts of the reality of unexpressed agency for 2SLGBTQI+ peoples through relating a traditional North American Indigenous teaching about the beaver. In congruence with Indigenous environmental justice ethics (McGregor, 2021), within these teachings all beings and species are born with specific responsibilities to the Earth community. The beaver's particular gift is wisdom for the way in which they use their skills, knowledge, and attributes for survival—that is, being able to chew through the trees wisely for the benefit of their family and altering their environment in a way that is environmentally friendly and sustainable. However, the QCCR WC elder also pointed out that if the beaver is not given the opportunity to use this gift, their teeth will eventually grow out, rendering them unable to chew, causing eventual starvation. The elder used this traditional teaching to draw a parallel to the potential harmful impacts on 2SGLBTQI+ peoples of being positioned as solely vulnerable rather than being given opportunities to utilise their unique agencies within climate emergency response.

In considering the unique agencies that 2SLGBTQI+ people have in relation to climate and cultural-ecological resilience, a Two-Spirit QCCR participant discussed Indigiqueer agency in the following way:

> The land is queer … But I am also thinking that climate and climate change are queer. How this is happening is different everywhere, and it's even different within the same places from year to year and how these processes are happening … [A]nd I

FIGURE 1 *Interconnections* by Carmin Bear Bloomberg

> am thinking about the horned serpent [Mishipizhu, an entity associated with water-land-sky relations].

They then went on to say that people talk about Mishipizhu as both the cause of climate change and the restorer of balanced relationships in response to fossil fuel extraction (Nelson, 2013)—by "keeping the balance between the sky and the underworld". In relation to the last comment, they added, "We're obviously very out of balance now and I think how Two-Spiritedness is really like an in-between, like a balance as well between men and women."

In a forthcoming article, the unique challenges and potential capacities of peoples whose identities lie at the intersections of Indigenous, gender-diverse, and sexual identities to contribute not only to climate adaptation and mitigation but more broadly to Indigenous futurities and planetary wellbeing will be further explored (Williams et al., in press).

Discussion and conclusion

Collaborative partnerships and knowledge-sharing opportunities for knowledge exchange and interregional and international network development can strengthen collective efforts and collaboration across climate or socioecological innovations (Moore et al., 2015). Each of the above-mentioned initiatives has potential to inform climate and cultural-ecological resilience strategies across other contexts. For example, the rongoā Māori movement has the potential to reinspire and reconnect people of the Gàidhealtachd back to the cleared moors, which are a rich source of traditional food and medicine. In addition, they also contain peat, which can act either as a reservoir for carbon storage or as a source of fossil fuel. (Activities surrounding communal peat cutting and preparation are key elements of cultural and community connection.) Some Gàidheil argue that the small-scale use of peat, for example, on individual crofts, in conjunction with community-controlled renewable energy sources (rather than corporate-owned renewable energy entities) is culturally and environmentally sustainable, and an important source of cultural-ecological restoration (Williams, 2024).

Anishinaabe energy-harvesting protocols and their processes of implementation could inspire similar processes for the Gàidhealtachd and Tauranga Moana in terms of wind and hydro energy, respectively. Thinking about the rights and responsibilities of wind and water beings in this way would provide a grounded means and framework for assessing the sustainability of renewable energy initiatives from a non-human-centric Indigenous environmental justice

perspective (McGregor, 2021). The cultural darning and mending strategies of the Gàidhealtachd could provide a useful metaphor and means of ethical environmental connection for urban and culturally disconnected Indigenous peoples living in and around Deshkan Ziibi and Tauranga Moana. These groups rarely participate in climate emergency decision-making and strategy because of the fragmented nature of their lives and their cultural disconnection from place and community. Yet, ironically, it is because of their starting point of cultural brokenness that the strategies of climate and cultural-ecological resilience being employed by the Gàidheil may have much to offer urban disconnected Indigenous peoples in other countries.

The issues of non-binary approaches to Indigenous and gender and sexual identities raised by Indigenous peoples on the QCCR WCs foreground the need for a more inclusive approach to climate mitigation and adaptation, and the active engagement of Indigenous cultural resurgence within Indigenous intergenerational resilience practice for climate and cultural-ecological resilience. There is a dearth of research on the impacts of climate change with respect to Indigenous genders and sexualities (Ramnarine, 2023; Williams et al., 2018), let alone active inquiry into the unique contributions these groups might make to climate and cultural resilience (Williams et al., in press). This forms a significant cross-cutting piece of the three aforementioned climate challenge strategies, with younger Indigenous peoples appearing in the main to be driving this critical aspect of change. Indeed, resilient Indigenous futurities rely on such regenerative forms of cultural-ecological resurgence.

Glossary

Te reo Māori

hapū	subtribe
Māori	Indigenous peoples of Aotearoa
mauri	life force
rongoā Māori	Māori systems of healing
takatāpui	Māori LGBTQ+
taonga	treasured
te taiao	the natural world
uri	descendants
waiata	song(s)
wānanga	educational forums
whakapapa	genealogy between living entities
whakawhanaungatanga	the making of kinship relations with all living entities
whānau	family or extended family

Anishinaabemowin

Anishinaabe	Indigenous peoples of Southwest Ontario and the Great Lakes region
Anishinaabemowin	the language of the Anishinabek Nation
Anishinaabek Gkendaasowin	Anishinaabe knowledge

Gàidligh

Alba	the Gàidligh word for Scotland
dùthchas	interconnected ontology of land, people and culture
Gàidhealtachd	Gàidligh-speaking Western Islands and Highlands of Scotland
Gàidheil	Indigenous peoples of the Western Highlands and Islands of Scotland
Gàidhlig	the Scottish Gaelic language

Acknowledgements

The author gratefully acknowledges the energy and enthusiasm of the Indigenous elders and youth participating in this research over the past four years. Ethics approvals are listed in the Methods section.

References

Alliance for Intergenerational Resilience AIR. (2021, July 31). *The language of the land: A multigenerational Wisdom Council* [Video]. YouTube. https://www.youtube.com/watch?v=TIxh2LZO070

An Àirigh | The Shieling Project. (n.d.). *About*. https://www.theshielingproject.org/en/about

Awasis, S. (2020). Anishinaabe time: Temporalities and impact assessment in pipeline reviews. *Journal of Political Ecology*, *27*(1), 830–852. https://doi.org/ghf3b8

Awasis, S. (2021, March). Gwaabaw: Applying Anishinaabe harvesting protocols to energy governance. *The Canadian Geographer/Le Géographe canadien*, *65*(1), 8–23. https://doi.org/gjvvnz

Awatere, S., King, D. N., Reid, J., Williams, L., Masters-Awatere, B., Harris, P., Tassell-Matamua, N., Jones, R., Eastwood, K., Pirker, J., & Jackson, A. M. (2021, October). *He huringa āhuarangi,*

he huringa ao: A changing climate, a changing world (Te Arotahi Series Paper No. 7). Ngā Pae o te Māramatanga, New Zealand's Māori Centre of Research Excellence. https://www.maramatanga.ac.nz/index.php/media/7005/download?inline

Batel, S., & Devine-Wright, P. (2017) Energy colonialism and the role of the global in local responses to new energy infrastructures in the U.K.: A critical and empirical exploratory analysis. *Antipode. A Radical Journal of Geography*, *49*(1), 3–22. https://doi.org/gn7vzv

Beavis, B., McKerchar, C., Maaka, J., & Mainvil, L. (2019). Exploration of Māori household experiences of food insecurity. *Nutrition & Dietetics*, *76*(3), 344–352. https://doi.org/fcvn

Black, A. (2021). *Dàn fianais or Protest poem* [Video]. Vimeo. https://vimeo.com/672259479/801e252abc

Blundell, S. (2019, July 6). The meaning of trees. *New Zealand Listener,* 24–27.

Carthy, A., & Landesman, T. (2023, July). Beyond inclusion: A queer response to climate justice. *Backgrounder*. https://www.iied.org/sites/default/files/pdfs/2023-07/21546iied.pdf

Chiblow, S., & Meighan, S. (2023). Anishinaabek Giikendaaswin and Dùthchas nan Gàidheal: Concepts to recenter place-based knowledges, governance, and land in times of crisis. *Ethnicities*, *24*(4), 617–634. https://doi.org/n7hv

Climate Action Network International. (2023). *Gaelic language and culture under threat from rising sea levels in Scotland* [Video]. YouTube. https://www.youtube.com/watch?v=hrNA_2U-cyQ&t=1s

Concordia University. (2016, March 31). *Decolonizing methodologies: Can relational research be a basis for renewed relationships?* [Video]. YouTube. https://www.youtube.com/watch?v=rqYiCrZKm0M

Contreras, J., Ruiz, A., Campos-Celedor, A., & Fjellheim, A. (2023). Energy colonialism: A category to analyse the corporate energy transition in the Global North and South. *Land*, *12*(6), Article 1241. https://doi.org/gtbw8z

Dick, S. (2023, July 23). Storm brews over Isle of Lewis off-shore windfarm. *Herald Scotland*. https://www.heraldscotland.com/news/23637051.storm-brews-isle-lewis-offshore-windfarm/

Dziadowic, R. (2022, March 16). Tobar an Dualchais: What can proverbs tell us about dùthchas? *West Highland Free Press*. https://www.whfp.com/2022/03/16/tobar-an-dualchais-what-can-proverbs-tell-us-about-duthchas/

Eilean Mo Gahoil. (2023, October 23). *Devastating Northland scoping report revealed*. https://www.emg-lewis.co.uk/news-1/devastating-northland-scoping-report-revealed

Gibson, R. (2023). *The Highland Clearances trail*. Luath Press.

Gordon, C. (2023, January 31). *Remembering the Tuath*. Enough! https://enough.scot/remembering-the-tuath/

Graham, R., Jackson, K., Masters-Awatere, B., & Stolte, O. (2022). Hidden hunger in a land of plenty: Food insecurity in Aotearoa New Zealand. *Global Journal of Community Psychology*, *13*(2), 1–20. https://www.gjcpp.org/pdfs/GrahamEtAl_Final.pdf

Herman-Mercer, N. M., Matkin, E., Laituri, M. J., Toohey, R. C., Massey, M., Elder, K., Schuster, P. F., & Mutter, E. A. (2016). Changing times, changing stories: Generational differences in climate change perspectives from four remote indigenous communities in Subarctic Alaska. *Ecology and Society, 21*(3), Article 28. https://doi.org/f87n6z

Hoicka, C., Savic, K., & Campney, A. (2021). Reconciliation through renewable energy? A survey of Indigenous communities, involvement and peoples in Canada. *Energy Research and Social Science*, *74*, Article 101897. https://doi.org/gjvjqf

The IEJ Project. (2022, September 13). *Climate crisis: An indigenous perspective* [Video]. YouTube. https://www.youtube.com/watch?v=FDvNuIcijtU

Johnson, D., Fisher, K., & Parsons, M. (2023). Resistance, resurgence and wellbeing: Climate change loss and damages from the perspective of Māori women. *Environment and Planning E: Nature and Space*, *7*(3), 1318–1364. https://doi.org/n7hw

Kihara, Y. (2023). *Queering climate. Talanoa forum: Moana rising*. Powerhouse. https://powerhouse.com.au/stories/queering-climate

Kovach, M. (2021). *Indigenous research methodologies: Characteristics, conversations and contexts*. University of Toronto Press.

Lipsham, M. (2023). Taiao and mauri ora: Māori understandings of the environment and its connection to wellbeing. *MAI Journal*, *12*(2), 181–192. https://doi.org/n7hx

MacKay, M., Parlee, B., & Karsgaard, C. (2020). Youth engagement in climate change action: Case study on indigenous youth at COP24. *Sustainability*, *12(16)*, Article 6299. https://doi.org/gn5nnd

MacKinnon, I. (2018). 'Decomonizing the mind': Historical impacts of British imperialism on indigenous tenure systems and self-understanding in the Highlands and islands of Scotland. *International Journal of the Commons*, *12*(1), 278–300. https://doi.org/gdg2vn

McFadyen, M., & Sandilands, R. (2021). On "cultural darning and mending": Creative responses to *Ceist an Fhearainn* / the Land Question in the *Gàidhealtachd*. *Scottish Affairs*, *30*(2), 157–177. https://doi.org/gmm8cd

McGregor, D. (2021). Indigenous environmental justice. In S. Atapattu, C. Gonzalez, & S. Seck (Eds.), *The Cambridge handbook of environmental justice and sustainable development* (pp. 58–71). Cambridge University Press. https://doi.org/n7hz

Menzies, A. K., Bowles, E., Gallant, M., Patterson, H., Kozmik, C., Chiblow, S., McGregor, D., Ford, A., & Popp, J. N. (2022). "I see my culture starting to disappear": Anishinaabe perspectives on the socioecological impacts of climate change and future needs. *FACETS*, *7*, 509–527. https://doi.org/n7h2

Mhathúna, N. D. (2021). Traditional ecological knowledge and the relevance of *dùthchas* in

Gàidhealtachd environmental futures. *Scottish Affairs*, *30*(2), 251–261. https://doi.org/n7h3

Moore, M., Riddell, D., & Vocisano, D. (2015). Scaling out, scaling up, scaling deep: Strategies of non-profits in advancing systemic social innovation. *Journal of Corporate Citizenship* (58), 67–84. https://doi.org/ggmdbr

Morgensen, S. L. (2012). Theorising gender, sexuality, and settler colonialism: An introduction. *Settler Colonial Studies*, *2*(2), 2–22. https://doi.org/gms38p

Nelson, M. K. (2013). The hydromythology of the Anishinaabeg: Will Mishipizhu survive climate change or is he creating it? In J. Doerfler, N. Sinclair, & H. Stark (Eds.), *Centring Anishinaabeg studies: Understanding the world through stories* (pp. 213–233). Michigan State University Press.

Ngāpeke Permaculture. (n.d.). *About*. https://ngapekepermaculture.com/our-mission/

Nightingale, E., & Richmond, C. (2022). Reclaiming land, identity, and mental wellness in Biigtigong Nishnaabeg Territory. *International Journal of Environmental Research and Public Health*, *19*, Article 7285. https://doi.org/n7h4

Panelli, R., & Tipa, G. (2007). Placing well-being: A Māori, case-study of cultural and environmental specificity. *EcoHealth*, *4*, 445–460. https://doi.org/fcr3zz

Parsons, M., Fisher, K., & Crease, R. P. (2021). Environmental justice, and indigenous environmental justice. In *Decolonizing blue spaces in the Anthropocene* (pp. 39–73). Palgrave Macmillan. https://doi.org/n7h5

Perkins, P. (2019). Climate justice, gender, and intersectionality. In T. Jafry (Ed.), *Routledge handbook of climate justice* (pp. 349–358). Routledge/Earthscan. https://doi.org/n7h6

Persson, L., Bethanie, M., Almroth, C., Collins, C. D., Cornell, S., de Wit, C. A., Diamond, M. L., Fantke, P., Hassellöv, M., MacLeod, M., Ryberg, M. W., Søgaard Jørgensen, P., Villarrubia-Gómez, P., Wang, Z., & Hauschild, M. Z. (2022). Outside the safe operating space of the planetary boundary for novel entities. *Environmental Science & Technology*, *56*(3), 1510–1521. https://doi.org/gn6rsw

Ramnarine, J. (2023). *Who speaks for the river?: An indigenous feminist approach to the one health impacts of climate colonialism on two-spirit people in Deshkan Ziibi* [Unpublished honors thesis]. University of Western Ontario.

Restoule, J.-P. (2019). Where indigenous knowledge lives: Bringing indigenous perspectives to online learning environments. In E. McKinley & L. Smith (Eds.), *Handbook of indigenous education* (pp. 1295–1317). Springer. https://doi.org/n7h7

Restoule, J.-P., & Snow, C. (2023). Conversations on Indigenous centric design. In O. Zawacki-Richter & I. Jung (Eds.), *Handbook of open, distance and digital education* (pp. 425–440). Springer Nature. https://doi.org/g7xnh6

Richmond, C., Pualani-Louis, R., & Coombes, B. (2024). *Because this land is who we are: Indigenous practices of environmental repossession*. Zed Books. https://doi.org/n7h8

Salmòn, E. (2000). Kincentric ecology: Indigenous perceptions of the human-nature relationship. *Ecological Applications, 10*(5), 1327–1332. https://doi.org/cprb5h

Simpson, L. B. (2017). *As we have always done: Indigenous freedom through radical resistance*. University of Minnesota Press. https://doi.org/n7h9

Smith, L. T. (2021). *Decolonizing methodologies. Research and indigenous peoples* (3rd ed.). Bloomsbury Academic.

Tauranga City. (2023). *Mahere mahi āhuarangi me haumitanga. Tauranga Climate Action and Investment Plan 2023–2033*. https://www.tauranga.govt.nz/Portals/0/data/council/strategies/files/tauranga-climate-aip.pdf

Tessaro, D., & Restoule, J.-P. (2022). Indigenous pedagogies and online learning environments: A massive open online course case study. *AlterNative*, *18*(1), 182–191. https://doi.org/n7jb

Titoki Education. (n.d.). *About us*. https://titokieducation.co.nz/about-us/

United Nations. (2022, April 25). *Extraction operations on indigenous peoples' land without consent cause irreparable harm, speakers stress, as Permanent Forum begins session* [Press release]. https://press.un.org/en/2022/hr5467.doc.htm

Urras Oighreachd Ghabhsainn. (n.d.-a). *About the Galston Estate Trust*. https://www.galsontrust.com/about-the-trust

Urras Oighreachd Ghabhsainn. (n.d.-b). *Baile an Truseil wind energy project*. https://www.galsontrust.com/wind-energy-project

Waitangi Tribunal. (2010). *Tauranga Moana: 1886–2006. Report on the post-Raupatu claims* (WAI 215). https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_68361885/Wai215vol1.pdf

Watts, V. (2013). Indigenous place-thought and agency amongst humans and non-humans (First Woman and Sky Woman go on a European world tour!). *Decolonization: Indigeneity, Education and Society*, *2*(1), 20–34. https://jps.library.utoronto.ca/index.php/des/article/view/19145

Wiebe, S. M. (2016). *Everyday exposure: Indigenous mobilization and environmental justice in Canada's chemical valley*. UBC Press. https://doi.org/n7jc

Wildcat, M., & Voth, D. (2023). Indigenous relationality: Definitions and methods. *AlterNative*, *19*(2), 475–483. https://doi.org/n7jd

Williams, L. (2022a). *Indigenous intergenerational resilience: Confronting cultural and ecological crisis*. Routledge. https://doi.org/n7jf

Williams, L. (2022b, March 25). *Wisdom Council on climate crisis and multi-generational resilience* [Video]. YouTube. https://www.youtube.com/watch?v=7lR6GIdKoqU&t=1s

Williams, L. (2024). *Gàidheal resurgence and indigenous place-based knowledge in and of the Hebrides: Strengthening climate and cultural-ecological resilience*. Community Research Report. University

of Western Ontario and University of the Highlands and Islands. https://intergenresil.com/images/Gaidheal_Resurgence_NearFinal_Lewis.pdf

Williams, L. Awasis, S., & Ranmarine, J. (2025). Disrupting climate emergency through Indigiqueer futurities. *Journal of Indigenous Social Development*. Special Issue in Indigenous Resurgence amongst climate disruption. Vol 13(1), 1-14. https://journalhosting.ucalgary.ca/index.php/jisd/article/view/81110

Williams, L., Fletcher, A., Hanson, C., Neapole, J., & Pollack, M. (2018). *Women, climate change impacts and action in Canada: Feminist, indigenous and radical intersectional perspectives*. Canadian Research Institute for the Advancement of Women and the Alliance for Intergenerational Resilience. https://www.criaw-icref.ca/wp-content/uploads/2021/04/Women-and-Climate-Change_FINAL.pdf

Wilson, S. (2007). Guest editorial: What is an indigenist research paradigm? *Canadian Journal of Native Education*, *30*(2), 193–195.