

LAND-BASED EDUCATION FOR NORTHERN YOUTH: EXPLORING THE IMPACTS OF
ON-THE-LAND CAMPS IN THE NORTHWEST TERRITORIES

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Abstract

Ongoing extractive research and educational systems continue to perpetuate colonial narratives of northern Indigenous communities and the Land which ignore the rights, perspectives, and values of Indigenous Peoples in arctic and subarctic regions around the world, such as the Northwest Territories (NWT). Additionally, Indigenous Peoples face rapid environmental and sociocultural changes that disrupt access to traditional places and practices and limit cross-generational knowledge transfer and decreases opportunities for youth to connect with the Land. Land-based programs aim to provide Indigenous and non-Indigenous youth with spaces to learn about and connect with the Land. However, limited research exists on the experiences of youth in land-based programs, particularly regarding their potential to foster leadership and Land Stewardship among northern youth. Additionally, there is a lack of research documenting the impacts of on-the-land camps as spaces for land-based research projects. Grounded in an Indigenous Research Paradigm (IRP) methodology and Land Stewardship theoretical framework, this land-based research addresses the forementioned gaps in three manuscripts: (M1) *"It's not being 'on-the-land'; it's like we are a part of the Land."*: Indigenous Youth share visual stories at "on-the-land" camps in the Dehcho; (M2) *"A connection with the Land will help youth protect it"*: Empowering northern youth as Land Stewards through land-based programs in the Northwest Territories and (M3) *"Just being on-the-land, the traditional way, eating the food off it. I couldn't ask for a better community to do that in"*: On-the-land camps as a space for collaborative, reciprocal land-based research.

An adapted photovoice method was used to support northern youth to share visual stories of their experiences at four on-the-land camps in the NWT. This research documents the ways

the youth were (re)connecting with the Land (M1) and empowered as leaders through Land Stewardship values and practices (M2) at on-the-land camps. By analysing stories from Ka'a'gee Tu, also spelled as K'ágee Tue First Nation (KTFN), youth, Tarek Leahy-Chicot, I provide a reflective examination of this collaborative land-based research to explore holistic meanings and stories of the Land (M3). The results show that land-based programs, like on-the-land camps, are transformative and healing spaces for building relationships between youth and the Land and empowering them as leaders and Land Stewards. Additionally, on-the-land camps are effective spaces for conducting collaborative, reciprocal land-based research. Throughout the dissertation, I include my own personal photographs and poetry as section breaks to create space for the reader to stop, pause, and breathe, and allow for moments of reflection about the ideas shared. This research was conducted and written with love, care, respect, and reciprocity, embedded with my emotions and self-reflection, and it is an act of nurturing and honouring all my relationships.

Ethics Statement

Research presented in this dissertation conforms to all ethical standards of work with humans.

Certificate of Ethics Approval was granted by the University of Ottawa Research Ethics Board.

Informed consent was obtained from all participants.

Ethical approval for community-based work in the Dehcho region of the NWT was granted by the University of Ottawa Research Ethics Board (file number: S-01-20-4778). Ethical approval for community-based work in the Dehcho and Sahtu region of the NWT was granted by Wilfrid Laurier University Research Ethics Board (file number: 6171).

NWT Scientific Research License (license no. 16594) for the participatory and community-based work in the Dehcho and Sahtu were granted by the Aurora Research Institute (Inuvik, NWT).

Copies of the ethics approval letters are provided in Appendix 1 and scientific research licenses are provided in Appendix 2.

Statement of Authorship and Collaborations

Co-authors: SW = Steph M. Woodworth; SDW = Sonia D. Wesche; AS = Andrew Spring; KT = Kristen Tanche; BH = Beth Hudson; BN = Britney Nadli; AG = Audrey Giles; BM = Brenda Macdougall; TMA = Tricia McGuire-Adams; BP = Brandon Pludwinski

Chapter 3: Research priorities were identified during an on-the-land camp at Willow Lake in the Edézhíe (NWT, Canada). SMW and KT conceived of the research question and research. SMW collected visual stories, performed the analysis, interpreted the visual stories, and drafted the manuscript. BH assisted with the analysis and interpretation of the data. KT, BN, AG, BM, and TMA provided feedback on the drafted manuscript. SDW and AS oversaw the research, provided intellectual support, and feedback on the drafted manuscript.

Chapter 4: SMW and BH conceived of the research question and research. SMW collected visual stories. SMW and BH performed the analysis, interpreted the visual stories, and drafted the manuscript. BP was a partner on this project, collaborated on the analysis, thinking and development of ideas shared, and provided input towards the drafted manuscript. SDW and AS oversaw the research, provided intellectual support, and feedback on the drafted manuscript.

Chapter 5: SMW conceived of the research question and research, performed the analysis, interpreted the stories, and drafted the manuscript. SDW and AS oversaw the research, provided intellectual support, and feedback on the drafted manuscript.

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Acronyms

AIP	Agreement-in-Principle
CBPAR	Community-Based Participatory Action Research
DFN	Dehcho First Nations
DYETKC	Dehcho Youth Ecology and Traditional Knowledge Camp
GNWT	Government of the Northwest Territories
IRP	Indigenous Research Paradigm
KTCC	Ka'a'gee Tu (K'ágee Tue) Canoe Camp
KTFN	Ka'a'gee Tu (K'ágee Tue) First Nation
NWT	Northwest Territories
REBs	Research Ethics Boards
WLU	Wilfrid Laurier University
WSG	Water Stewardship Gathering
YLS	Young Leaders Summit on Northern Climate Change



it feels so big
to write this
in its entirety
so i must
b r e a k i t
d
o
w
n

but now it feels
separated from
the whole

how do i sew
all these pieces
back together
again?

i start with *relationships*
the relationships with community
the relationships with the Land

our relationships are the thread that weaves everything together

it is a story about relationships

we are learning together
the Land is teaching us
and we are teaching each other

Chapter 1: Introduction

This chapter is an introduction to the dissertation by situating the research within Indigenous Knowledges of, and relationships with, the Land. Through a critique of the history of colonialism in the North, land-based education is contextualized within Indigenous resurgence self-determination. This introductory chapter outlines the research objectives, structures the dissertation chapters, and justifies the research contributions to the advancement of knowledge .

General Background

In the North, Indigenous Peoples' ways of knowing, being, and doing are rooted in the Land (Cluderay et al., 2022). Capitalizing Land is a way to honour, respect, and illustrate the power of the Land as a living, spiritual, and sacred entity, which is central to Indigenous Knowledges (Cluderay et al., 2022; McGregor et al., 2010; J. Redvers, 2020; Robertson & Ljubicic, 2019). However, Indigenous Knowledges of, and relationships with, the Land are directly targeted by colonial-capitalist systems through mechanisms of dispossession in order to conquer the "land" (Snelgrove et al., 2014; Tuck et al., 2014). When referring to colonial ideologies of the "land", I write land in lower case and quotations to demonstrate the imagining and materialization of "land" as property, an object to be used, owned, controlled, and dominated, for the benefit of colonial society (Fox, 2022).

Mechanisms of dispossession refer to the tactics, tools, and actions that work to erase, suppress, and delegitimise Indigenous Knowledge systems tied to the Land to assert dominance and control over the "land" (Harris, 2004). Colonial-capital systems and structures of power remove and replace Indigenous Land Rights with extractive and hierarchical approaches that

prioritize exploitation over Land Stewardship (King et al., 2022). Specifically, colonial-capitalist systems impose extractive industries, territorial reconfigurations, and governance frameworks, which have resulted in profound socio-environmental changes.

The North is rapidly changing through the socio-political systems of colonial-capitalism and the accompanying environmental destruction, which primarily threaten the places Indigenous Peoples rely on for their livelihoods, cultural practices, sustenance, and the transmission of land-based practices and teachings to younger generations (Verderber et al., 2020). The Land needs Stewards, and Indigenous resurgence and self-determination is essential for Land Stewardship (Lees et al., 2021) Land Stewardship is capitalized to emphasize the deeper, relational meaning of the Land and caring for the Land through Indigenous ways of knowing, interconnected cultural, spiritual, and land-based practices. Land Stewardship is rooted in reciprocity, respect, and a recognition of the Land's agency and teachings. By capitalizing the term, we align with Indigenous ways of framing the Land as central to identity, governance, and knowledge systems and Stewardship as an act of relational accountability and sovereignty.

To situate the context of this research, it is critical to examine the complex interplay between historical and contemporary forces in the North that shape the experiences of Indigenous Peoples and northern communities and the efforts to empower northern youth as Land Stewards through land-based programs, land-based education, and on-the-land camps. This research includes youth ages 12-17 and 18-30, which are collectively referred to as youth throughout my dissertation. *Land-based programs* involve the hands-on implementation of land-based education, encompassing activities and teachings that take place directly on-the-land (Clarke, 2015). *Land-based education* refers to the underlying epistemological framework rooted in local Indigenous Knowledge systems and interconnected relationships with the Land (Obed,

2017; Virtanen, 2022). *On-the-land camps* are healing spaces that provide opportunities for intergenerational knowledge exchange, fostering connections to the Land through relationship-based learning (Ljubicic et al., 2021).

I argue that through Indigenous-led land-based education, northern Indigenous and non-Indigenous youth can be positioned to lead efforts in addressing socio-environmental changes with Land Stewardship. Moving beyond environmental stewardship as a theoretical framework, Land Stewardship enables a deeper exploration of reciprocal and respectful relationships with the Land for Indigenous Peoples and non-Indigenous peoples. Through a cross-examination of colonialism in the NWT and the resulting socio-environmental and political changes, this chapter situates the necessity of Indigenous resurgence and self-determination, particularly in relation to Indigenous Guardianship, Land Stewardship, and land-based education. The research objectives and dissertation structure are then outlined before an in-depth explanation of the methodology and theoretical framework of this land-based research.

Indigenous Peoples of the North

Since time immemorial, Indigenous Peoples have lived reciprocally with the Land (Edge & Komarnisky, 2022). In this dissertation, the term Indigenous Peoples refers to the First Nations, Dene, Métis, and Inuit, of the North. Indigenous Peoples, capitalized and pluralized, reflects the diverse and distinct Knowledges, languages, cultures, placenames, stories, governance systems and traditions deeply rooted in the Land, which have sustained their communities for generations and form the foundation of their identities and ways of living (Coulthard, 2014; Lines & Jardine, 2019; McGregor et al., 2010).

The “North” refers to the northern arctic and subarctic regions of Canada above the 60th parallel, including the Northwest Territories (NWT), Yukon, Nunavut, Nunavik, and Nunatsiavut. Specifically, this research focuses on the NWT, which includes vast and diverse landscapes such as tundra, boreal forests, and mountains, characterized by its remote and rural nature (H. K. Gill, 2013).

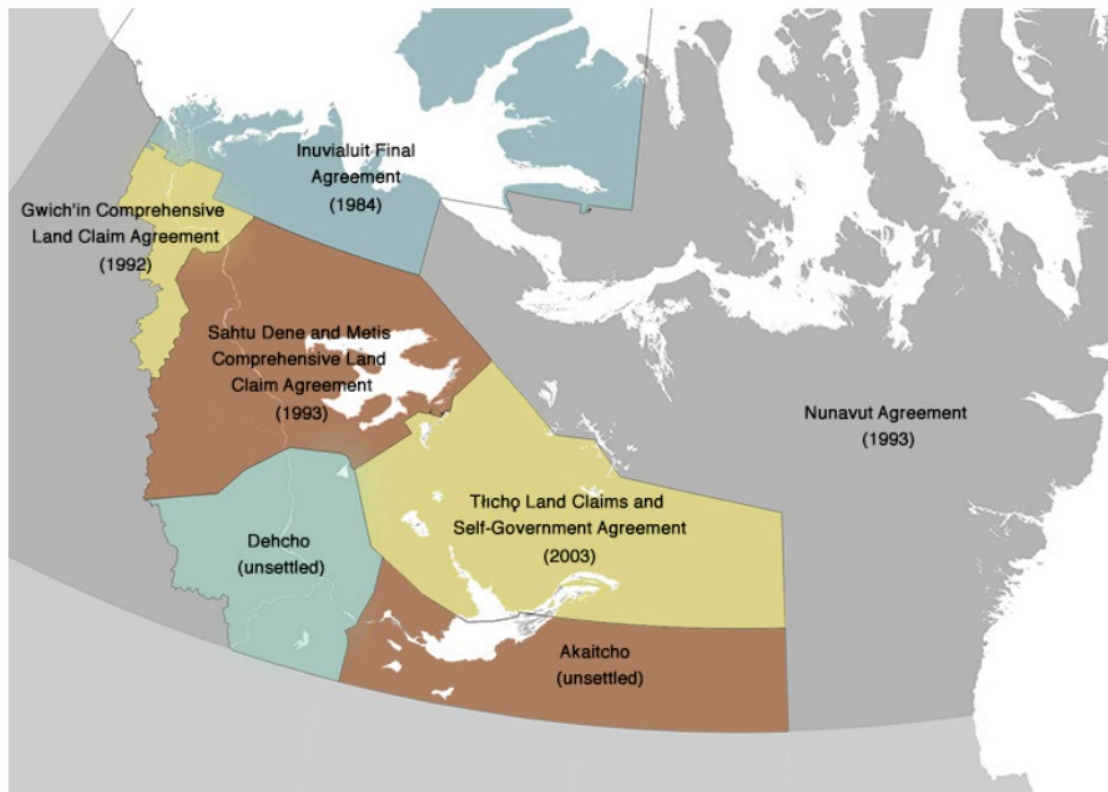


Figure 1. Map of Indigenous Land Claim agreements and negotiations in the NWT (Stoller, 2019).

In the NWT, 33 communities are scattered across five regions, 1.3 million square kilometres, with populations ranging from fewer than 100 (e.g., Kakisa home to 35 people) to several thousand residents, with the highest population of over 20,000 people living in Sòmba

K'è (Yellowknife), the capital city of the NWT (Statistics Canada, 2023). Indigenous Peoples represent a significant portion of the total population in the NWT, comprising approximately 50% of the territory's residents (Statistics Canada, 2023).

Indigenous Peoples are the majority population in most small NWT communities (Statistics Canada, 2023), many of which are only accessible by air, seasonal ice roads, or waterways (Sharma, 2010). There are many challenges due to the limited accessibility of remote NWT communities, including restricted access to services (e.g., healthcare, social supports, education), increased costs of living (e.g., food, water, heating, gas), and poor infrastructure (e.g., schools, houses, roads) (Ross & Mason, 2020; Sharma, 2010). Remote community settlements with reduced services and conditions are a direct result of colonial mechanisms of dispossession and tactics of assimilation (Etter et al., 2019). The next section details how colonial-capitalist systems operate through mechanisms of dispossession to seize, own, and control the “land”.

Colonization of the North

Colonialism is a structure, system, and process that violently dispossesses and disconnects Indigenous and Black Peoples from their Land, cultures, identities and knowledge systems (L. B. Simpson, 2014; Sium et al., 2012; Tuck & Yang, 2012). Colonial powers exist across socio-spatial relations and multiple, differentiated, and interweaved terrains and scales (Harris, 2004; Radcliffe, 2017a), which structure, assemble, and order the relationships between humans, other-than-humans, ancestors, and the Land (Tuck & Yang, 2012). Colonialism involves the exploitation and control of the “land” with external power (Radcliffe, 2017b). To

seize control of the “land”, colonial-capitalist systems rely on, and benefit from, the separation of relationships between Indigenous Peoples and Land, resulting in profound, epistemic, ontological and cosmological violence (Snelgrove et al., 2014).

Colonial states enforce territorial divisions through property laws, conservation laws, natural resource legislation, resource extraction agreements, and policies that prioritize capitalist development over Indigenous sovereignty (Lees et al., 2021). *Capitalism* relies on the commodification of “land” and exchange-production values of people/Peoples as assets for economic exploitation (Marin, 2020). Moreover, “land” is valued primarily for its capacity to generate profit (e.g., agriculture, mining, energy development) rather than as a relational space with cultural and spiritual significance to Indigenous Peoples (Harris, 2004; J. Redvers, 2020). Capitalism and colonialism are interconnected and inseparable systems that dispossess of Indigenous Peoples from Land through the establishment of state organized territorial control, jurisdictional authority, and governance structures (Tomiak, 2016).

Colonial states use discourses of the “land” as empty, barren, unoccupied, wilderness to progress, develop, and nation-build (MacKey, 2014). Such discourses are used to justify territorial dispossession and resource exploitation, which frame Indigenous Rights as obstacles to economic growth and nationhood (Goeman, 2008; Snelgrove et al., 2014). Furthermore, these discourses are shaped by, embedded in, and materialized through capitalism, structural racism, and heteropatriarchy, each reinforcing the others to sustain state dominance over the “land” and peoples (Tomiak, 2016). Colonial discourses materialize the colonial-capitalist system through the construction and enforcement of colonial tools, such as maps, numbers, law, resettlement strategies, government structures, and schools (Harris, 2004). In other words, colonial tools are used as mechanisms of dispossession to assimilate, capitalize, and eliminate Indigenous peoples,

knowledges and cultures (Harris, 2004; Sium et al., 2012). Mechanisms of dispossession in the North include the municipal, territorial and federal governments, mining and extractive production, development of transportation infrastructure, residential schools and churches, the fur trade, settlements and relocations, sled dog massacres, disease and infection (e.g., tuberculosis, Spanish flu), and forced labour (E. S. Cameron, 2012; Edge & Komarnisky, 2022; Ross & Mason, 2020).

The following section outlines a brief timeline and history of colonial-capitalism in the NWT and its impacts on Indigenous peoples of the North and emphasizes the importance of Indigenous resurgence and self-determination, Indigenous Guardianship, and land-based education in the North. This review is largely informed by Yellowknives Dene First Nation scholar Glen Coulthard's *Red Skin, White Masks* (2014)s, which provides an essential foundation for understanding Dene self-determination, Indigenous resurgence, and colonial power structures in the NWT. Considering that much of the academic literature on Indigenous resistance and resurgence is often southern- or urban-focused, Coulthard's (2014) historical and geographical analysis of the North that is deeply rooted in Dene perspectives has been critical for my research. Through Coulthard's (2014) scholarship, I frame how colonial and capitalist systems and interventions have shaped the North.

Specifically, Coulthard's (2014) critique of recognition-based politics and his emphasis on resurgence through land-based practices inform the broader conceptual framing of my research. His argument that colonialism is maintained through economic and political structures and not solely through cultural dispossession. As a Yellowknives Dene First Nation scholar and founder of the Dechinta Centre for Research and Learning, Coulthard's (2014) work is particularly relevant because he has been actively involved in shaping land-based education in the North. His

long-term commitment to this field provides both theoretical and lived insights into the significance of land-based learning in northern contexts. His work also helps position my research within the broader trajectory of land-based education initiatives in the NWT, offering a critical lens through which to understand the significance of the programs examined in this study.

Mechanisms of Dispossession

Indigenous Peoples' self-determination and resurgence has been an ongoing and convoluted struggle against the state. The struggle for political rights to territory has been shaped and defined by colonial constructions and discourses of "land" as property and resource, melded with understandings of Land as a field of relationships (Coulthard, 2014). In this process, distinct understandings, and definitions of "land" vs. Land have been contested, overlapped, and blurred. Values of "land" as property have enabled systems of colonial-capitalist accumulation and production that exploit the environment and peoples for the benefit of the system rather than the protection of the Land (R. Hall, 2013). Mechanisms of dispossession have altered northern Land(scapes) and resulted in socio-cultural, political, environmental, economic, and health impacts and changes, which are rapidly impacting Indigenous communities in the North (Cunsolo et al., 2017; Lapensée et al., 2018). As ways of knowing, being, and doing for Indigenous Peoples are intimately connected to and embedded in the Land (Absolon, 2011; K. Martin & Mirraboopa, 2003; Wilson, 2008), altered and changing landscapes impact local Knowledge of the Land, relationships of the Land, and disrupt the transfer of knowledge from generation to generation (T.-A. Kenny, MacLean, et al., 2018). Through a historical review of mechanisms of dispossession in the North, I highlight examples of altered landscapes and the

past and present impacts on Indigenous Peoples. This review is not exhaustive and does not encompass all aspects of colonial-capitalist legacies in the North; it is intended to demonstrate the importance of land-based education and Land Stewardship for northern youth.

Broken Treaties: Establishing Colonial-Capitalist Governments

The North was colonized much later than southern Canadian regions, hence, mechanisms of dispossession were established first in other Indigenous territories. The Hudson's Bay Company began expanding in the North in the late 1800s to establish trading posts for fur trades (D. Smith, 1998). Upon arrival in the North, Europeans used pre-established colonial-capitalist tools and systems for extraction, accumulation, and assimilation, such as treaties, mining, development of transportation infrastructure, the fur trade, and residential schools (Devine, 2015). Colonial discourses and ideologies of "land" used in treaty-making was central to colonial-capitalist expansion in the North. For instance, In 1857, The Gradual Civilization Act was passed to assimilate Indigenous Peoples into Canadian society by encouraging enfranchisement, however, this act failed and led to the establishment of the Gradual Enfranchisement of Indians in 1869 to define Indigenous claims to, possessions of, and rights to "land" as property and control Indigenous Peoples (Consolidation of Indian Legislation. Volume II: Indian Acts and Amendments, 1868-1975, n.d.).

Following suit, in 1876, the Indian Act was established by the federal government to define Indigenous Peoples and Lands (Devine, 2015). The Indian Act enabled the process of assimilation of Indigenous Peoples into the state and control over "land" (de Leeuw, 2009). Both

the Gradual Enfranchisement of Indians and the Indian Act laid the foundations for colonial-capitalist dispossession and established the guiding principles for colonial education and governance systems, including residential schools and Band Councils (de Leeuw, 2009). Years following, two treaties in the North were signed: Treaty 8 in 1899 which included parts of Alberta, Saskatchewan, British Columbia, and the NWT, and Treaty 11 in 1921 which covered the Yukon, NWT, and Nunavut (Devine, 2015). The treaties included provisions to provide First Nations communities schools, hunting, trapping, and fishing rights, assistance with agriculture, and guaranteed regular income annually for members of the signatory bands and reserve lands (Burrage et al., 2022).

Extraction: Mining Indigenous Lands

After oil was discovered in 1911 (Davison & Hawe, 2012), the mining industry started gaining momentum, and by the 1930s, mining was a booming industry for resource extraction and capitalist accumulation (R. Hall, 2013). In 1939, Imperial Oil established a refinery in what is now known as Norman Wells (Mathias et al., 2008). Gold was discovered in the NWT in 1896 (Devine, 2015; R. Hall, 2013) and fueled the desire for negotiating treaties with northern Indigenous Peoples (Davison & Hawe, 2012). In 1935, the discovery of gold around Sòmba K'è (Yellowknife) marked the beginning of significant mineral exploration and extraction in the region (Knudsen et al., 2023). This early mining activity laid the foundation for the development of the local economy and settlement patterns (Knudsen et al., 2023).

Uranium and silver were also critical for mining projects in the NWT. In 1932, the Port Radium Mine (a collection of four mines) on Great Bear Lake, NWT was developed for medical

research, following in the early 1940s to the 1960s the site was mined for uranium, and then the site was mined for silver from the 1960s to 1982 until it was decommissioned and closed (Gordon, 2014). In 2000, the community of Délı̨nę raised concerns about the risks of the Port Radium Mine and the site has been further assessed for radiation, elevated levels of metals, and contaminated soils (Gordon, 2014). However, it was in the early 1990s that mining activity significantly expanded, particularly with the discovery of diamonds at Lac de Gras (M. G. Stevenson, 1996). This marked a turning point for the region, transforming Sòmba K'è (Yellowknife) into a hub for mining practices (M. G. Stevenson, 1996). The establishment of the Ekati Diamond Mine in 1998 and the Diavik Diamond Mine in 2003 not only brought economic opportunities but also intensified environmental and social challenges for Indigenous communities (van Luijk et al., 2021).

The legacy of mining in the North is marred by incidents of environmental degradation and health hazards. Notably, the 1992 underground explosion at the Giant Mine Site released significant amounts of arsenic and asbestos into the surrounding environment, leading to long-lasting contamination (MacDonald et al., 2016). Sòmba K'è (Yellowknife) remains within the arsenic contamination zone, raising ongoing concerns about public health and safety (Chan et al., 2020; R. Hall, 2013; Hrynyshyn, 2003). Moreover, the impacts of mining extend beyond immediate environmental concerns. The mining industry disrupts traditional land-use practices and threaten the cultural connection that Indigenous Peoples maintain with their territories (Korteweg & Root, 2016). As resource extraction continues, Indigenous communities face the challenge of navigating these changes while striving to protect their cultural heritage and ensure the sustainability of their ways of life (E. S. Cameron, 2012).

Colonial practices have prioritized resource extraction, such as mining, which lead to environmental degradation, habitat destruction, and pollution that disrupts traditional land use (Elmes et al., 2016; R. Hall, 2013; Weatherdon, 2017). Environmental changes are primarily caused by the impacts of resource extraction and altered landscapes through development (Ross & Mason, 2020; Sloan Morgan, 2020; Wesche & Armitage, 2014). Examples include, though are not limited to, weather, climate, and ecosystem changes which alter migratory patterns of animals, such as caribou migration (Guyot et al., 2006), permafrost thaw (Cater et al., 2015), reductions in sea ice (Halliday et al., 2022), weather unpredictability (Ross & Mason, 2020), increases in intensity and frequency of wildfires (Dodd et al., 2018), increases in snowmelt and river break-up (Derksen et al., 2012), and changes in water quality and quantity (Medeiros et al., 2017).

The Transportation of Disease

Colonization in the NWT heavily relied on northern transportation systems, specifically in the late 1800s with the Canadian Pacific Railway and steamboats along the Deh Cho, as well as police, churches, and schools (Mathias et al., 2008). In 1873, the North-West Mounted Police (later renamed to Royal Canadian Mounted Police in 1920) were established as a colonial enforcement tool to assert control over the western territories, particularly in response to Métis assertions of self-determination at Red River and fears of United States expansion (Piper & Sandlos, 2007), specifically in response to the American whiskey traders from Fort Whoop Up and the massacre of Assiniboine at Cypress Hills (Allen, 1983). The northern transportation systems permitted access to northern communities, which also permitted the transport of diseases

from southern regions into the North, such as tuberculosis, pneumonia, and influenza (Daschuk et al., 2006; Piper, 2019; Piper & Sandlos, 2007). Tuberculosis was identified in the North in the late 1800s and became the dominant disease impacting northern Indigenous Peoples (Piper & Sandlos, 2007). In 1928, the influenza epidemic devastated northern Indigenous communities, and this epidemic is a major part of oral tradition and a key marker of time (Piper, 2019; Piper & Sandlos, 2007). The influenza outbreak occurred due to a Hudson's Bay Company supply ship stopping at trading posts along the Deh Cho (colonially named Mackenzie River) (Piper & Sandlos, 2007).

There are ongoing health inequities among Indigenous populations in the North traceable to these first outbreaks of diseases (Etter et al., 2019; J. Redvers, 2016). Outcomes of the spreading of diseases resulted in displacement, loss of cultural identity, intergenerational trauma, limited access to healthcare services and discrimination within the healthcare system, and the inaccessibility of remote northern communities, all contribute to increased rates of mental health issues and substance abuse in Indigenous communities (Lys et al., 2022). Central to health inequities for Indigenous peoples of the North is the lack of access to traditional food sources, issues around food security, and limits in food sovereignty (Wesche et al., 2016).

Destruction of Traditional Food Sources

In conjunction with resource extraction, infrastructure development transformed natural landscapes, impacting local ecosystems and the ability of communities to access traditional food sources (M. J. Price et al., 2022). Mechanisms of dispossession specifically targeted Indigenous harvesting practices (e.g., hunting, fishing, gathering, berry-picking) and food sharing networks

(Grey & Patel, 2015). In the NWT, the deliberate destruction of Indigenous food sources were strategies aimed at undermining Indigenous sovereignty, disrupting ways of living reciprocally with the Land, forcing the reliance on the state, and facilitating capitalist expansion (Woolford et al., 2014). The loss of traditional food sources destabilized Indigenous economies that were built on hunting, fishing, and gathering, and the reciprocal, cultural, and spiritual relationships between Indigenous Peoples and the Land (Ross & Mason, 2020).

Throughout the late 1900s and early 2000s, Canadian wildlife conservation policies were introduced without the consent of Indigenous Nations and contradicted Indigenous laws that had protected the Land for generations (Judge et al., 2022). Legislation such as the Migratory Birds Convention Act (1917), Fisheries Act (1868), and various territorial game regulations imposed seasonal restrictions, licensing systems, and quotas that disregarded Indigenous subsistence needs and ceremonial practices (Swerdfager & Olive, 2023). These laws were developed based on notions of resource management, which treated wildlife as a resource for economic benefit (such as sport hunting and commercial fishing) (Judge et al., 2022). Conservation laws in Canada functioned as mechanisms of territorial control, economic accumulation, and cultural disruption, which sought to criminalize and regulate traditional harvesting activities, severing Indigenous Peoples from their means of sustenance, governance systems, and relationships with the Land (Swerdfager & Olive, 2023).

In the NWT, these conservation frameworks intersected with ongoing colonial processes, including the expansion of the RCMP, treaty-making processes, and the imposition of the Indian Act. Harvesting restrictions were enforced through colonial laws that positioned Indigenous harvesters as "poachers" on their own territories, which criminalized Indigenous Peoples' food

economies, forcing reliance on wage labour, dependency on government rations, and participation in state-regulated markets (Johnston et al., 2007). For example, the NWT Game Act and Regulations enforced closed seasons on animals traditionally used by the Dene, such as “moose, caribou, mink, muskrat, ptarmigan, wild geese, wild ducks”, without the same restrictions for non-Dene trappers (Kieth, 2016, p. 19). These restrictions were justified under the language of conservation and "protecting" declining wildlife populations without the recognition that the declining wildlife populations were a result of colonial-capitalist industrial development, including overhunting practices, fur trade pressures, and environmental degradation (Judge et al., 2022; Kieth, 2016).

Capitalist economies and productions of food, such as agricultural development and industrial expansion, became dominant through the destruction and replacement of Indigenous food systems (M. J. Price et al., 2022). Hence, the destruction of Indigenous food sources was an act of genocide against Indigenous Peoples (Woolford et al., 2014). The destruction of Indigenous food sources has lasting impacts that continue to impact Indigenous Peoples today (Ross & Mason, 2020). Many Indigenous communities in the NWT and beyond continue to face food insecurity (e.g., high food costs, reduced food access, and food supply contamination) loss of local Indigenous Knowledges, languages, and stories tied to the Land, and environmental degradation caused by colonial policies (T. A. Kenny et al., 2018; M. J. Price et al., 2022). Furthermore, climate change is exacerbated by the destruction of wildlife populations and habitats, extractive industries and infrastructure, which disproportionately impacts northern Indigenous communities and further threatens their food sovereignty (T.-A. Kenny, Wesche, et al., 2018; Spring, 2018; Wesche et al., 2016).

Issues around food security in the North are a threat to food sovereignty for Indigenous Peoples and northern communities (T.-A. Kenny, Wesche, et al., 2018). Examples include increased cost of going out on-the-land, decreasing knowledge transfer and skilled hunters, fishers, and harvesters, and increasing reliance on the market, wage, and labour economy (Cunsolo et al., 2017; Lapensée et al., 2018). In conjunction with the introduction of market foods, communities are less dependent on the land for their livelihoods (T. A. Kenny et al., 2018). On-the-land activities and local knowledge transfer to the younger generation are especially disrupted by altered Land(scapes)— the altered definitions of “land” vs. Land and the altered physical geography (Cuerrier et al., 2012). Over the long term, a generational decline of knowledge transfer decreases food and water security and weakens food sharing networks (T. A. Kenny et al., 2018; M. J. Price et al., 2022).

Food sovereignty refers to people’s control over their food systems and access to traditional food sources, which is separate from dominant agricultural models and global trade policies that undermine local food systems and perpetuate inequities (Grey & Patel, 2015). Food sovereignty is critical for Indigenous food sharing networks that prioritize living in relation with the Land (Matson et al., 2021). In the context of this research, food sovereignty is about Indigenous Peoples’ Rights to produce, distribute, and consume food in ways that honour local traditions, ensure ecological balance, and foster social equity (Wesche et al., 2016).

Efforts to restore local food sources in the NWT, such as through protected areas and Indigenous-led stewardship initiatives, are part of broader movements for food sovereignty rooted in self-determination, resurgence, Indigenous Guardianship, and Land Stewardship (King et al., 2022). Reconnecting Indigenous communities with traditional food systems is seen as a

form of resistance, resurgence, and healing from the impacts of colonization (King et al., 2022). Specifically, teaching Indigenous children and youth traditional hunting, harvesting, gathering, and fishing practices is essential for rebuilding Indigenous food sharing networks and strengthening food sovereignty (Wesche et al., 2016).

Settlements and Schools

In the 1950s-60s, the Dene were profoundly disrupted by the colonial-capitalist economy of the emerging state (Coulthard, 2014). For example, following the Second World War there was an increase cost of trade goods and a decrease in price of furs (Coulthard, 2014). During this time, families became unable to support themselves solely through traditional harvesting and hunting practices (Coulthard, 2014). Dene were forcibly removed and coerced from their traditional and migratory lifestyles to permanent community settlements, often located far from traditional hunting, fishing, and gathering areas (Etter et al., 2019). The churches and missions were central to the settlement process. When priests, nuns, and government officials took children from families to attend residential schools, families began settling near the schools to be closer to their children (Fraser, 2024).

Permanent community settlements disrupted Indigenous Peoples' ability to practice traditional subsistence and cultural activities tied to the Land (van Luijk et al., 2022). The forced settlement of Indigenous Peoples into small, remote communities caused significant social, cultural, and economic rupture, because they were removed from their ways of living and connecting with the Land (Collings, 2014; Corntassel et al., 2009). With Indigenous Peoples in permanent community settlements, education (schools) and labour (workplace) became dominant

spaces and places to further dispossess Indigenous Peoples from their Land and assimilate into Euro-Canadian(Wilson, 2008).

Through the enforcement of day schools, mission schools, and residential schools, education was used as a strategy to dispossess and assimilate Indigenous Peoples to exploit, extract, and dominate the “land” (Coulthard, 2014; L. B. Simpson, 2014; Tippeconnic III, 2015). In other words, education was used as a primary tactic to take control of large geographic areas across Canada, such as the NWT (Burrage et al., 2022). Schools worked as disciplinary sites that removed and displaced Indigenous Peoples from, and relationships with, the Land, to weaken Indigenous Peoples’ ways of life, kinship networks, culture, knowledge, and language (Goeman, 2008; Tippeconnic III, 2015).

In 1867, the first mission school, called Sacred Heart Residential School, was opened by the Sisters of Charity, who were referred to as the Grey Nuns, in Fort Providence (National Centre for Truth and Reconciliation, 2023). This was the first residential school operating in the NWT and following its establishment the Grey Nuns expanded the school system to other regions and communities (National Centre for Truth and Reconciliation, 2023). Churches established day schools, mission schools, and residences that accompanied schools (hence the term “residential schools”) . Indigenous children were forcibly taken from their families, communities, cultures, and homelands by priests, nuns, and government officials to receive an education designed by the churches and territorial and federal governments (Burrage et al., 2022). Through mechanisms of dispossession, Indigenous youth and children were separated from their Indigenous languages to prioritize and enforce learning English and French, which has led to a decline in fluent speakers and a disconnection from cultural practices and Indigenous Knowledges (Burrage et al., 2022; Gittings et al., 2022). Furthermore, the imposition of colonial

discourses of “land” through mechanisms of dispossession has weakened traditional practices, ceremonies, and Knowledge systems that are vital for Indigenous Peoples’ cultural identity tied to the Land (Ioana Radu et al., 2014).

Historical traumas, including residential schools and forced relocations, have lasting effects on mental health and community cohesion, impacting family structures and relationships (Mcguire-Adams, 2021). Residential schools worked to destroy Indigenous identity, knowledge, kinship, and culture through the practice of Western-Catholic ideologies (Cajete, 1994; Chief & Smyth, 2017; Ioana Radu et al., 2014; McGregor, 2013; Trout et al., 2018). In residential schools, Indigenous children suffered cultural genocide and experienced sexual, mental, emotional, and physical abuse and traumatic living conditions (Burrage et al., 2022). Thousands of Indigenous children died in the schools and families have fought for decades to release the information on their deaths (Eaton & Hughes, 2022).¹

In 1955, the federal government seized administration of education in the NWT and started to convert residential schools into open territorial schools, such as Sir John Franklin High School in Yellowknife (Millar, 2015). Many of the residential schools were remodeled, repurposed, or rebuilt into open territorial schools (Millar, 2015). In 1997, the last residential school in the NWT, Grollier Hall in Inuvik, was shut down (Gordon, 2014). Operated by the Roman Catholic Church, it was one of the last residential schools to close in Canada (Gordon, 2014). Though residential schools are no longer operating, assimilative strategies continue to be enforced through education systems in Canada today. In the North, there remains underfunded infrastructure for schools in northern communities and many Indigenous children in northern

¹ In 2021, unmarked mass graves of Indigenous children in the abandoned schoolyards of residential schools started to become uncovered across the country (Eaton & Hughes, 2022).

Canada must leave their home communities and families to attend elementary and secondary schools in communities elsewhere (Trout et al., 2018). Colonial systems and structures restrict youth engagement in land-based activities, as well as youth capacity to envision and enact land-based solutions for their communities (Wildcat et al., 2014).

Presently, reduced access to land-based activities and compounding challenges imposed through mechanisms of dispossession on Indigenous Peoples continues to weaken knowledge transfer to children and youth (T.-A. Kenny, MacLean, et al., 2018; Wesche et al., 2016). Colonial power structures and systems are maintained through, and embedded in, modern education institutions, schools, and disciplines (Battiste, 2002; Grande, 2015). Hence, it is imperative that youth are educated through local Indigenous Knowledges to be empowered as Land Stewards, for the continuity of local Knowledges of, and connections to, the Land.

Capitalist Accumulation: Altering Northern Land(scapes)

In 1967, Canada transferred the administration centre of NWT from Ottawa to Sòmba K'è (Yellowknife), without consulting majority of the Dene, Inuit, and Métis (Coulthard, 2014). The transfer resulted in dramatic size and power changes in the Government of the Northwest Territories (GNWT) and growth of the non-Indigenous population in the NWT (Coulthard, 2014). In 1968, a huge oil and natural gas reservoir was discovered in Alaska and the Mackenzie Valley Pipeline proposal was developed to transport it via the Mackenzie River Valley to markets in southern Canada and the United States of America (Coulthard, 2014). The Mackenzie Valley Pipeline proposal was overwhelmingly rejected by Dene, Inuit, and Métis communities, as the pipeline would change and destroy traditions and way of life (Coulthard, 2014).

In response, 16 Dene Chiefs established the Indian Brotherhood of the NWT in 1969, and later renamed Dene Nation in 1978 at the 8th Dene National Assembly² (Coulthard, 2014). In 1970, Inuvialuit followed suit, and in 1971, the Inuit Tapirisat of Canada was formed, and then in 1972 the Métis Association of NWT was created (Coulthard, 2014). These groups advocated for “the interests of Indigenous Peoples against the vision of economic and political expansion that state and industry began to aggressively impose the previous decade”, which became possible due to the changes made to the Indian Act in the 1950s to allow Indigenous Peoples to hire lawyers and pursue Land Claims (Coulthard, 2014, p. 58).

The establishment of the Métis Association of NWT was critical for Métis self-determination and resurgence. Métis in the NWT have a complicated history of neglect, interference, erasure, and forced removal and continue to be misunderstood, misconstrued, and disregarded in conversations of Indigenous resurgence and self-determination in the North (Northwest Territory Métis Nation, 2023). Métis lived on-the-land and traveled the waterways with their own distinct traditional practices and Knowledges before the territorial and federal governments imposed a dominant colonial-capitalist system of control and management over their traditional territories (Northwest Territory Métis Nation, 2023).

In the early 1970s, two significant developments arose for Dene self-determination in the face of industrialization in the North: (1) the 1973 New Comprehensive Land Claims Policy and (2) the “Berger Inquiry” (Coulthard, 2014, p. 58-59). The comprehensive Land Claims policy was premised on Dene never ceasing their rights to their territories, despite signing Treaties 8 and 11 (Coulthard, 2014). The Berger Inquiry, otherwise known as the “Mackenzie Valley

² The Indian Brotherhood of the Northwest Territories is hereby referred to as Dene Nation in this dissertation.

Pipeline Inquiry”, investigated the socio-environmental impacts of the proposed Mackenzie Valley Pipeline, was spearheaded by Justice Thomas Berger (Coulthard, 2014, p. 59). In 1975, Berger travelled across Canada to interview those impacted by the proposed pipeline, Indigenous and non-Indigenous peoples (Coulthard, 2014; R. Hall, 2013). Following the public hearings, Berger released a two-volume report that provided recommendations and ultimately argued that the pipeline project should not proceed; specifically the inquiry recommended a moratorium on construction for ten-years to allow for land claims to be resolved (Coulthard, 2014; Nichols, 2013).

An act of self-determination, the Dene effectively voiced their position against the pipeline in the mid-1970s (Coulthard, 2014). Moreover, in 1975, more than 300 Indigenous delegates unanimously voted to adopt the “Dene Declaration—a political manifesto demanding the full ‘recognition’ of the Dene as a ‘self-determining’ nation” (Coulthard, 2014, p. 64). The Dene Declaration sparked a resurgence of Dene nationalism, which framed Dene governance through Dene values, ethics, and ways of being, knowing, and doing (Coulthard, 2014). While the Dene Declaration was grounded in Dene values and knowledge of Land as a field of relationships, the declaration also incorporated emerging socio-political discourses of “land” as property to meet the political and economic demands of the state, as well as the goals of contemporary Dene society (Coulthard, 2014).

Canada and the NWT pushed to facilitate the forced assimilation of Dene, Inuit, and Métis, and their territories, into colonial-capitalist society to ensure alternative socioeconomic vision do not threaten desired functioning of economy (Coulthard, 2014; R. Hall, 2013). The federal and territorial governments insisted on negotiating “land” settlement based on the ideas that the Dene political claim to self-determination was invalid and a settlement could only be

established through the extinguishment of Dene Rights (Coulthard, 2014). While Dene relationships with the Land had been frayed through colonial displacement, the Dene remain strong and resistant against colonial-capitalist dispossession (Coulthard, 2014; R. Hall, 2013). Relationships with the Land, built and maintained through reciprocity and relational accountability, were (and are) the foundations for Dene to critique “the dual imperatives of colonial sovereignty and capitalist accumulation that came to dictate the course of northern development in the postwar period.” (Coulthard, 2014, p. 64). Continuing to fight for self-determination and self-governance on their Lands, the Dene Nation formed the “Agreement-in-Principle”³ (AIP) in 1976 to establish a Dene government (Coulthard, 2014, p. 67).

The AIP indicated Dene political authority over the “land” within the jurisdiction of federal and territorial governments (Coulthard, 2014). Through this process, the Dene Nation announced a boycott against all participation in the territorial governments, as it was a colonial institution that did not represent the Dene, which lasted from 1976 to 1979 (Coulthard, 2014). The Dene Declaration paired with the AIP evoked support and hostility from the state (Coulthard, 2014). Hostility included public discourse that the Indian Brotherhood was the “Radical Left”, being trained in tactics of guerrilla warfare. The RCMP employed racist undercover tactics to infiltrate them (Coulthard, 2014).

The creation of the Dene Nation, the Inuit Tapirisat of Canada, and the Métis Association of NWT led to the establishment of Land Claim processes in the NWT (Coulthard, 2014). However, the GNWT Legislative Assembly denounced the Dene Land Claims and framed such

³ Designed to achieve a level of Indigenous political and economic autonomy unparalleled in the history of Land Claim settlements in Canada, the AIP set forth the groundwork for establishing a renewed relationship with the state (Coulthard, 2014).

as discriminatory of non-Indigenous peoples (Coulthard, 2014). Moreover, the GNWT and the federal government, and henceforth the public, did not appropriately comprehend, understand or interpret the declaration and agreement, and viewed such as discriminatory against non-Indigenous peoples (Coulthard, 2014). The governments wanted to separate Dene cultural practices from any socioeconomic scheme that may disrupt accumulation of capital through resource development in the North (Coulthard, 2014).

In response to the GNWT Legislative Assembly, the Dene Nation submitted a revised second proposal in 1977, titled the “Metro Proposal” to acknowledge the self-determination for all northerners, not only the Dene (Coulthard, 2014, p. 70). Recommendations for the Metro Proposal included a decentralization of the federal government and separate the NWT into three regions, Dene, Inuit, and non-Indigenous peoples, which would hold distinct government systems that respect the traditions, desires, and aspirations of each region (Coulthard, 2014). The GNWT and federal government countered the Metro Proposal with their own proposal, titled “Political Development in the Northwest Territories,” which depoliticized and reconceptualized Dene Land Claims as “cultural rights” to education, languages, traditional activities (e.g., hunting, harvesting, fishing), rather than political claims to territory (Coulthard, 2014, p. 71). This proposal was designed “to guide the newly appointed Special Representative for Constitutional Development in the NWT, Charles (Bud) Drury” to consider the division of the NWT, not in terms of political geographical boundaries, but in terms of “functional issues” like housing, education, and socio-economies (Coulthard, 2014, p. 72).

In response, Dene and Métis collaborated to construct a joint settlement claim, entitled “Public Government for the People of the North” in 1981 (Coulthard, 2014, p. 73). The proposal included outlining the jurisdiction of *Denendeh* (The Land of the People), which charted a public

territorial and community level of government (Coulthard, 2014). The joint settlement claim defined Dene and Métis control over territories that the GNWT and federal government currently held power over, and would allow the protection and development of the Dene way of life (Coulthard, 2014). Moreover, the claim served to protect the Land through a focus on renewables and self-sufficiency (Coulthard, 2014). This process continued to result in oppositions from non-Indigenous peoples who felt they had the right to own the “land” (Coulthard, 2014).

In 1988, the negotiations continued to drag on and the government denied the proposal for Denendeh (Coulthard, 2014). A new AIP with the Dene, Métis and federal government was proposed – except, this outlined that Indigenous Peoples would have their political rights removed from the negotiation table and surrender rights to the “land” (Coulthard, 2014, p. 75). This AIP was eventually rejected as it continued to deny rights to the “land,” and the Gwich’in, followed by the Sahtu, dropped out of the Land Claim process and later signed and settled their own independent comprehensive Land Claim agreements (Coulthard, 2014). During this period, many of the Dene government’s perspectives (excluding Dehcho) on economic development changed significantly, and many Dene supported diamond mega-mining projects, pipelines, and gas projects (Coulthard, 2014; R. Hall, 2013).

Through capitalist accumulation, the state developed economic dependency and displacement for Indigenous Peoples (Chabot, 2003; MacKey, 2014; Verderber et al., 2020; Watkins, 1997). Colonial policies created economic dependency on outside systems, undermining traditional economies and leading to challenges in achieving self-sufficiency (Condon et al., 1995; Everard et al., 2018; M. G. Stevenson, 1996). The introduction of external industries displaced traditional livelihoods, affecting employment opportunities and economic stability within Indigenous communities (Denize & Giles, 2022). Since the signing of treaties,

the state has and continues to ignore, undermine, and break historical treaties and Land Claim agreements by removing Indigenous rights to Land, which has resulted in ongoing legal battles, unsettled Land Claim agreements, and unresolved socio-political and environmental cases (Watson, 2018). Indigenous communities continue to face barriers to political participation, resulting in underrepresentation in decision-making processes that affect their lives, communities, and territories (Cohen et al., 2021). Land Claims are a fundamental component of Indigenous self-determination, resurgence, sovereignty, self-governance, and land-based education (Coulthard & Alfred, 2014).

Negotiating and Settling Land Claim Agreements

The process of developing Land Claim agreements begins by addressing the historical and ongoing colonial-capitalist dispossession of “land” as an object and resource to be owned and revitalizing Indigenous Knowledges of Land (Tondu et al., 2014). With Land Claims, Indigenous communities are reclaiming sovereignty and self-determination of their traditional territories and regions by re-establishing Indigenous governance systems (Coulthard & Alfred, 2014). Through this resurgence, Indigenous Peoples reintegrate local Knowledge systems and practices into land-based education, where learning happens on the Land and is guided by Indigenous values, language, and teachings (L. B. Simpson, 2014). Furthermore, settled Land Claim agreements enable Indigenous Peoples to design, develop, and implement their own educational curricula rooted in local Knowledges, values, histories, and worldviews, which have often been excluded from mainstream educational systems (van Luijk et al., 2022).

Presently, there are five Dene regions that fall within the constructed boundaries of what is known as the NWT. Specifically, the Gwich'in Dene (northernmost region) Land Claim area was settled in 1992, the Sahtu Dene (Hare, Mountain, and Bear Lake people) Land Claim was settled in 1994, and the Tłıchǫ Dene Land Claim was settled in 2003. Additionally, there are Land Claim Agreements that remain in ongoing negotiations, such as the Métis and Dehcho Land Claim and the Akaitcho region occupied by the Weledeh and Chipewyan Dene (Coulthard, 2014). All these Dene and Métis nations occupy different regions, speak related, though different, dialects, and share many connections in terms of spirituality, law, governance, and economies (Coulthard, 2014).

NWT Land Claims and self-government agreements have expanded from only dealing with land rights to include more self-governing areas, such as management of land, water, resources and harvesting, education, social programs, and heritage (DeLancey, 2020). As part of their self-governance efforts, Indigenous Nations are creating education programs grounded in their own knowledge systems and relationships with the Land, which stand in contrast to the frameworks imposed by the Canadian state's education system. By reclaiming and asserting Indigenous Rights to Land, Indigenous Nations ensure the protection and stewardship of the environment, provide economic opportunities for communities, and reinforce their inherent rights to self-governance in all sectors, including education, justice, and health (Coulthard & Alfred, 2014; R. K. Datta, 2018; Gorlewski & Porfilio, 2012; Government of Northwest Territories Executive and Indigenous Affairs, 2022).

Indigenous Resurgence and Self-Determination

Indigenous resurgence centres Indigenous lives, sovereignties, and futurities, and the protection of and renewal of relationship with the Land (L. B. Simpson, 2002, 2014). Indigenous resurgence is the rebuilding of Indigenous nations through the reparation of Land for Indigenous Peoples (L. B. Simpson, 2014; Tuck & Yang, 2012), which requires continual time and effort (L. B. Simpson, 2002). *Reparation* refers to the restoration of Land sovereignty for Indigenous Peoples, which includes resurgence and self-determination and acknowledges Indigenous Peoples as the caretakers and stewards of their homelands (Burrage et al., 2022). Reparation is a structural and relational process of resurgence that involves repairing and undoing the colonial injustices of “land” ownership by returning Indigenous Rights to Land back to Indigenous Peoples (Burrage et al., 2022). Indigenous resurgence is rooted in diverse, contextual, place-based, traditional Indigenous values and connections to the Land (L. B. Simpson, 2002). Indigenous resurgence is the revitalization of Indigenous ways of knowing, doing, and being, through the support of self-determination for the future (L. B. Simpson, 2002).

Self-determination for Indigenous Peoples is reclaiming and re-honouring reciprocal relationships with the Land (Daigle, 2016). This process is action-orientated, practical, methodological, theoretical, collective, cautious, confrontational, unfailingly tentative, and unafraid to fail (Jazeel, 2017), and is “lived, embodied and practiced every day” (Cluderay et al., 2022, p. 57). The enactment and embodiment of self-determination requires redefining and reimagining meanings and structures of governance, place, space, and scale (Tomiak, 2017). Indigenous resurgence and self-determination necessarily unsettle and oppose colonial ways of thinking, acting, and relations of power (de Leeuw & Hunt, 2018; L. B. Simpson, 2002; Tuck &

Yang, 2012). While Indigenous resurgence and self-determination are complex, diverse, and distinct material, psychological, epistemological, and spiritual (L. B. Simpson, 2016a; Tuck & Yang, 2012) reimaginings and rearticulations of power, change, and knowledge (L. B. Simpson, 2002), they are also intrinsically linked (Corntassel, 2012; Hatala et al., 2019). By challenging and disrupting colonial frameworks of power and knowledge, Indigenous resurgence and self-determination are a collective movement toward re-establishing Indigenous identities, practices, and governance in ways that are reflective of community values and aspirations (Cavino, 2013; Wildcat et al., 2014).

Indigenous resurgence provides the cultural and spiritual foundation that informs self-determination, while self-determination creates the structural and political space necessary for resurgence to occur. Together, they foster a holistic approach to healing and empowerment, as communities work to re-establish their rightful place in the social, political, and environmental landscape (Jessen et al., 2022; Snelgrove et al., 2014). Both Indigenous resurgence and self-determination are about creating sustainable futures grounded in Indigenous values, ensuring that the relationships with the Land and each other are honoured, renewed, and respected (Corntassel, 2012). Through this interconnected framework, communities are navigating the complexities of colonial legacies and creating meaningful change. Northern Indigenous communities are enacting resurgence and self-determination through Land Stewardship, language revitalization, land-based education programs, Indigenous Guardianship programs, Land Claim agreements and self-governance, healing camps and programs, and many others.

Self-determination in a Dene context has been an ongoing struggle against the colonial government for the rights to self-governance and claims to Land. As described in the previous section, Coulthard (2014) unpacked how Indigenous struggles for self-determination are

embedded in colonial-capitalistic discourses of “land” as property, which has negative effects on the meaning of self-determination for many Indigenous Peoples in the North. Specifically, Coulthard (2014) critiqued the ways the struggle for self-determination is framed by discourses of “land” as “a material resource to be exploited in the capital accumulation process” (p. 78).

Colonial-capitalistic discourses of “land” constrain Indigenous self-determination to colonial territorial boundaries as opposed to Indigenous relationships with, and responsibilities to, their kinship networks (Coulthard, 2014; Daigle, 2016). Michelle Daigle (2016), The concepts of Indigenous resurgence and self-determination emphasize the need to reframe relationships with the Land beyond colonial constraints, recognizing the deep kinship ties that exist between Indigenous Peoples and their Lands. This perspective naturally leads to the notion of Indigenous Guardianship, where communities actively reclaim their roles as stewards of the Land, fostering a sense of responsibility and interconnectedness that is essential for both cultural preservation and environmental sustainability (Popp et al., 2020).

Land-based and Indigenous Guardian programs are enacting self-determination and resurgence beyond spatial-legal identities and colonial territory imaginaries. Through self-determination and resurgence, land-based education centres Indigenous ways of knowing and doing that were disrupted by residential schools, relocation, and colonial education systems (Lys et al., 2016). To illustrate, many land-based programs in the North are shaped by Indigenous governments, Guardians programs, Elders, and Knowledge Holders who define the purpose, content, and location of learning, such as the on-the-land camps led by Dehcho First Nations and Ka’a’gee Tu First Nation that were explored in this research. Priorities for land-based education include language revitalization (e.g., learning Dene terms for animals, plants, and placenames), harvesting (e.g., hunting, moose hide tanning, fishing, and berry picking), and ceremonies (e.g.,

feeding the fire and paying the water) (Corntassel & Hardbarger, 2019; Luig et al., 2011; J. Redvers, 2020). When led by Indigenous Nations and rooted in traditional protocols, land-based programs are acts of resurgence through self-determination, reinforcing relationships of care, responsibility, and governance.

Indigenous Guardianship

Globally, Indigenous Peoples are re-establishing relational roles as stewards of the Land through land-based leadership (Popp et al., 2020). Land-based leadership includes, but is not limited to, *Indigenous Guardianship*, which is a lived and embodied relationship between Indigenous Peoples and the Land (Wilson, 2008). Moreover, Indigenous Guardianship supports self-determination and environmental stewardship at the community and regional scale, allowing Indigenous Peoples to monitor and protect their homelands while (re)connecting with the Land (Popp et al., 2020). Values of responsibility, relationality, respect, and reciprocity are fundamental to Indigenous Guardianship (Popp et al., 2020).

Indigenous Guardians are the monitors and protectors of local wildlife, species, waterways, and environments (Nature United, 2023) to support the well-being of the Land (McDonald, 2023). Applying both Indigenous and Western scientific methods, Indigenous Guardians carry out duties and responsibilities for community-based monitoring, enact land-based leadership roles, gather information, and design plans for environmental management (Popp et al., 2020). As land-based leaders and stewards, Indigenous Guardians “foster intergenerational knowledge transfer and cultural revitalization” (Popp et al., 2020, p. 297)

Indigenous Guardians programs are critical for environmental monitoring and protection in Canada and around the world (Nature United, 2023).

In 2008, Ni Hat'ni Dene (Watching the Land) program in Łutsel K'e was the first modern Indigenous Guardians program launched in the NWT (Nature United, 2023). There are currently 15 Indigenous Guardians programs in the NWT, whereby Indigenous Guardians are hired by Indigenous Nations and spend prolonged periods of time on-the-land monitoring environmental changes, maintaining cultural places, and educating youth and community (Nature United, 2023). Land-based education is an essential component to Indigenous Guardians programs, as the knowledge transfer to the younger generation is vital to continue these land-based leadership and stewardship systems, roles, and practices. Over the long term, less time doing land-based activities results in a generational decline of Indigenous Knowledge (J. Redvers, 2020). The continuity of Indigenous Guardianship requires Indigenous self-determination for governance and land-based education (Tulloch et al., 2016).

To delve deeper, Indigenous Guardians programs empower communities to monitor their regions, protect culturally significant and sacred sites, and uphold responsibilities for Land Stewardship (Popp et al., 2020). Central to Indigenous Guardianship, Indigenous Peoples are valued and recognized in their roles as the rightful caretakers and decision-makers for their territories (Bowie, 2013; Cannon et al., 2024; Popp et al., 2020). Hence, land-based programs, such as Indigenous Guardians programs and on-the-land camps, are sites of political action, resurgence, and self-determination, rooted in Land Rights, Indigenous governance, and Land Stewardship. Through land-based education, youth can learn how to take care of the Land as

Land Stewards, which will support the growth of Indigenous Guardianship and Guardians programs, ensuring this work continues for future generations to come.

Land-based Education

The Land is full of stories and is the primary teacher in life (Neeganagwedgin, 2015). Indigenous Knowledges are often passed along to the next generation through oral and symbolic stories, in languages rooted in the Land, passed on from their ancestors, through continuous storytelling, practice, and lived experiences, which is the core of land-based education since time immemorial (Battiste, 2002; L. T. Smith, 1999; Wabie et al., 2021). Indigenous Knowledges are diverse and inseparable from the Land and peoples in which that Knowledge comes from (L. T. Smith, 1999). Land-based education is rooted in Indigenous philosophies (epistemologies, ontologies, methodologies, axiologies) of the Land (J. Hansen, 2018; Trout et al., 2018). Hence, land-based education is distinct, unique, contextualized, and conditioned to the places the knowledges are held (Bowra et al., 2021). Land-based education is about protecting the Land and spiritually connecting to the Land through a process of learning and introspection (Hansen, 2018). Learning on-the-land bridges knowledge between school and community and honours one's kinship, heritage, and community (R. K. Datta, 2018).

Since the 1970s, there has been a large movement across Canada and the United States led by Indigenous Peoples for the resurgence of Indigenous land-based education, whereby the central concern is reconnecting youth to the Land, their cultural identity, language, Knowledge, history, and ways of life s (Alfred, 2014; Barajas-López & Bang, 2018; Battiste, 2002; Corntassel & Hardbarger, 2019; Cuerrier et al., 2012; R. K. Datta, 2018; J. Hansen, 2018;

Lowan, 2009). Land-based education is a way of teaching one's responsibilities to the Land and can be expressed through various programs, pedagogies, methods, and practices (Korteweg & Root, 2016). The movement for land-based education arises in direct response to the historical and ongoing impacts of colonialism and capitalism, which have systematically removed and disconnected Indigenous Peoples from their Lands (Mowatt et al., 2020). Traditionally, land-based education was not a formalized system—it was embedded in daily life, guided by kinship, seasonal cycles, and relational responsibilities (Bowra et al., 2021). However, violent disruptions—including colonial dispossession, forced displacement, and policies designed to sever Indigenous Peoples from their territories—have fractured these ways of life (Cajete, 1994; Wabie et al., 2021).

Colonial-capitalist systems displaced Indigenous Peoples from their Lands and attempted to replace Indigenous Land Stewardship with colonial environmental management models to feed capitalist greed for natural resources (Cohen et al., 2021). Importantly, Indigenous Peoples have not forgotten how to care for the Land as colonial institutions deliberately undermine Indigenous governance, restrict access to Land, and attempt to erase Indigenous Knowledges (Gaudet & Caron-Bourbonnais, 2015). The shift from Land Stewardship to environmental stewardship imposed a resource-based model of “land” management that prioritized extraction and conservation over Indigenous governance (Cohen et al., 2021).

For example, the development of national parks and conservation areas often excluded Indigenous Peoples from their own territories, reinforcing the idea that environmental stewardship is separate from Indigenous relationships with the Land (King et al., 2022). Furthermore, while residential schools are no longer operating, Indigenous youth continue to be educated within institutions that center colonial knowledge and histories while excluding land-

based teachings (Christensen, 2013). As the threats of climate change, resource extraction, and environmental degradation are rapidly increasing, Indigenous youth must learn how to reclaim their roles as Land Stewards in the face of ongoing ecological destruction (R. K. Datta, 2018).

As a result, formalized land-based programs have become necessary to reconnect Indigenous youth with the Land, support cultural revitalization, counteract the intergenerational impacts of colonial removal, and address the rapidly increasing socio-environmental changes (Marom & Rattray, 2022). The very existence of land-based education as structured programs for Indigenous youth reveals the unnatural rupture in Land relationships caused by colonialism and capitalism. Therefore, the need for land-based programs today is a response to generations of colonial policies that have criminalized Indigenous land use, forced relocations, and placed Indigenous children in residential schools where they were intentionally separated from their communities, cultures, and the Land.

While land-based education is rooted in Indigenous ways of knowing and being, its value extends beyond Indigenous communities. Non-Indigenous youth also benefit from learning on the Land in ways that challenge colonial systems, foster humility, and build deeper relationships with Indigenous Peoples and the Land (Clarke, 2015). Educating non-Indigenous youth through land-based approaches helps cultivate a shared responsibility for Land Stewardship, encourages critical reflection on colonial histories and present-day systems, and creates pathways for meaningful solidarity (Arellano et al., 2019). In this way, land-based education serves as a transformative framework for all youth to learn how to live in good relation with the Land and one another.

Land-based education necessarily unsettles colonial discourses of “land” as property and resource by teaching Land as relationships, living, identity, and teacher. Moreover, land-based education embodies and sustains Indigenous ways of living and knowing and acts in direct contestation to colonists’ drive to eliminate Indigenous life and Land Claims (Chief & Smyth, 2017). Through Indigenous resurgence, self-governance, and sovereignty, land-based programs are overturning unjust power relations and are addressing ongoing socio-cultural and environmental changes impacting Indigenous Peoples and the Land(Benton, 2017).

Land-based programs offer pathways to reclaim relationships with the Land rooted in Indigenous Knowledges, governance systems, and responsibilities (Neeaganagwedgin, 2015). At the same time, it is important to acknowledge that Indigenous communities are not monolithic in their approaches to Land. Many Indigenous communities are actively negotiating with and participating in resource development projects as part of broader strategies for economic self-determination, which reflects the complex and often difficult decisions Indigenous governments and communities must make within a colonial-capitalist state (Yellowhead Institute, 2019). Hence, land-based programs are critical spaces where youth and community members can navigate, debate, and imagine different futures, including how to engage with development in ways that honour Indigenous governance, self-determination, and resurgence.

Many Indigenous and non-Indigenous authors, scholars, activists, leaders, Guardians, and community members emphasize the value of land-based education to the survival, resilience, and livelihood of Indigenous communities. Examples of the benefits of land-based education include, though are not limited to climate change adaptation (Cunsolo et al., 2017), challenging colonial systems of power (Corntassel & Hardbarger, 2019), food security (T.-A. Kenny, Wesche, et al., 2018), mental and physical health benefits (Dubnewick et al., 2018; Trout et al., 2018),

monitoring and measuring contamination (Alfred, 2014), urban lifestyle adaptation (Styres et al., 2013), and water stewardship and governance strategies (McGregor et al., 2010)

There are many types of land-based programs, such as on-the-land camps, led by communities, organizations, institutions, First Nations governments, and Métis councils in the NWT (Cluderay et al., 2022). *On-the-land camps* connect youth with local Elders and Knowledge Holders through land-based cultural activities, outdoor science activities, experiential learning, mentorship, and travelling to ancestral, cultural, and sacred places (Lowen, 2009). Being on-the-land with Elders is critical to instilling an ethic of care and responsibility in the next generation (Ahmed et al., 2022) hence, it is critical that youth are given opportunities to learn from Elders in traditional places (McDonald, 2023). Elders hold Knowledge of the Land and share stories about the significance of these places to their families, nations, and Peoples (Maor & McConney, 2015), and being on-the-land in traditional places evokes memories and stories of land-based practices and pedagogies (L. B. Simpson, 2002).

Land-based education is a site of resurgence, reclamation, and self-determination. Youth attending land-based programs are actively restoring relationships with the Land that colonial policies sought to sever. Supported through land-based education, youth are reasserting their place as future land-based leaders, refusing colonial-capitalist frameworks of environmental control, and reclaiming the ways of knowing and being that have always sustained their communities. Therefore, I argue that Land Stewardship is nurtured through land-based education. Land-based programs, such as on-the-land camps, empower youth with knowledge, skills, and experiences of how to protect the Land. Spending time on-the-land teaches reciprocity and relational accountability (Wilson, 2008); and cultivates a sense of belonging through care and nurturing (Goeman, 2008; Liebenberg et al., 2019).

Research Context

Working in collaboration with local and regional First Nations in Denendeh, academic partners, and a non-profit organization, this research explores the perspectives of northern youth at four on-the-land camps in the NWT. Within each subsection, I outline the on-the-land camps and respective partnering First Nations. Importantly, all the on-the-land camps that are included in this research took place independently of our intention to conduct this research, and youth participation in the camp did not demand participation in the research.

Dehcho First Nations (DFN)

Dehcho First Nations (DFN) represents Dene and Métis people who are Indigenous to the Dehcho region of the NWT. The public government comprises of ten First Nations bands and two local Métis organizations: Deh Gáh Got'ıę First Nation (Fort Providence), Tłı̨tłı̨t'ek'ehdélı First Nation (Jean Marie River); Ka'a'gee Tu First Nation (Kakisa); Łı́ı́łı̨ Kúę First Nation (Fort Simpson); Nahzą Dehé Dene Band (Nahanni Butte); Pehdzeh Ki First Nation (Wrigley); Sambaa K'e First Nation (Sambaa K'e); West Point First Nation (West Point, Ts'ueh Nda – Spruce Point); Fort Providence Métis Council (Fort Providence); and Fort Simpson Métis Nation (Fort Simpson). DFN has been in negotiations for a self-government agreement with the Government of Canada and GNWT since 1999. Titled the Dehcho Process, DFN's self-government agreement focuses on their rights with respect to the ways the Land is understood, and the ways

the Dehcho region is used and managed (Government of Northwest Territories Executive and Indigenous Affairs, 2022).

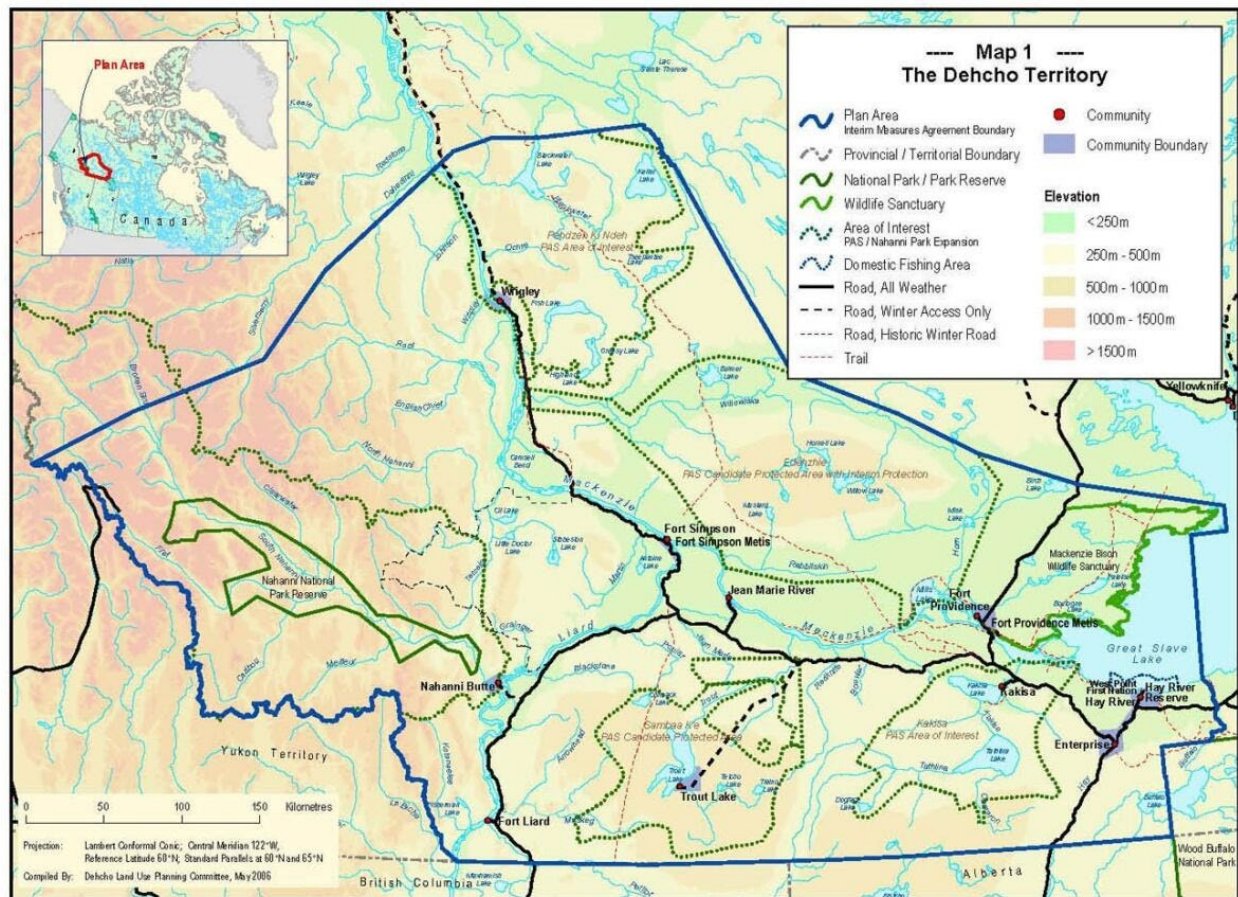


Figure 2. Map outlining the Dehcho region of the NWT (CBC News, 2018).

Understanding the Dehcho Region of the NWT is central to the geographical context of this research. This region encompasses several key locations where the on-the-land camps took place and where many of our community partners are based. Communities such as Łíídlıı Kúé

(Fort Simpson), Kakisa, and Fort Providence are highlighted in this research. These communities are of significant socio-cultural and environmental importance and home to many of the youth involved in the research. These camps, deeply rooted in Indigenous-led land-based education, are situated within this expansive landscape, with notable areas like the Edézhíe Protected Area, a spiritual place with ecological, physical, spiritual, and cultural significance to DFN (Dehcho First Nations & Environment and Climate Change Canada, 2018).

The Edézhíe was officially designated as a protected area in 2018 which was spearheaded by Dehcho K'ehodi Guardians (Dehcho First Nations & Environment and Climate Change Canada, 2018). That same year, DFN hosted the Dehcho Youth Ecology and Traditional Knowledge Camp (DYETKC) at Willow Lake. This was the first camp I attended before my doctoral program began to meet the research partners and co-develop the research questions, objectives, and methods for this project. This camp laid the groundwork for co-creating a research project that would be deeply rooted in DFN's values and goals, aligning with their vision for Land Stewardship, youth leadership, and land-based education. The following year, in September 2019, I documented visual stories with the youth at the DFN-led, seven-day DYETKC at Maoste (6 Mile Creek). Refer to Woodworth Chapter 3 for more details. Understanding this geography is vital for grasping the relational dynamics at play in the partnerships and the learning environments that emerged during the on-the-land camps.

Ka'a'gee Tu First Nation (KTFN)

Ka'a'gee Tu First Nation (meaning “between the willows”), also spelled as K'ágee Tue First Nation (KTFN), is in Treaty 11 territory within the Dehcho region of Denendeh, the

homelands of Dene and Métis peoples. The community settlement Kakisa has a population of approximately 36 people and is located on the east side of Kakisa Lake. Kakisa was established in the early 1960s after families were evacuated from Tathlina Lake. A wildfire destroyed their food sources and threatened the community's safety, so families were forced to relocate across the Dehcho, including Kakisa Lake, Beaver Lake, Hay River, Fort Providence, amongst others (Jayaratne, 2021). The community remains deeply connected to Tathlina Lake and they continue to travel back for harvesting, hunting, and fishing.

As part of Andrew Spring's PhD work on climate change adaptation in the community of Kakisa with KTFN, engaging youth as part of local stewardship and research and monitoring efforts was identified as a community priority (Spring, 2018). Initial camps were held in 2016 and 2017 in the community and brought together researchers, youth, Elders, and other community members to share knowledge about the impacts of climate change in the North, and the camp programs continued through the partnership with WLU and other organizations like Ecology North (Reid et al., 2021). In August 2019, the KTFN-led, five-day Ka'a'gee Tu Canoe Camp (KTCC) was held at Kakisa Lake and First River. I supported the organization of the camp logistics, attended the camp, and facilitated activities, including a photovoice research project (see Woodworth Manuscript 2, Chapter 4 for more details). The KTCC was part of the ongoing on-the-land program funded by NSERC's PromoScience.

The following year, in August 2021, I worked with KTFN and Ecology North to coordinate the five-day Water Stewardship Gathering (WSG) in Kakisa on First River, including hiring camp staff and science and cultural facilitators for camp activities, creating the schedule, setting the dates, preparing the camp location, contacting the youth, developing the meal plan,

buying groceries, coordinating travel, and much more. We co-facilitated the camp activities and co-monitored the camp environment. Camp programming included a mixture of science-based, Traditional Knowledge, and leadership-focused programming. Cultural activities were led by Dene Elders and Knowledge Holders; science-based activities were led by local community monitors, land-users, and graduate student researchers (see Woodworth Chapter 4 for more details).

Ecology North

Ecology North is a charitable, environmental non-profit organization that supports bringing people, Knowledge, and information together to support positive environmental decision making at individual, community, and regional levels. Ecology North aims for a healthy northern environment, forever. Since 1971, its mandate has expanded to building capacity and empowering youth and community members through five program areas: climate change, water stewardship, waste reduction, local food production, and education. Moreover, the common thread throughout the organization is the inseparability of environmental, social, and community (Northern) wellbeing.

Ecology North collaboratively works with various partners (including governmental, non-governmental, academic, and Indigenous governments) across the North to deliver programs rooted in education, sustainably living, and climate change adaptation and mitigation. Two of such on-the-land programs are the Water Stewardship Gathering (WSG) and the Young Leaders Summit on Northern Climate Change (YLS). YLS partners included WLU and the Yellowknives Dene First Nation (YKDFN), whose territory is centered in Sòmba K'è (Yellowknife), N'dilo,

and Dettah, and form the Chief Drygeese Territory. YKDFN are part of the Akaitcho Territory Government and Treaty 8 Nation.

In August 2021, I led a photovoice project at the 5-day YLS on Northern Climate Change (YLS) in Dettah on Great Slave Lake, the territory of YKDFN, as part of my doctoral research with WLU. The YLS was conducted jointly by several partners. Camp programming included a mixture of science-based, Traditional Knowledge, and leadership-focused programming. Cultural activities were led by Dene and Métis Elders and Knowledge Holders; science-based activities were led by local community monitors, land-users, and researchers; and leadership discussions were facilitated by local climate leaders and policymakers (see Chapter 4 for more details).

Researcher Positionality

My name is Steph Woodworth. I am a queer, trans nonbinary white settler with English and German ancestors born and raised in Dryden, Ontario, a milling and forestry community in Treaty 3 territory, the homelands of the Anishinaabek. As a person who was born and raised on the homelands of the Anishinaabek in what is colonially known as Dryden, it is my responsibility to situate myself in this history. For re-storyation, I must acknowledge the destruction, dispossession, and oppression embedded in the state, critique how this system works to support communities like Dryden while destroying the livelihoods of Indigenous Peoples, Land (which includes waters), and actively work towards collective healing.

Dryden is a place holding multiple, complex, overlapping identities, which was/is created through colonial discourses and imagined geographies that have real, material consequences. Dryden is not a fixed place with a boundary or border in a contained space, but, rather, it is fluid, dynamic, and evolving. Furthermore, Dryden is a contested city where the processes of colonialism and decolonizing take place in the same spaces (Tomiak, 2017). To illustrate, in the 1960s and 1970s, the paper mill in Dryden dumped mercury waste into the English-Wabigoon river system, poisoning the First Nations communities downstream from Dryden (Brusser & Poisson, 2016). As the mill has undergone new ownership since the 1970s, the responsibility and accountability of the violent actions are deflected between groups. The poisoning of the river continues to impact First Nations communities downstream from Dryden, including Grassy Narrows First Nation, Whitedog First Nation, and Wabaseemoong Independent Nations, and they continue to fight against the state for justice for the Land and their Peoples.⁴

My relationships and identities held within Dryden are not bounded to a fixed or bordered place – they create the essence of my being, shape my thinking, influence my emotions and feelings, and guide my actions. Tracing the histories and imagined geographies of my hometown has helped me (un)learn the colonial tactics and tools of research. Ultimately, (un/re-) learning the history of Dryden in my Master's led me on a path to where I am today.

In Chapter 5, I delve into the details of my research path, which serves as a foundational element of this land-based research. This chapter provides a comprehensive exploration of the

⁴ In my Master's thesis, I write extensively about my hometown's colonial history and ongoing conflicts with Grassy Narrows First Nation, Whitedog First Nation, and Wabaseemoong Independent Nations (S. M. Woodworth, 2018). Without replicating my previous critiques, reflections, and expressions, it is still necessary to identify the violent, colonial space and place that is Dryden.

methodologies, approaches, and principles that guided my research, highlighting how each step of the research process was intentionally shaped by the Land and my relationships. By focusing on these aspects, Chapter 5 underscores the importance of aligning research practices with the values and responsibilities inherent in land-based frameworks.

Looking back to the start of my doctoral studies, I see a different person than I am today. My roles and responsibilities for this research have remained in-tact; that is, I am doing this research *for* and *with* community, and it is a true gift to be writing in the North – the place and space this research occurred. My relationships in the North have deepened in ways that would not have been possible if I did not live here. Living in Kakisa and Sòmba K'è showed me what was missing from this research when I was living in the South – maintaining our relationships requires me to be *here* and not *there*. Importantly, I am not the same person I was when I started this research, as our relationships grew, I grew, too. “If research doesn’t change you as a person, then you haven’t done it right” (Wilson, 2008, p. 135).

Throughout the past six years, I worked with DFN, KTFN, Deh Gáh Got’îê First Nation, Łíídlıı Kúé First Nation, Ecology North, and Northern Water Futures to explore the perspectives of the youth at on-the-land camps in Denendeh. My roles for the on-the-land camps included camp coordinator, photovoice facilitator, camp instructor, and research assistant. My relationships with everyone who participated in the camps (from organization to implementation) informed the ideas shared in this dissertation.

My responsibilities for the on-the-land camps included building relationships with partners, staff, and the youth, organizing and coordinating the camp schedule and activities, coordinating Wilfrid Laurier University (WLU) graduate students to attend and lead activities at

the camps, leading activities at the camps, facilitating the photovoice projects, writing reports after the camps, filming, editing and producing videos from each of the camps, organizing and facilitating photo exhibits in the participating communities, creating photobooks to share with each of the partners and youth from the camps, as well as writing articles for publication and creating presentations to share the research results.

My epistemologies and ontologies are rooted in the process of my relationships, and my methodologies and axiologies maintain my accountability to those relationships (Wilson, 2008). My worldviews inform and shape the assumptions and parameters for this land-based research, as such, the methodological and theoretical framework used must be grounded in protecting and preserving the Land (K. Martin & Mirraboopa, 2003). The ideas shared in this dissertation are reflective of my relationships, and as I am accountable to those relationships, I must be careful in the knowledge I share, how I share it and with whom I share it with. Knowledge cannot be owned, it is shared (McGregor et al., 2010).

In this research, I draw on the storied experiences of youth at four on-the-land camps, paying particular attention to the ways the youth are re-storying their relationships with the Land. In writing this dissertation, I am also re-storying my relationship with the Land. Poetic inquiry, poetry and photography, are expressive and embodied methods used to re-story my 'self' in my research. Importantly, I write this dissertation care-fully, respecting the relationships that are foundational to this research –with peoples, ideas, the Land, those who are gone, those who are here today, and those that will come tomorrow.

In this research, I had to continuously reflect critically on my positionality. Critical self-reflection, specifically for non-Indigenous researchers, is an ongoing process of critiquing and

evaluating the ‘self’ with a “consciousness of being unsettled” (McGuire-Adams, 2021, p. 7). As an axiology, ontology, and methodology, critical self-reflection is a continual analysis of values, ideologies, and actions towards Indigenous Peoples through an active disruption and dismantling of colonialism as a system of power and its associated mechanisms of dispossession (Lees et al., 2021; McGuire-Adams, 2021).

Hence, critical self-reflection is a refusal against the violence embedded in academic, particularly geographic, knowledge production (Lomawaima, 2016; A. Simpson, 2017; Sylvestre et al., 2018; Tuck & Yang, 2014). *Refusal* shapes the stories that are shared, how they are written, as well as those that are withheld from sharing (Tuck & Yang, 2012). Disrupting colonial knowledge production through a politics of refusal requires navigating the research relationships outside of the institutions terms and academic gatekeepers (e.g., Review Ethics Boards), and within the community’s terms (Phillips, 2001; Sylvestre et al., 2018).

By refusing to focus on epistemologies and methodologies that erase Indigenous Peoples, Knowledges, and Land (Tuck & Yang, 2014), land-based research focuses on “doing things differently” (Simpson, 2017, p. 29). Refusal requires responsibility and accountability to the Indigenous Peoples and communities we work with (Tuck & Yang, 2014). Respectful, anti-colonial land-based research relationships require a profound commitment to respect, responsibility, and accountability, active listening and (un)learning through time spent with Indigenous Peoples in Indigenous places (Sylvestre et al., 2018).

In this land-based research, I refuse oversharing intimate stories, experiences, and relationships that were part of this research, though I acknowledge the contributions of the unshared within this work. To navigate what is shareable and not shareable as part of this

research, I trust in the relationships developed and maintained with community partners, parents, guardians and teachers, children and youth, Elders and Knowledge Holders, community members and leaders. This research was co-created through relationality and relational accountability, and as such, this research serves the communities it was designed with. Importantly, this research refuses a storying of the North that portrays Indigenous Peoples and communities as weak, vulnerable, traumatized, and lacking capacity. This research is an act of love and care, built through respect, responsibility, relationality, continued by nurturing relational accountability.

Research Objectives

Research on land-based education and land-based programs is rapidly growing. As demonstrated in the introduction, there is an expanding base of literature that documents the impacts of land-based education (Bowra et al., 2021) and the Indigenous theory that grounds land-based pedagogies (McDonald, 2023; L. B. Simpson, 2014). However, there is little research that documents northern Indigenous and non-Indigenous youth experiences at on-the-land camps, or how land-based programs support Land Stewardship. While these programs and pedagogies aim to create spaces for youth to learn about and connect with the Land, their language and culture, it is unclear the degree to which they are effective in responding to young people's needs or what the youth are experiencing, enjoying, and learning during these programs. Additionally, more comprehensive research is needed to explore the ways land-based programs can create a space to empower Indigenous and non-Indigenous youth to be leaders in their communities through the values and practices of Land Stewardship. In reviewing the land-based education literature and the documented potential of land-based programs, there is a gap in

understanding the impacts of on-the-land camps as spaces for respectful community-driven, land-based research projects.

Hence, my doctoral research is a collaborative, reciprocal land-based research study to answer: How do Indigenous-led, on-the-land camps in the NWT provide northern youth with opportunities to connect with the Land and empower them to become land-based leaders in their communities? Grounded in an Indigenous Research Paradigm (IRP) and theoretical framework of Land Stewardship, this land-based research is co-created with First Nation communities in the NWT for northern Indigenous and non-Indigenous youth. Using relational methods, such as photovoice, sharing circles, “watching and doing” at four on-the-land camps, the primary aims of this research is to provide input towards co-creating relational research with northern communities, as well as contribute to the development of sustainable land-based education programming, specifically on-the-land camps, in the NWT for northern youth. The central research objectives are as follows:

- Document the youth’s experiences and lessons learned during on-the-land camps.
- Identify the ways on-the-land camps provide a space for northern youth to connect with the Land.
- Explore the ways on-the-land camps empower northern youth to be land-based leaders and Land Stewards in their communities.
- Analyze the impacts of on-the-land camps as spaces for respectful and reciprocal land-based research with northern Indigenous communities.

Dissertation Structure

This dissertation consists of seven chapters, including the epilogue. **Chapter 1** is an introduction to the dissertation by contextualizing the research within the land-based education literature and northern context. This introductory chapter outlines the research objectives, structures the dissertation chapters, and justifies the research contributions to the advancement of knowledge. **Chapter 2** details the theoretical foundations and methodological framework of this research.

Chapters 3 – 5, have been prepared as manuscripts for publication in relevant peer-reviewed academic journals. The three manuscripts presented in this dissertation answer a research question, or set of research questions, with the goal of furthering understanding of land-based education for northern youth. Contributions by academic and community partners are recognized for the respective manuscripts. A statement of authorship for each manuscript is summarized on page iv: *Statement of Authorship and Collaborations*. **Chapter 3** presents the manuscript, “*It’s not being on-the-land; it’s like we are a part of the Land*”: Indigenous Youth share visual stories at on-the-land camps in the Dehcho, which has been accepted for publication in the journal *Canadian Geographies/Géographies canadiennes*. **Chapter 4** presents the manuscript, Empowering northern youth as Land Stewards through land-based programs in the Northwest Territories, which has been submitted to the journal *Arctic*. **Chapter 5** presents the manuscript, *Re-storying relationships with the Land through land-based research*, which has been prepared for the journal *Annals of the American Association of Geographers*.

Chapter 6 concludes the dissertation with key implications, contributions, and limitations. This conclusion chapter discusses the significance of this research and connects back

to the introductory chapter objectives and questions. Lastly, **Chapter 7**, titled, *Epilogue: A Love Letter*, is a creative and reflexive piece that honours the interconnected and loving relationships that guide every aspect of this work. Five appendices are included in this dissertation. **Appendix 1** includes scientific research licenses for work in northern Canada. **Appendix 2** includes ethics approval documentation. **Appendix 3** includes materials (i.e., letters of approval, consent forms) related to the community-based work in the NWT. **Appendix 4** includes photovoice interview materials. **Appendix 5** includes supplementary materials, such as videos that feature the on-the-land camps.



Relationships are born in and built through stories. When we think of our relations with others, we tell ourselves stories of our connections through spacetime. Our minds travel to places of our past and possibilities of our future. We are most connected when we are together, writing a collective story of the present. Allow our words to collide and dance the tango of life and love. Let us write together today, for the memories of yesterday and for the hope of tomorrow...

Chapter 2: Theoretical and Methodological Foundations

This chapter establishes the theoretical and methodological foundations of the dissertation. This research is grounded in a theoretical framework of Land Stewardship and an Indigenous Research Paradigm (IRP) methodology and employs relational methods to honour and integrate Indigenous ways of knowing and being. By weaving in my own poems and photographs as section breaks, this chapter invites readers to pause and reflect on the narratives and insights shared. These creative elements serve as integral components of the methodology, embodying the reflexive, holistic, embodied, and situated nature of land-based research. This approach facilitates a deeper engagement with the material, allowing for personal connection and contemplation, and aligns with my commitment to conduct research in a way that is respectful, reciprocal, and accountable to everyone involved.



I forget how to write to you...

I get so caught up in finding the sources to back up the thoughts bouncing around in my brain, I forget how to just *write*. And while these thoughts may seem like *mine*, they are not actually *mine*. They are connected to everything I have learned, from everyone I have learned it from, and from everywhere I have been. All the peoples and places of my past, connected to what I am thinking in the present, for what I am trying to do in the future. It's all entangled, simultaneous, a dance between past, present, and future; a dance of relationships – relationships with ideas, people, the Land, and the cosmos.

Then I try to write these thoughts on these pages, for you to read, for you to feel, for you to experience, for you to have your own thoughts. But I am thinking about how I need to find a source to back up my thoughts.

How do I cite and write?

How do I write and cite?

I want to write, but I need to cite.

So, I try to cite, and then I can't write.

To cite and write.

To cite.

To write.

To cite.

Cite.

Cite.

Cite.

Cite.

I need a break...

I need to write.

To write.

To write.

To write.

I can't write. I must cite.

I can't cite. I must write.

Theoretical and Methodological Foundations

Geography, as a research field, aims to define and know the natural world (Aitken & Valentine, 2006). Since geography's emergence as an academic discipline in the late eighteenth and early nineteenth centuries, geographic research was (and remains as) a tactic and tool for colonialism (Bonnett, 2003; Leddy, 2017; Radcliffe, 2018). Geographic research has been used as a means to exploit, extract, and dominate the "land" and dispossess Indigenous Peoples (Harris, 2004; Radcliffe, 2017a). Geographic methods of mapping aimed to dominate and control Indigenous Peoples and Lands, reducing the environment into compartments and components (Goeman, 2008). Moreover, geographical imaginings and constructions of maps, numbers, laws, and scales materialized the "land" as an object – fixed, dead, partial, bounded, bordered and contained – that can be owned, extracted, exploited, accessed, and controlled (Coulthard, 2014; Elden, 2010; Goeman, 2008).

Geographic research established the foundations for the exploitation of "land" for capital and control through the colonial constructions of space, place, scale, territory, and terrain (Elden, 2010). Shaped by colonial discourses and mechanisms of dispossession, geographic research has been used as a means of recording, interpreting, and analyzing the world to appropriate it and control it (Noxolo, 2017). Through strategies of calculation, measurement, and standardization with quantitative and scientific tools, the "land" has been parcelled, compartmentalized, and disassembled into colonial-capitalist categories, such as property, natural resources, territory, and terrain (Elden, 2010; Goeman, 2008). As a result, Indigenous Peoples have been erased from the Land through geographical approaches to define the "land", such as place names, maps, numbers, laws, and scales (Leddy, 2017; Watson, 2018).

Given the violence embedded in geographic approaches to studying the “land,” it is important to examine the epistemological shifts in geography as a discipline, each marking an effort to challenge or refine the dominant frameworks of the time. In the 1950s, geography was largely shaped by positivist science, which emerged as a response to and attempted supersession of the earlier regional tradition that had focused on describing places in isolated detail (Maddrell, 2009). This shift sought to make geography more scientific, emphasizing objectivity, quantification, and the search for spatial laws. By the 1970s, however, this positivist paradigm was increasingly challenged. New subfields emerged—behavioural geography, humanistic geography, and radical geography (including Marxist and feminist approaches)—that critiqued the depersonalized, deterministic nature of positivist science (Aitken & Valentine, 2006). These paradigms emphasized the lived experience of space, social justice, and the politics of spatial production.

Feminist geographers were among the first to mount sustained critiques of geography’s exclusionary practices. In the 1970s, they challenged the field’s male-dominated frameworks, highlighting how geography had been largely blind to the spatial experiences of women (Dixon & Jones III, 2006; McIntyre, 2003). By the 1980s and early 1990s, feminist geographers had begun examining the intersections of gender, space, and labour, with the rise of postmodernist thought further expanding feminist inquiries into identity, difference, and power (Dixon & Jones III, 2006). The field redefined space as fluid and relational, departing from the classic binaries and fixed categories that had long shaped geographic thinking. However, despite its insights, feminist geography often remained grounded in a human-centred paradigm, one that frequently excluded the more-than-human world and failed to fully acknowledge the agency of Land itself.

This limitation is significant in the context of Indigenous geographies, which are deeply rooted in relational ontologies that do not separate people from the Land (Lomawaima, 2016).

Alongside feminist critiques, postcolonial scholarship emerged during the 1970s–1980s, shaped by global anti-colonial struggles in Africa, Asia, and the Caribbean (Barnett, 2006). Influential thinkers like CLR James, Amílcar Cabral, and Aimé Césaire emphasized that colonialism extended far beyond political or economic control (Barnett, 2006). Geographers influenced by postcolonialism began to interrogate how space and place are entangled with colonial power, questioning how knowledge is produced and whose worldviews are legitimized (Barnett, 2006; Radcliffe, 2017a). However, as scholars such as Tuck and Yang (2012) argue, decolonization is not a metaphor—and postcolonial critiques, while valuable, often fail to unsettle the material and territorial foundations of settler colonialism where colonial structures remain intact.

In the 1990s, a pragmatic turn toward poststructuralism, critical theory, decolonizing methodologies, and Black and Indigenous geographies began to reshape the discipline more fundamentally, questioning not only what geography studied but how it studied—and for whom (Aitken & Valentine, 2006). Resisting colonial spatial logics, Indigenous geographies centre land-based governance, relational accountability, and Indigenous laws, with approaches grounded in Indigenous worldviews, epistemologies, and relationships with the Land (Howitt et al., 2009; Moreton-Robinson, 2016). Indigenous geographies are an assertion of decolonial ways of knowing, mapping, and living in relation to place, rooted in land-based knowledge systems, kinship networks, and spiritual, relational responsibilities to the Land (Hunt & Holmes, 2015; Radcliffe, 2017a).

Broadly, Indigenous geographies are the study of living relationships with place, ancestors, more-than-human beings, and story (de Leeuw & Hunt, 2018). Scholars in Indigenous geographies are enacting their responsibilities to the Land and their communities (Daigle & Sundberg, 2017; de Leeuw & Hunt, 2018). By focusing on the collective nature of research and ways of living (knowing, being and doing), Indigenous geographic scholars are raising a higher consciousness and state of being, connecting the spirit to the cosmos, eliminating the space between peoples, ideas, and places, and enacting mutual reciprocity and responsibility. For Indigenous geographies, research cannot be reduced to an “I”, which reflects the socio-spatial structures and systems of governance and sovereignty for Indigenous Peoples (de Leeuw et al., 2012). Nothing is studied through an isolated lens of the “individual”, but instead, is seen always in terms of its networks, relationality and collectivity (Daigle, 2016).

Indigenous geographies offer a direct critique of extractive research practices that remain pervasive, especially in the North (Ljubcic et al., 2018; McGregor et al., 2010). Researchers studying geography in the North are critiqued for “mining” Indigenous Knowledges (Aldred et al., 2021; McGregor et al., 2010), while ignoring the rights, perspectives, and values of Indigenous Peoples (Aldred et al., 2021; Christensen, 2013). Geographical research in the North is predominantly *about* Indigenous Peoples rather than *with* or *by* Indigenous Peoples (de Leeuw et al., 2012; Watchman, 2024). Therefore, this land-based research is embedded in Indigenous geographies, designed and implemented *with* Indigenous Peoples, *within* Indigenous methodologies and theoretical foundations of Land Stewardship. To understand the theoretical and methodological framework of this land-based research, is important to define land-based research, the roles of the researchers, partners and youth, approaches to selecting the research

topic and objectives, and identify the decision-making power over research protocols, analysis, and dissemination processes (R. Datta, 2019).

Land-based research deconstructs and reframes the politics of research and community impacts (R. Datta, 2019), and co-creates pathways for relationality and relational accountability (Wilson, 2008). Moreover, land-based research is a relational process prioritizing Indigenous Peoples and Indigenous Knowledges of the Land (Hecht & Nelson, 2021; Ollier, 2019; Wilson, 2008). Land-based research requires trust, respect, and humility and the ways those are enacted for our relationships (R. Datta, 2019). Land-based research approaches honour and hold accountable connections with each other, the Land, and the ideas shared, and the sacredness of research (Absolon, 2011; Kimmerer, 2013; Wilson, 2008). This land-based research employs Land Stewardship as the theoretical framework to examine how land-based programs, specifically on-the-land camps, cultivate stewardship values and practices among northern youth. In the following sections, I explain the roles and responsibilities of those involved in this land-based research (i.e., researchers, community partners, youth). I discuss the processes and approaches of determining the research topic and objectives with community partners. I critique academic decision-making power over research protocols, analysis, and dissemination processes and identify collaborative processes of knowledge sharing and research ownership.



I am not doing this research for the academy...

This research is for the youth.

This research is for the Elders.

This research is for the families.

This research is for the communities.

This research is for the ancestors.

This research is for those yet to come.

This research is for the Land.

Land Stewardship

Theoretical applications of environmental stewardship are prevalent in geographical research (Croft & Witte, 2021; Russell et al., 2021; Worrell & Appleby, 2000). *Environmental stewardship* is a broad concept that refers to the responsible use and protection of the natural environment through conservation and sustainable practices (Croft & Witte, 2021). Moreover, environmental stewardship involves managing natural resources in a way that meets current needs without compromising the ability of future generations to meet theirs (Worrell & Appleby, 2000). Moving beyond environmental stewardship theory to a framework built on Land Stewardship, this research is embedded in a new theoretical foundation that elucidates how land-based education contributes to the cultivation of Land Stewardship among youth.

Land Stewardship is embedded in Indigenous Knowledges of the Land and is shaped by interconnected cultural, spiritual, and land-based practices of care, reciprocity, and respect, which upholds the Land's agency and teachings. The Land is central to Indigenous identities, governance, and knowledge systems and Stewardship as an act of relational accountability and sovereignty. By applying Land Stewardship as the central lens, this research demonstrates that land-based education is not merely an educational approach but a strategic means of empowering youth to become responsible caretakers of the Land.

In geography, environmental stewardship often aligns with scientific and policy-driven approaches to conservation, which emphasize sustainable development, biodiversity preservation, and mitigating human impacts on ecosystems (Gray & Pigott, 2018). Environmental stewardship strategies involve practices like sustainable agriculture, “land”

conservation easements, and land-use planning to balance development with environmental protection (JT et al., 2010; Palma et al., 2021; M. J. Price et al., 2022; Puig et al., 2011).

Approaches to environmental stewardship are often grounded in environmental science, ecology, and policy frameworks (Hovel et al., 2020; Masinde, 2013; Polfus et al., 2017; Walsey & Brewer, 2018). For example, Brundtland's (1985) concept of sustainable development has been the centre of non-Indigenous approaches to stewardship. Specifically, the Brundtland Report defined sustainable development as meeting the needs of the present without compromising future generations (Brundtland, 1985). Another concept that underpins environmental stewardship frameworks is "land ethic", which emphasizes the importance of a responsible relationship between Peoples and the territories they inhabit (Leopold, 1949).

Further initiatives, like community-based resource management and environmental stewardship programs, advocate for engagement with local communities to develop conservation and sustainability practices (Fernández-Giménez et al., 2008). Environmental stewardship focuses on sustainability and conservation (Gray & Pigott, 2018; M. J. Price et al., 2022), and examines the natural environment in ways that emphasize responsibility, care, and sustainable management (Asfeldt et al., 2022; Russell et al., 2021). While environmental stewardship frameworks work to protect the environment, they remain embedded in colonial-capitalist discourses of "land" and "land" management, rather than Indigenous Knowledges of Land (Harmin et al., 2017). Nevertheless, the use of the English language to describe Indigenous Knowledges of the Land is inherently limited, as it often fails to convey the depth, spirit, and relational vitality that animate the Land in Indigenous worldviews. Indigenous languages are intimately tied to place, and the meanings embedded in the languages are diminished and distorted when translated into colonial languages that prioritize categorization over connection.

Land Stewardship is capitalized to represent the holistic and sacred responsibility that recognizes the Land as a living entity with which humans are in relationship. Land Stewardship refers to the responsible use and protection of the Land through socio-cultural and environmental practices (Popp et al., 2020). Land Stewardship emphasizes a deep, respectful relationship with the Land, recognizing it as a spiritual and living entity that requires care and Guardianship (Russell et al., 2021), and acknowledging the spiritual, emotional, physical, and intellectual dimensions of Indigenous Knowledges (Carothers et al., 2021).

For Indigenous Peoples, Land Stewardship is inseparable from cultural identity, self-determination, community, and sovereignty, and involves sustaining the Land as a living entity with which Indigenous Peoples have a profound connection and responsibility (L. B. Simpson, 2014). Through this lens, the Land is viewed as a relative and an integral part of Indigenous identity and existence (Wilson, 2008). Land Stewardship involves honouring these relationships through respectful and sustainable practices (Kimmerer, 2013).

Land Stewardship is deeply rooted in local Indigenous Knowledges and spiritual relationships with the Land (Vasquez, 2021). From an Indigenous perspective, Land Stewardship is a holistic and relational approach to strengthen reciprocal relationships with all living and non-living entities (Marshall et al., 2022). Land Stewardship specifically focuses on the care and Guardianship of the Land through relational accountability (Popp et al., 2020). Land Stewardship is linked to the rights of Indigenous Peoples to manage the Land according to their laws and customs, reinforcing sovereignty and self-determination (L. B. Simpson, 2016b).

Overall, there is significant research in geography explaining how both concepts of environmental stewardship and Land Stewardship address contemporary environmental

challenges. While some studies have explored outdoor education's role in fostering environmental stewardship (Asfeldt et al., 2022; Gray & Pigott, 2018; K. T. Stevenson et al., 2019), there is a notable lack of research explicitly connecting land-based education with the development of Land Stewardship values, particularly among youth. Furthermore, existing research often treats environmental education and stewardship separately, without integrating the cultural, spiritual, and relational aspects inherent in Indigenous perspectives (Wray et al., 2020).

Moreover, this research identifies how land-based education promotes Land Stewardship among northern youth through Indigenous Knowledges and stories of the Land. In the face of escalating environmental challenges, fostering a sense of Land Stewardship among youth is crucial for the protection of the Land and Indigenous futurities (Benton, 2017; Korteweg et al., 2010). By engaging relationally with, and developing profound respect for, the Land, youth develop a sense of responsibility and commitment to Guardianship and Stewardship (Clarke, 2015). Hence, Land Stewardship, as a theoretical framework, profoundly informed our methodological choices by aligning our research approach with principles that honour the Land as a living entity and a central participant in the research process. This framework emphasizes a reciprocal and respectful relationship with the Land, which necessitates methodologies that are relational, participatory, and reflective of Indigenous ways of knowing.



*it feels so powerful
when you fall in love
with the Land*

Dene Laws

In 2019, DFN collaborated with local communities and partners to share Dene Zhatie (Dene language), culture, and Knowledge in the Dehcho region (Dehcho First Nations, 2019). Twenty-four participants, including Elders, Knowledge Holders, Language Holders, youth, and staff gathered on-the-land to document the teachings of the Dene Laws in Dene Zhatie (Dehcho First Nations, 2019). The *Dene Laws* guide this research process, start to finish, and are key pillars of each camp included in this research. I include the Dene Laws here, as shared during the on-the-land project at the Katl'odeeche Dene Wellness Centre (Dehcho First Nations, 2019):

1. *Share what you have - Eleghaets'edendih* (p. 4)
2. *Help each other - Elets'áts'endí* (p. 5)
3. *Love each other as much as possible - Eleghonets'etq* (p. 6)
4. *Be respectful of elders & everything around you - Qhndah gots'edihchá & godhah ahsí azhq chu* (p. 7)
5. *Pass on the teachings - T'ahs'í ots'edihshq gogháts'izáh* (p. 8)
6. *Be happy at all times - Láqlih t'áh gogha gonezú* (p. 10)
7. *Sleep at night & work during the day - Tedhe ts'ete & dzené eghálats'enda* (p. 11)
8. *Be polite and don't argue with anyone - Dene ts'é nahzú gots'eh thá t'áh dene ahdahndí ile* (p. 12)
9. *Young girls and boys should behave respectfully - Ts'élíq gots'eh denelíq elegendihchá gha górq* (p. 13)

Through the Dene Laws, we learn how to live with each other, how to take care of ourselves, each other, and the Land. The Dene Laws are embedded with relationality and relational accountability, as they are a governance framework for relational responsibilities to build a collective conscious of care, love, gratitude, respect, sharing, caring, balance – honouring each other, the teachings, and the Land. As we are accountable for our actions to our relations, we must uphold natural and sacred laws within the research (Wilson, 2008). Each of the Dene Laws offer a way of being that reflects and respects the rhythms and responsibilities to living with the Land.

There are important connections to make between the Dene Laws and Land Stewardship. “Share what you have” and “Help each other” extend to the sharing of food from the Land, the collective nature of harvesting, and the responsibility to ensure that no part of the Land is overused. “Be respectful of Elders and everything around you” shows the importance of respecting the teachings of Elders about how to interact with the Land, and the Land is also a living relative deserving of respect. “Pass on the teachings” speaks to the intergenerational relationship with the Land to pass on traditional practices, history, and culture, and the responsibilities one holds for keeping the knowledge alive, knowledge that is rooted in the Land. “Be happy at all times” and “Sleep at night and work during the day” are about living in balance with the Land’s rhythms, respecting rest, work, and seasonal cycles. “Be polite and don’t argue” and “Young girls and boys should behave respectfully” are about maintaining peaceful communities—a necessary foundation for survival and coexistence.

In my research, the Dene Laws inform and guide how research relationships are structured (relationality) how knowledge is shared (reciprocity), and how ethical and responsible research practices are enacted (relational accountability). Methodologically and theoretically, the

Dene Laws grounded the research in relational accountability and governance. They offered a governance framework that shaped the design and facilitation of the camps and how I approached research relationships, storytelling, and knowledge sharing. The Dene Laws align with IRPs that centre respect, reciprocity, and relationality—and they tangibly directed the work by setting the ethical, cultural, and spiritual foundation for the co-creation of knowledge. By practicing the Dene Laws, land-based learning and research are embedded in land-based governance.

At the on-the-land camps, the Dene Laws were actively lived, taught, and upheld. Youth were introduced to the Dene Laws at the start of the camp, and they were revisited daily through stories, reminders, and reflective discussions. I learned the Dene Laws alongside the youth, and through that process, came to understand how they shape relationships—with the Land, with one another, and with oneself. The Dene Laws offer lessons to survive on-the-land and strengthen intergenerational community relationships, as well as provide guidance for how to live well with respect, humility, care, and responsibility.

Practically, the Dene Laws were embedded in the social and physical environment of the camp. They were displayed in the cookhouses and cabins, guiding how we treated each other and the Land, how we prepared and shared food, and how we resolved conflicts or offered help to one another. Youth were celebrated for demonstrating the Dene Laws in action—such as helping each other set up tents, respecting the Land, offering food to Elders first, and showing patience and care while learning new skills. These moments demonstrated how the Dene Laws serve as a governance framework for Land Stewardship, enacted through everyday acts of leadership and relational responsibility.



Landscapes

the soundscapes of the Land

*howling wolves
hooting owls
birds chirping
rivers flowing
wind blowing
and leaves rustling*

*all the sounds create a collective song of the Land
something that can never be duplicated
because it's alive*

*this magic comes from the life that sings it
and it's my favourite music to listen to*

Indigenous Research Paradigm (IRP)

IRPs refer to the “research done by or for Indigenous Peoples” (Wilson, 2008, p. 16), which support the revitalization of living and being relationally (Gaudet, 2019). Importantly, IRPs are inseparable from the Land (Howitt et al., 2009). Through an IRP, Shawn Wilson (2008) described the ways *Research is Ceremony* – it is not *like* ceremony (metaphorically), it is ceremony (literally). Research as ceremony raises a higher consciousness and state of being, connecting the spirit to the cosmos, eliminating the space between peoples, ideas, and places, and enacting mutual reciprocity and responsibility (Wilson, 2008). In other words, an IRP builds relationships, and bridges distance between the cosmologies and ourselves (Wilson, 2008).

Research is a ceremony. It bears repeating, as I think this statement ties up and holds together all of the relationships that have gone into the formation of this book. The purpose of any ceremony is to build stronger relationships or bridge the distance between our cosmos and us. (Wilson, 2008, p. 137)

In this research, IRP is used instead of Indigenous Research Methodologies (IRM), which aligns with Indigenous scholars such as Wilson (2008), Absolon (2011), and McGregor (2017) who were foundational in shaping this research framework. A key distinction between IRP and IRM is that Indigenous research is not just about the methods used—it is about the entire worldview and philosophical approach that guides the research. IRM tends to focus on how research is conducted, while IRP emphasizes why and from what foundational principles research is undertaken.

Emotions are central to IRPs, where emotions are valued and acknowledge as guiding the research process start to finish—the choice of research topic, methods of collection, approaches

of analysis, and presentation of ideas (Wilson, 2008). Emotions are embedded in our ways of knowing, being and doing, and we can never separate our emotions (motives, desires, hopes, dreams, passions, feelings, thoughts, memories) from our research (K. Martin & Mirraboopa, 2003). Emotions are guided by relational accountability – our responsibilities to our relationships and the ways we are accountable to maintaining those relations (Wilson, 2008).

For IRPs, researchers must know and observe local protocols, recognizing that such protocols will be different depending on location and context (K. Martin & Mirraboopa, 2003). While there are many similar values among Indigenous Peoples, each community and nation has diverse geographies, languages, cultures, and social structures; hence, there is no singular IRP (K. Martin & Mirraboopa, 2003; Wilson, 2008). IRPs will be different depending on the Peoples and places that knowledge comes from (Land) (Loppie, 2007). Everything must be understood within the context of the relationships it represents (Wilson, 2008). “[...] the shared aspect of an Indigenous ontology and epistemology is relationality, or that relationships form reality. The shared aspect of an Indigenous axiology and methodology is that research must maintain accountability to all the relationships that it forms” (Wilson, 2008, p. 137).

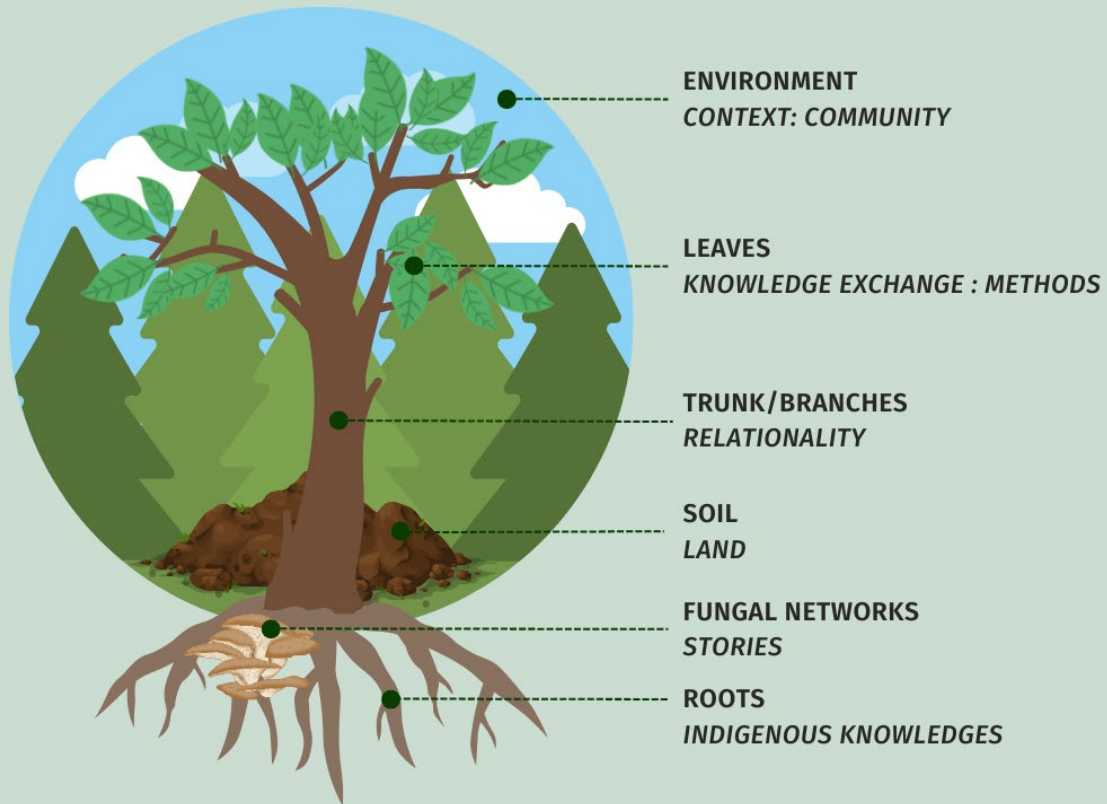
IRPs involve learning about ways of sustaining reciprocal and respectful relations, which can be used by Indigenous and non-Indigenous researchers (Wilson, 2008). However, an important distinction to assert here is that non-Indigenous researchers cannot offer an Indigenous perspective to the research. Non-Indigenous researchers using an IRP with Indigenous collaborators must earn the rights to start and continue research, with recognition that consent is an ongoing process and relationship (K. Martin & Mirraboopa, 2003). Regardless of the research approach and the researcher, reporting results requires respect, permission, terms and expressions

of community, and honours the relationships that hold the research together (K. Martin & Mirraabooa, 2003).

Studying the relationships between peoples and the Land requires understanding the entire system those relationships are constituted in (Kimmerer, 2013). *Wholism* is acknowledging and valuing the whole network and all of the relations that make up the network (Wilson, 2008). Importantly, there is no “right” or “wrong” way of doing research, but, instead, research is about understanding and connecting emotions and relationships (Wilson, 2008). Multiple, overlapping, interconnecting, and oppositional realities exist at any given time, and IRPs can be a way to understand the relationships of those plural realities (de France et al., 2018).

To understand the whole network of relations that shape this land-based research, I developed a visual framework informed by Absolon’s (2011) flower petal research framework, Wilson’s (2008) research as ceremony, and conceptions of Native Scale (Brooks, 2017; Tomiak, 2017). The components—soil, roots, fungal networks, trunk, branches, leaves, environment—are interrelated and interdependent, earth-centred, and harmoniously co-exist with the Land. The framework itself is alive, constantly evolving, growing, shifting, and changing, inclusive, relational, and reciprocating, and encompassed in every process of the research (Absolon, 2011).

LAND-BASED RESEARCH FRAMEWORK



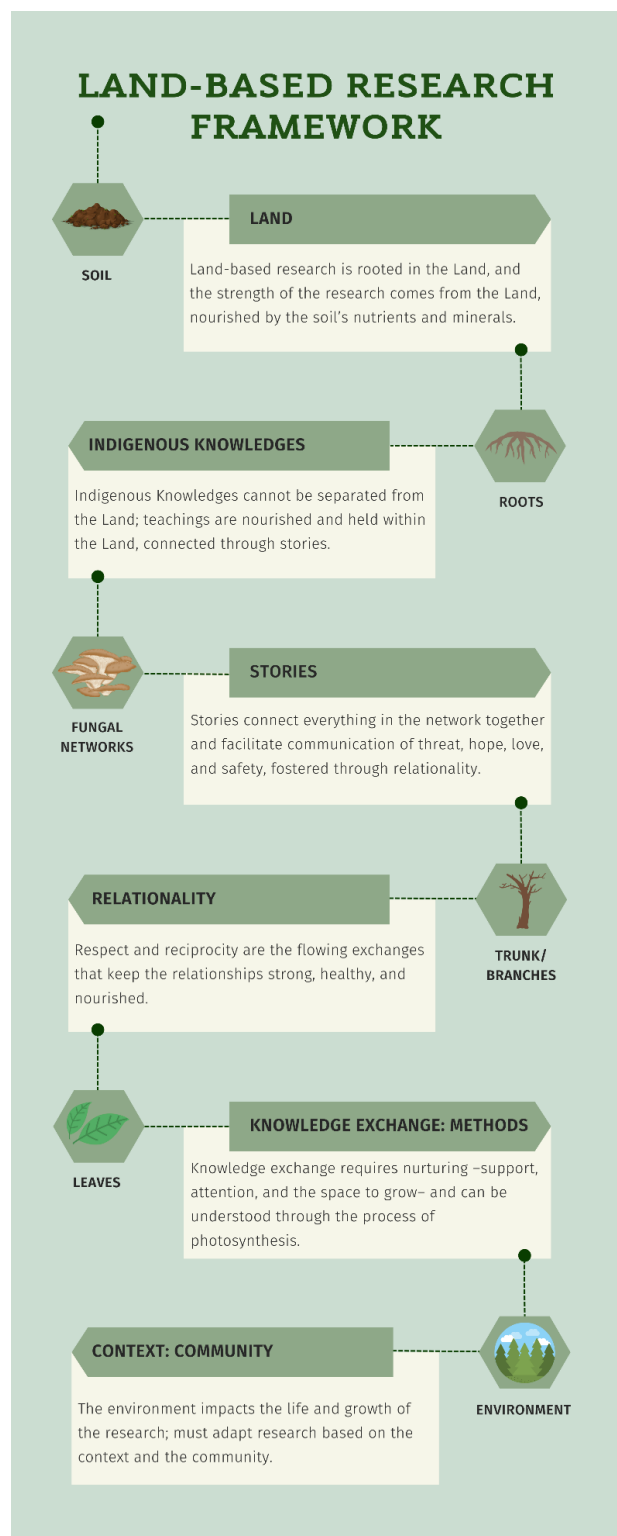


Figure 3. Visual framework of this land-based research, illustrating how the research elements interact to form a cohesive whole.

Each part of the framework represents a component of the research that is interdependent, relational, and alive working together as a whole system. In this way, the visual framework reflects a methodology and theoretical orientation that is grounded in Land Stewardship, shared stories, and the relational responsibilities that hold this research together. The soil represents the Land that the relationships are embedded within. The Land grounds this research, henceforth our decisions and actions. The strength of the IRP comes from the Land, nourished by the soil's nutrients and minerals. The roots represent local Indigenous Knowledges (e.g., Dene Laws), which are embedded in the Land. Indigenous Knowledges cannot be separated from the Land. Teachings are nourished and held within the soil (the Land). The fungal networks represent the stories that connect trees together and facilitate communication of threat, hope, love, and safety. Underneath the tree, intertwined within the roots is a network of fungus that connects the tree with others. It is through these networks that trees can communicate with each other, where stories are shared amongst the trees.

The trunk/branches represent relationality. Respect and reciprocity are the flowing exchanges that keep the relationships strong, healthy, and nourished. The flowing exchanges are maintained through trust, emotional connections, compassion, sensitivity, caring, listening, and spending time together. The strength of the trunk and branches holds everything together and channels the flow of nutrients for the whole tree. The leaves represent a two-way knowledge exchange, which requires a healthy environment to flourish in. Knowledge exchange requires nurturing –support, attention, and the space to grow– and can be understood through the process

of photosynthesis⁵. The leaves represent the transformative and healing journey inherent within Indigenous Research. This journey involves a series of steps, progression, and development towards research goals (planned or unplanned, defined or undefined, predictable or unpredictable). The environment represents the context and the community. The environment's patterns are cyclical and change seasonally, the environment impacts the life and growth of the research. The environment must be appropriately nurtured and maintained. "A healthy relationship cannot be built or flourish in an unhealthy environment" (Wilson, 2008, p. 125).

The visual framework was inspired by a tree because of its deep symbolic, ecological, and cultural significance—particularly in the northern landscape where this work is rooted. In the NWT, the Land is shaped by forests, and trees are active parts of the environment, knowledge systems, and relationships. The trees reflect the relational, interdependent, and grounded nature of the work. An Elder once told me, "trees are our counsellors," and that teaching stayed with me. Carrying this teaching, the visual framework emerged through lived experience, as I often found myself going to the trees when I needed to reflect, process stories, or think through the direction of the research. The trees became my companions and guides.

Importantly, trees do not live in isolation, they are part of an interconnected ecological community and reflect how I came to understand research as something that lives within a community, shaped by reciprocal relationships, shared stories, and collective care. The tree became both a metaphor and a methodological guide, helping me hold the values of Land Stewardship and IRP principles at the heart of this work. Trees embody relational accountability and reciprocity—they share nutrients through fungal networks, adapt to their environment, and

⁵ Photosynthesis is "the transformation of carbon dioxide and water into nutrients for the plant, occurs in the leaves" (Absolon, 2011, p.85).

support the life around them. Just as a tree draws strength from its roots, nourishes and supports other beings through its networks, and grows in response to its environment, Land Stewardship is not an individual act—it is a collective, land-based practice shaped by relationships. This framework represents a way of doing research that is guided by responsibility to the Land, by relational ethics, and by a commitment to care for the future, honouring the past, and living in the present.

Land-based research is responsive to the concerns of partner communities through active collaboration and co-learning, and values Indigenous Knowledge systems, worldviews, cultures, languages, and experiences. This relationally accountable process of land-research is supported by exchanging stories and conversation with peoples and interacting with the Land (K. Martin & Mirraboopa, 2003). Hence, I co-designed this land-based research and adapted relational methods with my research partners through humility, relationality, relational accountability, mutual reciprocity, continuous communication, openness, patience, and adaptability (Ninomiya et al., 2017). Collection and analysis were collaborative work held in Indigenous places and spaces. While the partners are co-creators of this research – co-designing the questions, methods, collection, analysis, and knowledge dissemination – I acknowledge the inevitable power imbalances that comes with doing research in a university-based setting (Castleden et al., 2012).

There are significant, inescapable tensions in academic institutions for land-based research. All research conducted in academic institutions must conform to various structural and institutional contexts (e.g., evaluated by Review Ethics Boards, through funders and their requirements, university mandates, and theoretical frameworks) (de Leeuw et al., 2012). No matter how well-intended the research(er) is, there remains an asymmetry of power between non-Indigenous researchers and Indigenous research partners and collaborators (Castleden et al.,

2010; Sylvestre et al., 2018). Power relations will always remain in a research relationship between researcher and partner or participant because of the structure and system of academic institutions (Sylvestre et al., 2018; Whetung & Wakefield, 2018).

To delve deeper, academic gatekeepers (e.g., Review Ethics Boards, Tri-Council government funders and policies, universities and professors) control what is considered *research* (Phillips, 2001). Moreover, academic gatekeepers control the procedures for legitimacy of research, such as what type of research is considered valid, reliable, and acceptable (Absolon, 2011). Academic gatekeepers create glass ceilings and obstacles to defend, justify, argue, and support IRPs (Absolon, 2011; Dufty-Jones & Gibson, 2022). For example, Research Ethics Boards (REBs) create unnecessary hurdles for doing research with Indigenous Peoples. REBs misunderstand methods and approaches used for IRPs, define what consent looks like (e.g., processes of asking consent and authorizing who gives consent) and enforce approval processes with significant delays to advance through the research stages (Sylvestre et al., 2018).

REBs have played an essential role in preventing predatory research and ensuring that research involving Indigenous communities adheres to a set of ethical guidelines. However, while REBs serve an important function, they are not inherently designed to accommodate Indigenous ethical protocols or land-based research approaches. Structural barriers within REBs limit Indigenous research sovereignty. REBs remain institutionally embedded within Western academic structures and are often not equipped to evaluate research based on Indigenous ethical frameworks. REBs assume authority over determining what constitutes ethical research, even when Indigenous Nations have their own ethical protocols. Indigenous communities must often seek approval from university REBs to conduct research within their own communities, regions, and territories, reinforcing academic control over Indigenous Knowledges.

Land-based and community-led research operates on relational timelines, where trust, reciprocity, and engagement unfold organically. REBs impose rigid bureaucratic timelines that do not align with Indigenous research processes, often forcing researchers to fit within predetermined deadlines that do not reflect how relationships are built in community-based research. REBs rely on Western notions of informed consent, typically in the form of signed consent forms. However, in many Indigenous contexts, consent is relational, dynamic, and ongoing. Land-based research involves ethical responsibilities that go beyond a one-time form—consent is embedded in ongoing relationships, accountability to Elders, and engagement with Land.

Many REB members lack lived experience in the North and may not fully understand the nuances of Indigenous protocols and methodologies, which prioritize reciprocity, storytelling, and Land relationships as ethical commitments. This results in REBs enforcing ethical standards that do not always align with Indigenous governance or land-based practices. If the goal of REBs is to protect Indigenous Peoples from research harm, then an essential step is to recognize and respect Indigenous Nations' own ethical governance structures. Many Indigenous communities already have their own ethics protocols, research approval processes, and governance structures that determine how research should be conducted in their communities, regions, and territories. However, these are often not recognized as holding equal weight to university REBs, reinforcing a colonial hierarchy of research approval.

This further extends to Aurora Research Institute Licenses in the context of the NWT, developed by the GNWT. Indigenous Nations and communities do not have the authority to approve research on their own, the systems that govern and authorize research remains in the hands governmental and institutional bodies that are disconnected from the communities the

research impacts the most. In addition to REBs, there needs to be a greater recognition and deference to Indigenous-led ethics review processes.

Researchers must confront double standards in the academy and stand up for Indigenous Peoples (Absolon, 2011; McGuire-Adams, 2021). As academic gatekeepers try to restrict ways of writing, researchers must support Indigenous writing approaches and avoid “white-washing” Indigenous Knowledges (Absolon, 2011; Justice, 2018). Moreover, Indigenous Knowledges, teachings, and stories are often mis-used and mis-represented by non-Indigenous researchers (Absolon, 2011). Indigenous Knowledges are active and alive, which loses meaning when they are frozen in time and place through writing (Absolon, 2011). As a white researcher, I remain within the constraints of academic gatekeepers and systems. I acknowledge the stories shared in this research are alive and ever evolving, and they must not be taken out of context of the time and place those stories were shared. In this dissertation, I write “care-fully”⁶ about Indigenous Knowledges and Peoples (Dufty-Jones & Gibson, 2022) by centring relationality and relational accountability in research and breaking through the glass ceilings of academic gatekeepers.

While I was invited into this work by community members, invitations do not absolve me from ongoing critical reflection on my own positionality, the structures I am embedded in, the broader implications of my work, the ongoing legacies of colonialism, and the logic of erasure in research spaces. My decision to engage with an IRP was not made without significant reflection, discussion, and co-creation with community partners. I am acutely aware of the dangers of white researchers adopting Indigenous methodologies and paradigms in ways that perpetuate colonial knowledge production, appropriation, and erasure. There is an undeniable history of white

⁶ Writing “care-fully” is a concept that describes the process of writing as full of care (Dufty-Jones & Gibson, 2022).

scholars co-opting Indigenous Knowledges and methodologies without accountability to Indigenous communities. Many white scholars use Indigenous Research Methodologies or community-based research models without relational accountability—which ultimately reinforces academic gatekeeping and extractive research.

For this reason, I see my use of an IRP as one that is necessarily situated, contingent, and relational. I did not enter this work with the assumption that I could—or should—apply an IRP. I first entered assuming I would use community-based, participatory research methodologies. However, as I was brought into these research relationships by the communities I worked with, who guided the research process in ways that aligned with their governance, knowledge systems, and ways of relating to the Land. The IRP did not come from me alone; it was enacted through relational accountability with the people and Land who shaped this work.

Colonialism operates through the exclusion of Indigenous Peoples from research and through inclusion in ways that extract, commodify, and decontextualize Indigenous ways of knowing. Therefore, my positionality as a white researcher demands constant self-interrogation. The dangers of implementing an IRP as a white researcher could result in IRPs becoming legitimized within academic spaces in ways that are inaccessible to Indigenous scholars themselves. This could further reinforce the idea that white researchers can engage in IRPs without direct accountability to Indigenous communities and thus replicate colonial logics by translating relational ways of knowing into extractive research frameworks.

There are significant risks in this approach, and I have worked to mitigate them by ensuring that this research is community-driven, which I do not hold sole authority over how the knowledge is interpreted, presented, or shared. Through a politics of refusal, I position myself as a relational participant in the research rather than as an “expert” on IRPs (see poem at the end of

the Chapter 6). Using poetic inquiry and photography allowed me to further demonstrate my own healing, transformation, and personal stories that reflect my positionality in this research and in the context of the North. My role is not to define or advance IRPs—my role is to enact accountability to those who have shared their knowledge with me. Most importantly, I trust in my relationships with the people I worked with, and I am committed to our relationships far beyond the completion of this research. However, I do not believe that such commitments resolve all tensions involved. Critical questions remain: Should non-Indigenous researchers engage with IRPs at all? Or is this a space that should be reserved for Indigenous scholars and communities?

Wilson's (2008) argument is that an IRP is not defined by identity alone—it is defined by relationships. In other words, knowledge is not owned by individuals, it exists within a network of relationships that demands accountability (Wilson, 2008). I do not claim ownership over the knowledge shared with me. I do not position myself as a knowledge producer—but as a participant in a reciprocal research process. I ensure that any contributions I make are accountable to the Land, communities, and relationships that have guided this work. Thus, my use of an IRP is not about asserting my right to use it as a non-Indigenous scholar—it is about enacting the relational responsibilities I hold through the research relationships I have built.

I also recognize that simply being in relationship with community does not absolve me from settler privilege or the structures I am embedded in. Non-Indigenous researchers, no matter how accountable, still benefit from the academic and funding systems that privilege white researchers. Using my position in academia, I advocate for more funding, research control, and decision-making power for Indigenous-led research. In all stages of this research, I am challenging colonial logics (externally and internally), centring Indigenous co-researchers,

leaders, and community governance over the research process, and maintaining accountability to the communities I work with beyond the completion of this project. An IRP is a living, relational responsibility, and that is a responsibility I will uphold for my entire life.

While I have been guided by community relationships, I recognize that I am still working within an academic structure that privileges white researchers, and I will never be fully outside of the settler colonial system that I critique. Moving forward, I remain committed to continuing to interrogate my positionality and power, ensuring that Indigenous scholars, community members, and youth lead and benefit from this work, and remaining open to critique and adjusting my approach as needed. This critique is ongoing, and I welcome further reflections and challenges from Indigenous scholars and communities as I move forward.



It's a messy process... Being, thinking, feeling, doing *in relationship*.

Stop. Pause. Breathe.

I am not alone in this writing. We are writing our stories together. We are part of each other's chapters.

We live in poems and our lives are poetry.

Relationality

Relationality is the core of our research and is the leading principle that guides our research process. *Relationality*, as described by Wilson (2008), refers to the relationships that make us as people. Who we are as peoples is defined, shaped, and formed by our relationships (Wilson, 2008). Relationality is the foundation to land-based research, Land Stewardship, and an IRP (R. Datta, 2019; K. Martin & Mirraboopa, 2003; Moreton-Robinson, 2016; Robertson & Ljubicic, 2019).

Relationality seems to sum up the whole IRP to me. Just as the components of the paradigm are related, the components themselves all have to do with relationships. The ontology and epistemology are based upon a process of relationships that form a mutual reality. The axiology and methodology are based upon maintaining accountability to these relationships. There, that sums up the whole book in one paragraph! An IRP is relational and maintains relational accountability. (Wilson, 2008, p. 70-71)

Goenpul scholar Aileen Moreton-Robinson (2016) described relationality as the core presupposition to an IRP. Specifically, she discussed how relationality gives rise to distinct forms of thought, provides a network of ideas for perception, and forms the conditions of possibility for coming to know and producing knowledge through research contextual to peoples, place, and Land (Moreton-Robinson, 2016). Relationality is a holistic concept of inter-connectedness, respect, responsibility, generosity, obligation, and reciprocity, which shapes Indigenous ways of knowing, being, and doing (K. Martin & Mirraboopa, 2003; Moreton-Robinson, 2016). Hence, when doing research with Indigenous Peoples, relationality must be the value that informs each stage of the research process (Moreton-Robinson, 2016; Wilson, 2008).

Wilson (2008) unraveled strands of relationality as relations with people, the Land, ideas, and cosmos. People are placed in relation to location and community, the networks that establish that person's reality (Wilson, 2008). Family is the glue that holds Indigenous Peoples to their identities, communities, and nations (Wilson, 2008). Knowledges of the Land is held in the relationships formed with the Land (Cluderay et al., 2022). For Indigenous Peoples, relationships with the Land are spiritual (Dylan & Smallboy, 2016a). Spirituality recognizes all relations as sacred and as connections to the cosmos (Wilson, 2008). Ceremonies are used to eliminate the space between people and the Land, bridging the sacred space between people and place (Wilson, 2008).

This land-based research is grounded in relationality—the interconnected relationships between people, the Land, and all living beings (Hecht & Nelson, 2021). I prioritize relationships in the entire research process, ensuring that the research is conducted with the Land and with Indigenous Peoples, rather than on-the-land and about Indigenous Peoples. I recognize the Land as a sentient being and a source of Knowledge, which aligns with Indigenous worldviews where the Land is considered a relative and teacher. Relationality guided the choice of research topic, methods of gathering information, analysis and interpretation of the information gathered, and presentation of the teachings and stories shared (Wilson, 2008).

Before the research design started, I asked DFN what they wanted to know and how I could support a project around that question. We gathered at an on-the-land camp in Willow Lake, NWT, in 2018 to share stories, connect with each other, build relationships, understand each other's passions, curiosities, concerns, priorities, and skills, and find ways to work together in mutuality. Storytelling around the campfire in Willow Lake was foundational to our research design, as we shared who we are, where we are from, and where we want to go in the future.

Designing the methodology was a process of building ideas through, and with, another, and coming to solutions by sharing teachings and interpretation (Wilson, 2008). In this research, I acknowledge that I am not discovering anything, but rather, gathering and sharing stories from the Land (Wilson, 2008). Furthermore, discovering something is not possible because ideas and Land cannot be owned (Wilson, 2008). The stories shared in this research do not belong to me, nor can they be owned by the academy. These stories, embedded in the Land and in the youth who shared them, are alive and living in the people of the North. They are not static data points to be extracted, analyzed, and categorized in a way that conforms to Western academic expectations of knowledge production.

Resisting the academy's tendency to claim ownership over Indigenous knowledges and experiences, I frame this dissertation as an exploration of land-based teachings, relationships, and stories, making a deliberate decision to center relational accountability over authoritative claims of expertise. I avoid the term "data" and "data collection", instead I use the terms "stories" and "gathering stories". These terms reflect the relational aspect of land-based research, Land Stewardship, and an IRP. Gathering stories requires responsibility and reciprocity (Kimmerer, 2013). In gathering stories, a special relationship of accountability is shared among all involved, including the Land (Kimmerer, 2013). Relational accountability is the fabric that holds our bundle of relationships and stories together (Wilson, 2008).



All the relationships I have built leading up to this research and all the relationships I continue to build within, and through, this research are the foundations of this dissertation. I have focused on what the community wants since the beginning, and I will continue to as long as this work is shared. I listen. I am patient. I am compassionate and understanding. I am supportive. I am kind, respectful, and caring. I show up. Our relationships are created and maintained through love and gratitude. These relationships are the glue that holds everything together. These relationships are the scale of my writing. All these connections – all the constellations. And so, I am writing about a constellation of relationships.

Relational Accountability

Relational accountability refers to our roles, responsibilities, and obligations as peoples to build, maintain, and strengthen respectful and reciprocal relations (Wilson, 2008). Relational accountability is about building a respectful relationship with the ideas you are sharing and engaging with (Wilson, 2008). Relational accountability shapes the project start to finish: choosing what to study, how to study it, how to analyze it and how to share it (Wilson, 2008).

In tension with observation methods that attempt to have no influence on studied environment, relational accountability requires forming reciprocal and respectful relationships within the communities you are conducting research (Daigle & Sundberg, 2017; Wilson, 2008). This requires going beyond a critique of dominant research paradigms and being accountable to the relations among Indigenous Peoples and Land (Ninomiya et al., 2017; Wilson, 2008). While we cannot attain a power-free form of relationship in academia, friendships can form through relational accountability and the “spatiality of critique”, which is the creation and facilitation of a safe space in which friends, partners and colleagues can meaningfully engage, share, evaluate and critique one another (de Leeuw et al., 2012; Ninomiya et al., 2017). Friendships require years of work to build care and trust, which foster relational forms of knowledge production (de Leeuw et al., 2012).

Though we, as Indigenous and non-Indigenous collaborators in this research, have unique positionalities, we hold personal commitments to embody lived actions of accountability to Indigenous sovereignty and futurities (Daigle & Sundberg, 2017). Relational accountability in research requires acknowledging “the importance of relationships, as they exist through all aspects of the research, requiring that special attention be paid to these relationships through-

the entire process” (Tobias et al., 2013, p. 130). As I am the writer of my doctoral research, it is important that I identify the web of relationships that informs the stories and knowledge shared, so I can be held accountable to everyone involved and acknowledge where that knowledge is situated and with whom (Wilson, 2008).

The concept of relational accountability, central to both Land Stewardship and Indigenous methodologies (Wilson, 2008), informed my commitment to conducting research that is accountable to the Land and the communities involved. In other words, relational accountability in our research means being responsible not only for the methods used but also for the impacts of the research on the Land and Peoples. In the entire research process, I ensure that this research benefits the communities and youth involved and honours local Indigenous protocols and ethics.

In this research, I consider how friendships informed the research design and process, and I situate these relationships within the research paradigm itself (de Leeuw et al., 2012). Our research was established and conducted through the development of meaningful friendships between researchers and community (partners, staff, Elders, Knowledge Holders, leaders, Guardians, youth, parents, guardians, etc.). We co-designed this research care-fully to build respectful relationships between the research topic and the peoples and places involved (Wilson, 2008). Building and maintaining friendships requires spending time together in ways that have no connection to the research project or any association to research in general, such as engagement in community-based activities, sharing meals, going for walks, checking-in with each other, and learning about who we are as people (de Leeuw et al., 2012). Maintaining relational accountability that surpasses the research project requires “developing non-extractive relationships, fostering spaces of dissent and disruption, and confronting the persistence of

colonial, racialized dynamics within the discipline” (de Leeuw et al., 2012, p. 192). As de Leeuw et al. (2012) state,

Our purpose is not to idealize friendship among researchers or hold it up as a “better” model of knowledge production—these relationships can be as fraught and power-laden as any others and they throw up their own sets of denials and dangers. (p. 183)

de Leeuw, Cameron, and Greenwood’s (2012) caution that friendship and relational research are not inherently safe, equal, or free from power dynamics is critical to this research. Their reminder that relationships—whether framed as collaborative, participatory, or even as friendship—are still vulnerable to power imbalances, harm, and denial was important for how I approached my own research process (de Leeuw et al., 2012). Cautionary of the pitfalls of romanticizing my relationships with youth, Elders, and community partners, I do not want to appear as I was somehow exempt from these dynamics simply because the research was community-based, land-based, and relational. I continue to take seriously the possibility that my presence, my role as a white researcher, and my positioning within an academic institution could reproduce the very power structures I was trying to resist—even within relationships that felt close, trusting, and caring.

Navigating this meant ongoing reflection and accountability throughout the research process, never assuming good intentions or closeness to people equaled ethical practice. I sought feedback regularly from the people I worked with and made space for critique of the project itself—including through the follow-up interview where one youth participant was invited to critique the process of his involvement and the use of photovoice. In the research process, I never assumed consent or agreement, and I had to always make room for discomfort, disagreement, and honesty, and then navigate how to work through the tensions that arose within the various

stages of the project. Additionally, I remained conscious of how my relationships with the youth were shaped by a power dynamic given my role as researcher and camp staff. As we spent time together in the communities and during the on-the-land camps, we shared meaningful experiences and built trust, but I continued to hold certain forms of authority and privilege. This was particularly important to reflect on through each research stage, ensuring that I did not speak for participants or position myself as the primary knower of their experiences.

By staying attentive to these tensions, I approached relational accountability as an ongoing, imperfect practice, recognizing that even in reciprocal relationships, the potential for harm remains, and that care must be practiced continuously through reflection, consent, and humility. My relational accountability deepened over time as my role shifted from that of a visiting researcher to a resident and community member in Kakisa, where I was integrated into daily life in the community outside of the research. Unlike many southern non-Indigenous researchers who come for short stays and then leave, I stayed. That staying—physically, emotionally, and relationally—became one of the most meaningful and transformative parts of the research process. It allowed for trust to be built slowly and naturally, for relationships to grow beyond the research project, and for friendships to guide the work. The concept of Native scale extends the principle of relational accountability by emphasizing the interconnected relationships and spatial dimensions inherent in Indigenous ways of knowing and being.



What is the *scale* of my writing?

Words that go beyond the page... Words that reveal the Land and our relationships.

I exist through many relational identities and networks (queer, nonbinary, white settler, disabled, artist, sibling, cousin, uncie, kid, grandkid, friend, researcher, collaborator, teammate, teacher, student, peer, mentor....)

The scale of my writing is *dynamic, messy, and embraces fluidity*. Scalar boundaries are blurred. My writing is a blend of my identities and relationships that exist inside and outside of this work. The stories gathered and shared in this dissertation are interpreted by the experiences I have had in my life and the relationships that I have created outside of the “research”. This writing is not bound to the research. This writing flows through constellations of relationships –through **all our relations.**

Native Scale

In geography, scale has conventionally been applied as a colonial tool, shaping how space and relationships are understood in rigid, hierarchical, and often exploitative ways (Hunt, 2014). Scale, in its traditional form, is used to map, control, and compartmentalize “land” and populations, serving as a means of domination and dispossession (Brenner, 2001). This colonial application of scale imposes boundaries on “land”, people, and relationships, viewing them as static, separate, and measurable entities (Tomiak, 2016). By reducing landscapes and relationships to these simplified scales, colonial geography flattens the lived realities and dynamic relationships Indigenous Peoples have with the Land and the cosmos (Tomiak, 2016).

In contrast, the concept of *Native scale* provides a radically different understanding of space and relationships. Rooted in Indigenous cosmologies, Native scale is a scalar cosmology that explores the fluid, interconnected, and dynamic relationships between people, the Land, ideas, and the cosmos (Brooks, 2017). Native scale moves beyond the colonial tendency to divide and reduce, instead embracing the constellations of relationships that make up the world (Evering, 2012, 2019). Decolonizing scale can help geographers recognize that relationships are inseparable and interdependent, extending beyond rigid categories of past, present, and future (Kitson et al., 2018).

Native scale challenges the conventional view of scale as fixed and external, instead offering a lens where time and space are circular and relational (Egan & Place, 2013). In this land-based research, Native scale allows for an understanding that the youth’s stories are not just bound to the specific places and times in which they were told but are part of a broader web of relationships with the Land, their communities, and the cosmos. As Wilson (2008) asserts, past,

present, and future happen simultaneously in Native scale through a "web of connections and relationships" (p. 77). This fluid, multidimensional approach emphasizes the messiness of relationships, which is often sanitized in colonial applications of scale (Nelson et al., 2015).

Unlike colonial scales that attempt to fix “land”, people, and time into fixed and clear-cut divisions, Native scale is living and cannot be contained (de Leeuw & Hunt, 2018). It is interconnected and interdimensional, with space and time converging in ways that allow histories, lived realities, and futurities to exist at once (Kimmerer, 2013). By acknowledging this, my research embraces Native scale as a way of understanding how the past, present, and future are braided together in the youth’s experiences (Henri et al., 2022; Kimmerer, 2013; McGregor et al., 2018). The youth’s visual stories are not merely snapshots in time but embodied reflections of their ancestors, current realities, and future aspirations.

Native scale emphasizes our relationships with the Skies and Stars. The stars guide and inform us—they are a repository of knowledge, a library of stories, and a source of prophecy and direction (K. Martin & Mirraboopa, 2003).

We also have a strong relationship with the Skies and Stars, because, while they share their knowledge of imminent storms and guide us on our travels, they are our library of stories, information, knowledge, entertainment and news. (Martin & Mirraboopa, 2003, p. 208)

In this way, Native scale encompasses more-than-human relationships, where the Land, the Skies, and the Stars are as much a part of the research as the human participants (K. Martin & Mirraboopa, 2003). These relationships with the cosmos are central to how Knowledge is transferred and how the Land communicates its teachings, offering guidance for travel, weather

patterns, and cultural understanding (Madden, 2019). Therefore, Native scale operates in a way that honours the indivisibility of relationships, stories, and knowledge.

In the context of my work, this framework allows me to consider the youth's visual stories not just as isolated experiences but as part of a continuous and interconnected story that links their pasts, presents, and futures. The stories shared through photovoice and other methods reflect this scalar cosmology, where the Land and cosmos are active youth in the co-creation and transmission of Knowledge (Kimmerer, 2013). Absolon (2011) reminds us that remembering is an act of connecting the past with the present to create visions for the future. In Native scale, storytelling becomes a process of remembering, weaving together histories and imagined futures in a way that transcends the boundaries imposed by colonial interpretations of scale. By expanding the concept of scale through a Native lens, the complexities of these connections are honoured and the reductive tendencies of conventional, colonial applications of scale are resisted. My research recognizes the cyclical and relational nature of time and space, allowing the voices of the youth to be understood within a framework that values relationships across time, the Land, and the cosmos. Through this lens, I identify my roles and responsibilities in this research and the ways this project contributes reciprocally to the collaborators and youth involved.



Re-storyation

stories are carved,
etched,
and rooted
in the rocks,
rivers,
and trees.

we must open
our mind,
body,
and spirit
to the teachings
blowing
in the wind,
and flowing
through the waters.

Re-story-ation

Indigenous histories, cultures, knowledges, and social structures have always been passed on through oral stories, of which the Land is central (Sium & Ritskes, 2013). Storytelling is the basis of Indigenous philosophies and methodologies, and stories of the Land must be respected (Wilson, 2008). Stories describe knowledge, philosophy, society, economies, and governance systems in dynamic and contextual ways (Loppie, 2007). Stories help to build intergenerational relationships by connecting the past, present, and future (Green et al., 2020). Stories are embedded with generations of knowledge, shape the ways we understand realities and the very realities in which we live (Coulthard, 2014).

Devi Dee Mucina (2011, p. 3) described story as research methodology, “storytelling is about engaging our relational selves. To know our relational selves is to be curious about our interconnectedness.” Anishinaabe-English scholar, Kathleen Absolon, in *Kaandossiwin: How we come to know* (2011), located her ‘self’ in her re-search through re-story-ation, “I now restore myself by re-storying myself into my doctoral journey on how we search for knowledge” (p. 18). Absolon (2011) defined re-search as re-writing, re-storying, re-searching Indigenous Peoples’ lives relative to Indigenous ways of knowing, being and doing.

Re-storying relationships requires learning and enacting our responsibilities and obligations for kinship through love, care, and gratitude (Justice, 2018). Re-story-ation requires time, sharing food, and learning by experiencing the relationships with the Land (Twance, 2020), and is built through reciprocity, relationality, and relational accountability (Kimmerer, 2013). Viewing the Land as identity, home, teacher, which is both life and living is central to re-story-ation (Kimmerer, 2013). The act of re-storying is expressed through artistic, creative, and

imaginative methods, such as storytelling, poetry, painting, music, ceremonies, and beadwork (Justice, 2018).

Land-based research requires re-storying relationships, by acknowledging that the researcher's stories, subjectivity and positionality is embedded in the Land (Absolon, 2011). Moreover, land-based research requires researchers to critically reflect to situate the self in the re-search (Absolon, 2011). The research process cannot be reduced to an individual unit, and everything is always viewed in terms of its relationships (Tuck & Yang, 2014). Nothing is studied through an isolated lens of the "individual", but instead, is seen always in terms of its networks, relationality and collectivity (Absolon, 2011). Whether it is a quantitative approach to understanding plant cells or a qualitative approach in understanding people-plant relations, the researcher's relationships influence every aspect of the study (Absolon, 2011).

The researchers are viewed as intimately connected to the environment they are studying, and the researcher fundamentally shapes the processes of the research (Absolon, 2011). Who the person is, where they come from and what their relationships are will lead to the topics that are explored, what questions are asked, how the methods are used, the forms of analysis employed and the avenues of sharing stories (Wilson, 2008).

The source of a research project is the heart/mind of the researcher, and 'checking your heart' is a critical element of the research process. The researcher insures that there are no negative or selfish motives for doing the research, because that could bring suffering upon everyone in the community. A 'good heart' guarantees a good motive, and good motives benefit everyone involved. (Wilson, 2008, p. 60)

Hence, a critical component of land-based research is checking my heart, to locate and situate myself, as the researcher, within the research itself (Absolon, 2011; Wilson, 2008). Land-based research is an act of re-story-ation – remembering and reconnecting to the Land (Absolon, 2011). Remembering who I am and where I came from contextualizes what I know. By describing my roles and responsibilities, I demonstrate how I come to know as a person is rooted in my relationships and the contextual conditions of my life and reality (Lomawaima, 2016; Moreton-Robinson, 2016).



I had trauma nightmares last night, so I took the morning to myself to relax. Thankfully, I was up before everyone else and got to sip my coffee by the river in quiet and peace. I saw a beaver swim by, ducks fly overhead, and a fish jump. The air was crisp and fresh. The Land embraced me, held me, and let me ease into another busy day, my stress flowing away with the river's current.

Personal journal entry from the 2021 Water Stewardship Gathering

Poetic Inquiry

Poetic inquiry and creative expression is used to connect readers with the research (Lafferty, 2022). By entangling poems within the sections of this dissertation, I aim to provide alternate forms of interpretation and expression (Lafferty, 2022). The poems shared in this dissertation were written throughout my five-year journey of doctoral studies. Throughout my writing process, I found myself stuck, and, so, I needed a separate writing outlet to express my feelings, emotions, thoughts, and reflections. The word document on my laptop titled, *Thesis Rambles*, helped me work through the most challenging pieces of this methodology – trying to describe what it means to do meaningful work, to write about relationships.

My various notebooks and journals show how my thinking progressed throughout my degree, as I changed, as I grew, along my own personal journey of healing and (re)connecting with the Land, others, myself, ideas, and the cosmos. As Joey-Lynn Wabie (2021) described in a sweetgrass story weaving methodology, the outcome of a healing journey is an ongoing transformative process overcoming an imbalance. Wabie's (2021) description resonates with my experience of ongoing transformation, a journey of healing, of finding balance in my research and life, one of continuous being and becoming.

Moments of poetic inquiry were essential to the thinking, feeling, doing, and being of this research. I share these moments of (r)evolution to embed this methodology with mind, heart, body, and spirit. There are moments, of course, that I do not share; moments that are for me, moments I am not ready to share. We, as researchers, must choose what is shareable and non-shareable in our research, excluding stories that are not meant to be shared. In addition to

intimate stories shared with me during this research process, I, too, hold personal, intimate stories that are not meant to be shared here.

Applying photovoice methodically and methodologically, I also include my own photographs to connect sections of this dissertation together. As photovoice was used in this research for the youth to share visual stories of their connections with the Land, I include my personal photographs to share stories of my connection with the Land. The moments captured in my photographs show alternate expressions of writing. Going for walks along the river and in the forest gave me insights and clarity I could not achieve by sitting at my desk. Walking and taking pictures of my surroundings facilitated my writing process and were essential moments in the development of this research. These photographs intend to connect the reader to the feeling of being on-the-land in ways words alone cannot.

Poetic inquiry is intended to support the reader to develop their own relationships with the writing (Luig et al., 2011). This experience is contextualized within the reader's web of connections; as you read, you bring in the ideas into your own context, community, and relationships, and you find ways to be accountable to what you have learned through these stories (Wilson, 2008). Poems and photographs helped me connect deeper to the stories shared from the Land, and I hope they can help you connect deeper to them, too (Lafferty, 2022). By reading the poems and seeing the images captured, I hope you feel the emotions embedded in this research, the love, gratitude, care, and connection held in this work, and the strength of the relationships formed through this work.



Writing “care-fully” is an ethic of care.

Writing “care-fully” requires radical, transformative, unconditional love.

Writing “care-fully” acknowledges the interdependence and interconnectedness of research relationships.

Writing “care-fully” reimagines the ways knowledge is shared in academic institutions.

Writing “care-fully” is the act of writing with, through, while being full of, care.

So, how do I write “care-fully”?

This work is **full of care**, co-developed through friendships, mentorships, and relationships, **rooted in responsibility and accountability – mutuality – and flows through reciprocity, love, and respect.**

I acknowledge that this story has been, and is being, written through relationships, with people, in places, with ideas, through space-time, long before me, and now I am gifted the responsibility to be the storyteller.

That is what is important. The relationships we have together. These relationships are the glue that holds everything together. These relationships are the scale of my writing. The connections; the constellations.

I am writing “care-fully” about a constellation of relationships.

Writing “care-fully”

Research writing is conventionally static, calculative, rigid, linear, and emotionless, established in colonial-capitalist systems of power that govern knowledge production (Dufty-Jones & Gibson, 2022). Dufty-Jones and Gibson (2022), in *Making space to write ‘care-fully’: Engaged responses to the institutional politics of research writing*, proposed an engaged pedagogy of research writing, which re-imagines academic writing socially and spatially through the act of writing “care-fully”.

Engaged pedagogies, a term coined by bell hooks (1994), emphasizes care and responsibility towards others and the self, and recognizes how we are shaped by and through our interactions with others. Care of the self is not self-indulgent, but a necessary practice to survive academic life (Dufty-Jones & Gibson, 2022). An *engaged pedagogy of research writing* requires that we, as researchers, “write-and-cite” in ways that disrupt what is considered as a legitimate academic text (Dufty-Jones & Gibson, 2022, p. 342). Care-full writing is dynamic, embodied, and felt (Million, 2009), context-specific dependent on peoples and places (Dufty-Jones & Gibson, 2022), and values the relationships that establish the research (Wilson, 2008).

Creativity is perhaps the most challenging constituent of Indigenous/Western research. Although creative expression is an essential component of Indigenous knowledge, this creativity is often constrained by disciplinary boundaries and notions of acceptability within scientific literature. Thus, we must often conceptualize, plan, develop, and implement research on a tightrope that many do not successfully traverse. (Loppie, 2007, p. 282)

In refusing cold and calculated research writing practices, I write this dissertation carefully (Dufty-Jones & Gibson, 2022). I include my poems and photographs, share emotions, experiences, and stories, and open myself carefully and vulnerably to the reader to allow for a relationship to form between us. These forms of self-expression are intended to weave the ideas together through my embodied and felt experience of writing spatially and temporally.

Reimagining research writing, spatially and temporally, requires acknowledging the ways “our bodies and emotions” hold “an enormous impact on how we learn to write” (Dufty-Jones & Gibson, 2022, p. 350). Hence, in writing this dissertation, I listen to my body and emotions, and embrace that writing is relational and spatial, enacted through social practices, expansive beyond the physical formation of words on pages (Dufty-Jones & Gibson, 2022). Writing carefully embraces the messiness and open-endedness of research (J. Cameron et al., 2009; Dufty-Jones & Gibson, 2022).

The practice of writing this dissertation was not confined to the moments I sat typing at my desk (Dufty-Jones & Gibson, 2022). Writing spatially and temporally is a relational practice enacted carefully (Dufty-Jones & Gibson, 2022). Writing was a social practice of interacting with others, including folks directly involved in the research, as well as outside of the research. Social writing practices included drinking tea with Elders, morning coffee at the band office, hosting community movie nights for the kids, sharing a meal with someone, weekly phone calls with my grandpa, facetimeing a friend, sending my parents photos of Kakisa, co-working online, Zoom meetings with my supervisors, sharing memes, visiting other communities, making conversation with a stranger in the grocery store.

Writing was a spatial practice of living and being on-the-land. Spatial writing practices included: watching the sunrise and sunset, walking in the forest and along the river, building and

sitting beside the fire, observing the birds, otters, and eagles, listening to the wolves and owls, feeling the warmth of the sun on my skin, breathing in the crispness of the northern air in Denendeh enriched by the scent of highbush cranberries and wet moss, observing the changes of seasons, laying in the soft snow, standing under the aurora borealis in -38°C.

While this dissertation has taken me six years “to write”, the spatial temporality of this research extends beyond the timeline of my degree. The stories embedded in this research are alive and rooted in Indigenous Knowledges of, and relationships with, the Land since time immemorial. These relations are entangled through the past, present, and future, and so, this research cannot be confined to the academic timeline. This research captures moments in space-time, through relational writing practices of care, love, and refusal, shared through stories, poetry, and visual imagery, which are felt and embodied (Dufty-Jones & Gibson, 2022; Hooks, 1994; Million, 2009; Tuck & Yang, 2014).



we are always writing
even when we feel like we are not
because our life is a story
that is unfolding
day by day
page by page

we are all storytellers
and our lives are stories
meant to be shared

Methods

Land-based research methods must work to benefit and serve the communities involved in the project (Wilson, 2008). Guided by the principles of Land Stewardship and an IRP, this research adapted participatory methods such as photovoice. This approach enabled the youth to express their relationship with the Land and reflect on their experiences of engaging in Stewardship practices. The following research methods (i.e., photovoice, “watching and doing”, sharing circles, knowledge mobilization) were designed to build respectful relations between the topic studied and the peoples involved (i.e., myself as researcher, partners, youth, communities) (K. Martin & Mirraboopa, 2003; Wilson, 2008). We relate respectfully to those involved in this research to form a stronger relationship with the ideas and stories shared, acknowledging our roles, responsibilities, and obligations to these relationships (Wilson, 2008).

Research Design

This research involved multiple stages of engagement and inquiry from 2018 to 2023. Our research design is contextual, multi-sited, multi-scaled, flexible, reflexive, and relational (K. Martin & Mirraboopa, 2003; Wilson, 2008). In the summer of **2018** before my doctoral program started, I attended the DYETKC, held at Willow Lake, NWT which is in the Edézhíe Protected Area. My participation in the camp was to learn more about the context of the research and to build relationships with the research partner, Kristen Tanche, as well as the Elders and youth at the on-the-land camp prior to developing the project itself. We shared stories and meals around the campfire, learned about each other, and discussed how we could build a project together with

our shared interests, goals, and skills. We slowly developed the research questions and objectives following the camp and began designing the project.

In the spring of **2019**, I conducted a scoping review of land-based education to better understand the pedagogical foundations of land-based programs. Then in the summer, I collected visual stories at two on-the-land camps. Camp 1 (August 2019) was the KTFN-led, 5-day Ka'a'gee Tu Canoe Camp (KTCC) at Kakisa Lake and First River. Camp 2 (September 2019) was the DFN and Lı́ıdlı́ Kúę First Nation (LKFN)-led, 7-day Dehcho Youth Ecology and Traditional Knowledge Camp (DYETKC) at Maoste (6 Mile Creek) in the traditional area of LKFN. For the KTCC, KTFN invited youth ages 13+ from Kakisa to participate. Three youth attended the camp and participated in this research. In total, twelve Dehcho youth participated in the research (one youth attended both camps). For the DYETKC, DFN recruited participants. The office sent out a call for youth from the Dehcho to attend the camp through Facebook, local radio stations, newspapers, bulletin boards, and schools. Participants were required to be between the ages of 12 and 17 and self-identify as a Dene and/or Métis youth from the Dehcho. Twelve youth from Deh Gáh Got'ıę First Nation, LKFN, KTFN, and Sambaa K'e First Nation attended the camp, and ten youth participated in this research project.

In early **2020**, before the outbreak of the COVID-19 pandemic, we held a Climate Change Adaptation Planning Meeting in Kakisa with various partners. Our gathering aimed to strategize and collaborate on initiatives addressing the pressing climate challenges faced by the community. However, as the pandemic unfolded, we had to pause our planned summer fieldwork to ensure everyone's safety. Despite the halt in on-the-ground activities, I remained committed to our community partners. I maintained regular contact and continued to strengthen our relationships through virtual means such as video calls, phone conversations, and email

correspondence. Consistent engagement allowed us to support one another and adapt our plans while we patiently awaited the opportunity to safely gather in person. Our virtual collaboration not only sustained our momentum but also deepened our partnerships, setting a strong foundation for future projects once we could safely resume the on-the-land programming and subsequent fieldwork.

In **2021**, I collected visual stories at two on-the-land camps, the WSG and YLS, with youth ages 18-30. The 5-day WSG was held in Kakisa on First River (co-facilitated by Ecology North, KTFN, WLU, and the Government of the Northwest Territories), and the 5-day YLS was held at B-Dene Adventures on Great Slave Lake on the territory of Yellowknives Dene First Nation (co-facilitated by Ecology North, Yellowknives Dene First Nation, Arctic Council, WLU, Trent University, the University of Victoria, the Government of the Northwest Territories, the Government of Canada, and Youth Forums Canada). At both the WSG and YLS camps cultural activities were led by Dene and Métis Elders and Knowledge Holders; science-based activities were led by local community monitors, land-users, and researchers; and leadership discussions were facilitated by local climate leaders and policymakers (collectively referred to as “camp instructors”).

In each case, Ecology North recruited youth between the ages 18-30 who self-identified as living in the NWT (for WSG) or as living in Nunavut, Yukon, or the NWT (for YLS). Recruitment strategies included asking local First Nations for nominations, and sharing information via email newsletters, Facebook posts, local radio stations, and news outlets. Both camps took place independently of our intention to conduct this study, and youth participation in the camp did not require participation in the study. Ten youth attended the WSG, seven of whom participated in this research. Fourteen youth attended the YLS, all of whom participated in this

research. In total, 19 northern youth participated in this research. The northern communities represented (including the number of youth from each community) were Cambridge Bay, NU (1); Dawson City, YK (1); Hay River, NWT (1); Inuvik, NT (1); Iqaluit, NU (5); Marsh Lake, YK (1); Ulukhaktok, NT (1); Whitehorse, YK (2); and Yellowknife, NT (6). The participants were gender-diverse, including self-identified men, women, two-spirit, and non-binary youth. The youth participants decided whether they would like to remain anonymous in this work or not: 3 participants chose to remain anonymous, and 16 participants chose to have their names shared.

After the WSG and YLS in August 2021, I held a photo exhibit in partnership with KTFN, in Kakisa, to share the visual stories from the 2019 KTCC. I also conducted an in-depth interview with Tarek Leahy-Chicot. I revisited the research with Tarek, with whom I had built a strong relationship of trust and respect, through an in-depth, semi-structured interview. Our friendship allowed us to engage in an open and honest dialogue about the project as a whole and his experiences participating in it. Tarek was invited to critique his role in the research and how the project integrated into a land-based program, offering unique insights that challenge conventional research methodologies. The interview builds upon the 2019 photovoice data, offering an opportunity to delve further into Tarek's experiences, teachings, and evolving relationship with the Land.

In **2022**, Beth Hudson and I completed analysis, and then I started compiling the results, writing Chapter 3 and 4, then the remaining sections of the dissertation. Britney Nadli and I also held two photo exhibits, one virtual and one in-person, in Fort Providence to share the visual stories from the Dehcho Youth Ecology & Traditional Knowledge Camp. In **2023**, Britney Nadli and I held a photo exhibit in Łíídlı́ Kúé (Fort Simpson) to share the visual stories from the

DYETKC. From September 2023-September 2024, I took a leave of absence from my studies to remove myself from the trauma of the academy for my personal healing and re-story-ation. In **2024**, I finished writing the final manuscript, Chapter 5, revisiting the research collected in 2019 and 2021, including the in-depth interview with Tarek, and then completed the revisions for my dissertation.

In summary, a total of 33 youth participated in the research and data was collected in 2019 and 2021. The first research study took place in August and September 2019. In total, 14 Dene and Metis youth ages 12-17 participated. For the second research study, stories were gathered at two on-the-land camps in August 2021. In total, 19 northern youth from NWT, Nunavut, and Yukon ages 18-30 participated. Building off the first and second studies, the third research study explored stories shared in 2019 and 2021, and one youth was further interviewed in August 2021.

While my research has been primarily shaped by partnerships with Dene communities, this does not mean that Métis and Inuit perspectives, histories, and governance structures are secondary or unimportant. Instead, my approach reflects the specific context of my relationships, research partnerships, and the places this work took place. Dene, Métis, and Inuit governance systems and cultures differ significantly, and that while there are moments of collaboration and shared agreements, there are also points of divergence, tensions, and distinctions in governance, rights, and political positioning. Métis, and Inuit distinct knowledge systems, political structures, histories, and cultures require further dedicated research beyond the scope of this study. Bringing Dene, Métis, and Inuit youth's stories together in a collective analysis demonstrates the impacts of land-based education to northern youth broadly, acknowledging that every youth comes from a distinct positionality rooted in their lived experiences, cultures, histories, and geographies.

	Manuscript 1	Manuscript 2	Manuscript 3
Title	"It's not being 'on-the-land', it's like we are a part of the Land": Indigenous Youth share visual stories at "on-the-land" camps in the Dehcho	Empowering northern youth as Land Stewards through land-based programs in the Northwest Territories	Re-storying relationships with the Land through land-based research
Authors	Steph Woodworth, Kristen Tanche, Britney Nadli, Sonia D. Wesche, and Andrew Spring	Steph Woodworth, Beth Hudson, Brandon Pludwinski, Sonia D. Wesche, and Andrew Spring	Steph Woodworth, Sonia Wesche, Andrew Spring, and Chief Lloyd Chicot
Partners	Dehcho First Nations, Ka'a'gee Tu First Nation	Ka'a'gee Tu First Nation, Ecology North	Ka'a'gee Tu First Nation, Ecology North
On-the-Land Camps	Dehcho Youth Ecology and Traditional Knowledge Camp (DYETKC), Ka'a'gee Tu Canoe Camp (KTCC)	Water Stewardship Gathering, Young Leaders Summit	Ka'a'gee Tu Canoe Camp (KTCC), Water Stewardship Gathering
Years	2019	2021	2019, 2021
Location	Maoste (6 Mile Creek), First River/Kakisa Lake	First River/Kakisa Lake, B. Dene Adventures (Dettah)	First River/Kakisa Lake/Kakisa
Youth	12 youth ages 11-17 from the Dehcho Region, NWT	19 youth ages 18-30 from NWT, Yukon, Nunavut	1 youth aged 19 from Ka'a'gee Tu First Nation
Methods	Photovoice, Sharing Circles, "Watching and Doing"	Photovoice, Sharing Circles, "Watching and Doing"	Photovoice, Semi-Structured Interview, Reflexive Reflection
Analysis	Thematic Analysis	Thematic Analysis	Reflexive Reflection Analysis
Main Findings	Land-based programs can foster relationships between youth and the Land, particularly for youth who have limited opportunity to experience land-based activities otherwise. On-the-land camps create a space for youth to see themselves as part of the Land.	On-the-land camps can empower youth as land-based leaders and Land Stewards by cultivating safe spaces of learning, caring, belonging, sharing, and nurturing, which are foundational elements of relationality and relational accountability.	Land-based research broadens and enhances participatory approaches by rooting the entire research process in Indigenous methodologies and understandings of the Land. Land-based programs, such as on-the-land camps, are effective spaces for conducting collaborative, reciprocal land-based research.

Table 1. Summary and overview of dissertation manuscripts

Photovoice

Photovoice is debated as a methodology or method across different research contexts and disciplines. Commonly in community-based participatory research and other participatory approaches, photovoice is framed as a methodology that shapes the entire research process, from data collection to analysis and dissemination, connected to epistemologies that value participant agency, storytelling, and visual representation as forms of knowledge production (Kile, 2021). Photovoice is also considered as a method to be used as a tool within a larger methodological framework (Gabrielsson et al., 2022). In my research, photovoice did not shape the methodological foundations of the research, it was a primary data collection method, employed alongside interviews, sharing circles, youth reflections, and lived experiences on the Land to foster reciprocal and relational engagement. In my research, photovoice was a method that aligned with and supported the land-based and relational methodologies that shaped the research.

When I met Kristen Tanche at the 2018 DYETKC, we spoke about what methods to use for this research that achieved DFN's goals for the project and honoured oral storytelling practices, art, language, and culture. A priority for the research was to ensure that the project could integrate naturally as a part of the camp environment. We chose to use an adapted photovoice method to create a space for youth to share their voices and perspectives in a way that felt authentic to the youth. Using an adapted photovoice method could blend into the ways youth were already engaging at the on-the-land camps—taking pictures, sharing stories, and reflecting on their experiences.

To delve deeper, photovoice fits well within an IRP because it allows for both storytelling and active, ongoing engagement with the youth, fostering relational accountability

and collaborative Knowledge sharing (Wilson, 2008). *Photovoice* is a method that combines photographs and storytelling to share experiences of the world (Woodgate et al., 2020). However, we adapted the conventional PAR photovoice method to fit within an IRP and theoretical lens of Land Stewardship. As an immersive experience of co-learning, we used photovoice as a method to centre northern youth's stories of, and relationships with, the Land. Using photovoice in this way, researchers can examine the relationships that develops between the storyteller and listener (Wilson, 2008). Specifically, we adapted photovoice to provide a space for *youth to share visual stories*⁷ of their experiences of land-based education and the ways they (re)connect with the Land.

Within an IRP, knowledge is relational, emerging from relationships with people, the Land, and all living things (Wilson, 2008). By adapting photovoice for our research, we ensured that the method did more than document experiences—it became a relational tool that allowed northern youth to reflect on and share their deep connections with the Land. This method aligns with Indigenous epistemologies that prioritize storytelling as a way of transferring knowledge, not just as individual reflections, but as contributions to the collective understanding of the community (L. T. Smith, 1999).

Through the lens of Land Stewardship, we adapted photovoice to centre the youth's relationships with the Land. As previously discussed, Land Stewardship emphasizes the reciprocal responsibility between people and the Land (Russell et al., 2021). Our photovoice

⁷ Due to the history (and ongoing practices) of extractive research methods (L. T. Smith, 1999), I purposefully avoid the term “data” and “participants” in this paper when referring to the youth who shared stories and engaged in this research. Instead, I refer to the photographs and reflections as “visual stories” and “stories”. I refer to the youth by name (or anonymized by the youth's request) or collectively as “youth”. Importantly, the youth are not merely participants, they are our friends and co-researchers (Wilson, 2008). I learned and grew with the youth in this research by continually reflecting on who I am, where I come from, and where I am going next, and how that shapes how I come to know the world around me (Wilson, 2008).

method was designed to foster a heightened awareness of this responsibility. By guiding the youth to capture images that reflect their connection with the Land, and by encouraging them to reflect on those experiences, we enabled the youth to embody the principles of Land Stewardship—honouring the Land as a living entity and recognizing their role as caretakers of it (Mashford-Pringle & Stewart, 2019).

During each camp, photovoice was integrated as an immersive activity, wherein the youth spent their days on the Land and then shared their reflections in the evenings, often in sharing circles. This process mirrored the cyclical and relational way in which knowledge about the Land is traditionally transferred—through repeated engagement, reflection, and sharing within the community. By reflecting on their photographs in groups or pairs, the youth were not just sharing their stories but were also participating in collective meaning-making, thereby reinforcing the importance of community in both Land Stewardship and land-based research.

Each day of the camp, the youth were invited to take photographs as a form of active engagement with the Land. This process encouraged them to not only observe the Land but also interact with it in meaningful ways—through their lenses, they were asked to capture how the Land speaks to them, teaches them, and forms a part of their identity. This active and reflective engagement goes beyond visual storytelling; it positions the youth as stewards of the Land, deepening their understanding of their reciprocal responsibilities to the environment.

In keeping with land-based research principles, the photovoice method was designed to be flexible and responsive to the youth's needs and preferences. Youth were given the autonomy to decide how they wished to share their reflections—whether orally in the evening sharing circles, in pairs, in groups, or through written reflections using a printed worksheet. This flexibility ensured that the method remained participant-driven and adaptable to individual

comfort levels and communication styles, a practice that aligns with relational accountability. Furthermore, the fact that the youth could use their own personal devices or borrow digital cameras emphasized the accessibility of the method. It allowed for different modes of engagement, ensuring that all the youth had equal opportunities to contribute to the collective story-telling process.

Specifically, we used photovoice during four on-the-land camps to capture the experiences of northern youth. We integrated photovoice into all aspects of the camps as an immersive activity, where the youth took photographs during the day and shared reflections in the evening about what they learned and enjoyed. On the first day of each camp, each of the youth was invited to use their own personal device or borrow a digital camera to capture photographs of what they were experiencing and learning, then reflect on their experiences at the end of each day. Reflections could be shared orally individually, in pairs, or in groups, or via written reflections using a printed worksheet (see [Appendix 4](#)). Worksheets, questions, and instructions were provided in English as all the youth spoke fluent English at the camps. The youth could change their sharing method throughout the project.

In total, the on-the-land camps had three to five recorded days of photovoice. While every youth was asked to share one visual story from each day, there were youth who did not share a story every day while others shared more than one story per day. The WSG had a total of 18 visual stories shared and the YLS had 36. The KTCC had a total of 20 visual stories shared and the DYETKC had 46.

The primary goal of adapting photovoice in this project was to centre the youth's stories of, and relationships with, the Land. As the youth took photographs during their time on the Land, they captured not only the physical beauty of the environment but also the emotional,

spiritual, and relational aspects of their experiences. The images were brought to life through the youth's reflections of how they were thinking, feeling, and relating to the Land. The photographs reveal moments of care, gratitude, curiosity, and respect, showing others what matters and holds meaning to the youth. Through their lens, youth depict the Land as living, relational, and active in their learning. In their reflections, youth spoke about why they chose certain images—often describing feelings of peace, connection, or memory associated with the place, the act, or the beings within the frame. The process of selecting and sharing these photographs invited them to articulate their relationships with the Land, such as what they noticed, what they learned, what they remembered, and how they see themselves as part of these spaces.

This practice of pairing photographs with personal narrative invited a deeper understanding of what the photograph meant to the youth, one embedded with emotion, relationship, and reciprocity. The method allowed for a re-storying of the Land through their own eyes, voices, and lived experiences, reflecting how land-based learning is about being in relationship with the Land. In this way, photovoice became a method of re-storying their relationship with the Land—a practice of retelling and revitalizing Indigenous connections to place that had been disrupted by colonialism (McGuire-Adams et al., 2022; J. Redvers, 2020).

Photovoice allowed the youth to become co-researchers, contributing their visual and narrative accounts of the Land and their on-the-land experiences. In this sense, photovoice was not a method of “data collection”. Photovoice was a method of gathering and sharing stories through reciprocity, responsibility, and respect. By adapting the method, we moved beyond conventional uses of photovoice as a tool for visual documentation and transformed it into a participatory, reflective, and relational practice. This adaptation aligns with relational accountability, ensuring that the youth have ownership over their stories, as well as control over

how those stories are shared and interpreted (Lees et al., 2021; Ljubicic et al., 2021; The First Nations Information Governance Centre, 2019).

The visual stories that emerged from this project were not static images; they were embodied experiences, capturing moments of learning, connection, and reflection. The photographs allowed the youth to articulate their growing roles as stewards of the Land, using the visual medium to express their sense of responsibility, care, and relationality with the environment. These visual stories were shared in various ways—through group discussions, individual reflections, and paired conversations—enabling each participant to articulate their personal journey of connection with the Land.

By adapting photovoice to fit within the IRP and the lens of Land Stewardship, we ensured that the research process honoured the relational, experiential, and reflective practices that are integral to Indigenous ways of knowing. The method facilitated the co-creation of knowledge, fostered relational accountability, and provided a space for the youth to engage deeply with the Land—not just as a backdrop for their stories, but as a living entity that is central to their learning, growth, and future Stewardship responsibilities (McGregor et al., 2010).

The culmination of the photovoice project resulted in a collection of visual stories that were shared through public photo exhibits and photobooks, further promoting the values of relational accountability and community engagement. The photobooks, curated for all the youth and community partners, ensured that the knowledge created during the camps was shared back with the communities, respecting the reciprocal relationship that is central to both Indigenous methodologies and Land Stewardship.



*sharing is revolutionary
in the face of capitalism
sharing is reciprocity
in the face of colonization
sharing is relationality
in the heart of communities*

Sharing Circles

To conclude the photovoice projects, I held sharing circles at the end of each camp, a method deeply rooted in Indigenous Knowledge sharing practices and community dialogue (Kurtz, 2013). Sharing circles involve gathering a group of people to discuss concerns, priorities, ideas, and perspectives using prompted or guiding questions (Tomaselli et al., 2018). Sharing circles bring people together to share ideas (Loppie, 2007). No one is seen as superior to the other, and everyone's ideas are important and valued as such (Loppie, 2007). In Indigenous cultures, sharing circles reflect the importance of relationality (Lavallée, 2009), and this relational approach supports an inclusive and non-hierarchical exchange of stories and Knowledges (Wilson, 2008).

As a practice of relational accountability, sharing circles foster a respectful space where individuals listen to and honour each other's stories, emotions, and concerns (McGregor et al., 2010). The circular format embodies equality, relational balance, and collective wisdom, aligning with Indigenous ways of knowing and ensuring that each participant's experience is acknowledged and valued (H. Martin, 2021). It is important to note that while some traditions may distinguish between "sharing circles" for sacred knowledge and "talking circles" for research and informal discussions, the usage of these terms can vary among different Indigenous groups (Fellner, 2018; McGregor et al., 2010). The underlying principle in both is the creation of a respectful space where each participant can be heard. For Dene, the term "sharing circle" is commonly used to describe safe and confidential spaces for people to connect and support one another (B. W. Hudson et al., 2020a).

Three out of four on-the-land camps included a sharing circle for the youth to share their closing reflections about their experiences at camp. Unfortunately, due to time constraints and schedule changes, I could not host a group interview during the YLS. Two of the sharing circles took approximately 1.5 hours (KTCC, DYETKC) and one took 3 hours (WSG). I set up a circle of chairs beside the river or campfire, where I asked the youth questions and facilitated discussions. Notes were also recorded during the group interview as supplemental material and to account for potential obscured audio due to uncontrollable environmental noise (e.g., wind, power generator, camp maintenance).

I used sharing circles to create a space for the youth to share their concerns, ideas, and actions for land-based education in the NWT. The youth engaged in group dialogue through a series of guided questions and probes. In addition, the sharing circles provided a structured yet flexible method to close each camp. While I had prepared guiding questions (e.g., "What was your favorite part of camp?" and "What does being on-the-land mean to you?") with Kristen Tanche, my research partner from Dehcho First Nations, the sharing circle format allowed for organic, evolving conversations shaped by the youth's priorities and interests. This approach aligns with Indigenous methodologies, which value adaptability and responsiveness, ensuring that the research process is dynamic and grounded in the youth's realities. Moreover, the sharing circles provided opportunities for the youth to express how being on the Land influenced their sense of Stewardship, their cultural identity, and their environmental responsibility. For example, when asked, "What does it mean to be on-the-land?" the youth responded not only with personal reflections but also with commitments to care for the Land, highlighting the connection between their experiences at camp and their growing roles as stewards of the environment.

Sharing circles is an Indigenous method that is not only participatory but deeply relational, supporting the broader theoretical lens of Land Stewardship and the IRP. These circles provided space for the youth to engage in reflective dialogue about their experiences, their relationships with the Land, and their responsibilities as stewards. Through this method, the co-creation of knowledge was respectful, accountable, and grounded in relational principles, further enhancing the connection between the research, youth, and Land itself. As a researcher, I did not simply lead the discussions, but I participated as part of the circle, acknowledging my role in the sharing process. This reflexivity ensured that I was accountable to the youth and responsive to their needs, concerns, and reflections throughout the research process.

Sharing circles align with the IRP by valuing relationality and relational accountability as central to knowledge generation and dissemination (Wilson, 2008). In these circles, knowledge is not extracted but co-constructed, with each participant contributing to the collective understanding of the group's experiences. The act of coming together in a shared space, physically grounded on the Land, ensures that the knowledge created is holistic, culturally resonant, and grounded in the lived realities of the youth. By gathering the youth in a circular format, this method honours the principle that everyone's voice is valued equally, promoting a holistic and interconnected understanding of experiences, perspectives, and Knowledge (B. W. Hudson et al., 2020b).

In this sense, sharing circles are ceremonial spaces where stories are alive, nurtured by sharing with the others in the circle. Sharing circles support the principle that Knowledge is not an individual possession, but it is rather a collective resource meant to be shared and used for the benefit of the community and the Land (The First Nations Information Governance Centre, 2019). The open dialogue facilitated by sharing circles allows for the fluid exchange of ideas,

ensuring that the research remains relationally accountable to the youth and their communities, reflecting the values and priorities they have expressed (Shaw et al., 2006).

Within the theoretical framework of Land Stewardship, sharing circles serve as a space where the youth can articulate their relationship with the Land and reflect on their responsibilities as stewards. The circle structure reflects the cyclical, interconnected nature of Land Stewardship itself, where the Land is not only present as a backdrop but as an active participant in the dialogue. The sharing circles took place beside rivers or campfires—places deeply connected to the Land and its teachings. By holding these discussions on the Land, the youth were reminded of their reciprocal relationship with it, reinforcing the idea that Land is a living entity, a teacher, and a guide in their reflections and actions.

In this research, sharing circles were not simply a research tool, they were vital spaces for relational engagement, reflecting Indigenous values of collective knowledge creation, Land Stewardship, and relational accountability (Madden & McGregor, 2013). These circles allowed the youth to articulate their experiences and reflect on their roles as stewards of the Land, contributing to the research in a way that is both meaningful and aligned with Indigenous Knowledges, land-based practices, and research methodologies.



*all the relationships that i have built leading up to this research
and all the relationships i continue to build within and through this research
inspire me to do this work*

this research is for all my relations

*i need to do the work in a good way
i will do the work in a good way
i am doing the work in a good way
and i will share this work in a good way*

“Watching and Doing”

As reframed by Indigenous scholars, I refer to participant observation as “watching and doing” in a systematic way that supports and enhances relationality, relational accountability, and reciprocity (Bennett & Lantz, 2014; Wilson, 2008). “Watching and doing” is conducted through relationship building, meaningful engagement, and co-learning (Takano et al., 2009). Within an IRP, “watching and doing” is not simply a detached act of observing others, but a way of participating with others in the co-creation of knowledge through relationship building, meaningful engagement, and co-learning (Cajete, 1994; Castleden et al., 2012; Takano et al., 2009). This method requires the researcher to immerse themselves fully within the environment and the community, engaging in the activities they are studying and acknowledging the reciprocal relationship between researcher and participants (Wexler et al., 2014).

The process of "watching and doing" is central to Land Stewardship. In each camp, the camp community interact with the Land as active caretakers and Stewards by respecting the Land, taking only what you need, offering the Land gifts (e.g., tobacco), and acknowledging the Land as our relation, a living entity with spirit and agency. This relational accountability toward the Land is reflected in how each activity is approached with respect and mindfulness of our reciprocal responsibility to care for the environment (Kimmerer, 2012; Wexler et al., 2014). Taking part in traditional land-based practices, assisting with daily camp operations, and documenting the experience is all part of the research methods and deeply intertwined with the ethical framework of Land Stewardship (Mason et al., 2012).

In this research, “watching and doing” took place across all stages of the on-the-land camps—pre-camp, during the camp, and post-camp—through continuous collaboration with

community research partners. These stages of engagement were not just logistical tasks but opportunities to deepen relational ties and strengthen the co-learning process. “Watching and doing” was a method used to support co-creating the camp environment, facilitating camp activities, and engaging in post-camp debriefing sessions to ensure that the youth’s voices and experiences were central to the process. This approach also shaped my own engagement in the camp environment as someone who, at the outset of this project, was unfamiliar with many of the practices, rhythms, and relational protocols of on-the-land camps.

Rather than positioning myself as an outside observer or detached researcher, “watching and doing” required me to be present, active, and accountable within the camp community. I learned alongside the youth—participating in paddling, harvesting, fish filleting, firewood gathering, setting up tents, and learning local safety practices. These actions were more than camp tasks and activities, they were practices that deepened my own relationship with the Land, with the people, and with the daily responsibilities of camp life. Through these shared experiences, I began to understand more deeply the embodied, relational nature of land-based learning.

Over the years of this project, my understanding of the camp environment shifted from unfamiliarity to a place of deep connection and responsibility. This process of learning through doing—and failing, asking questions, being taught, and trying again—was essential to how I approached my role as both researcher and camp staff. It was through this immersion that I came to appreciate the non-verbal teachings of the Land and the mentorship of those around me, recognizing that much of what was shared did not happen in formal interviews or scheduled activities, but through the everyday acts of living together. Specifically, the act of “doing” demonstrates the relational process of learning and Knowledge co-creation (Bennett & Lantz,

2014; Riddell et al., 2017; Wilson, 2008). For example, when preparing traditional foods or engaging in scientific lessons outdoors, my role was not to observe from afar but to fully participate in these activities. This co-learning process allowed me to better understand the youth's experiences of being on the Land, their sense of responsibility, and their evolving relationships with the environment. Through “watching and doing”, I experienced firsthand the Land's role as a teacher, deepening my understanding of how Land Stewardship is woven into the daily practices and activities of the camp.

During the camps, my “watching” was not confined to specific moments or events. Rather, they were continuous and immersive, shaped by the everyday interactions with the youth, staff, and Land. I recorded detailed notes each day, reflecting on the various aspects of camp life, such as environmental features, cultural practices, and emotional expressions. These notes were heavily informed by informal conversations with the youth and staff, who shared their reflections, concerns, and joys with me throughout the day. I did not record or transcribe any quotes from informal conversations for direct use in the research. Instead, these conversations informed my understanding of the socio-environmental, relational, and camp contexts. By journaling about the informal conversations, I could better understand and reflect on the lived realities of the camp community, and thoughtfully prepare for more formal, recorded interviews, where consent was explicitly given. These notes also shaped my awareness of where I needed to educate myself further—such as researching specific community concerns, environmental changes, or cultural teachings referenced in passing—without extracting or formalizing those conversations into research outputs.

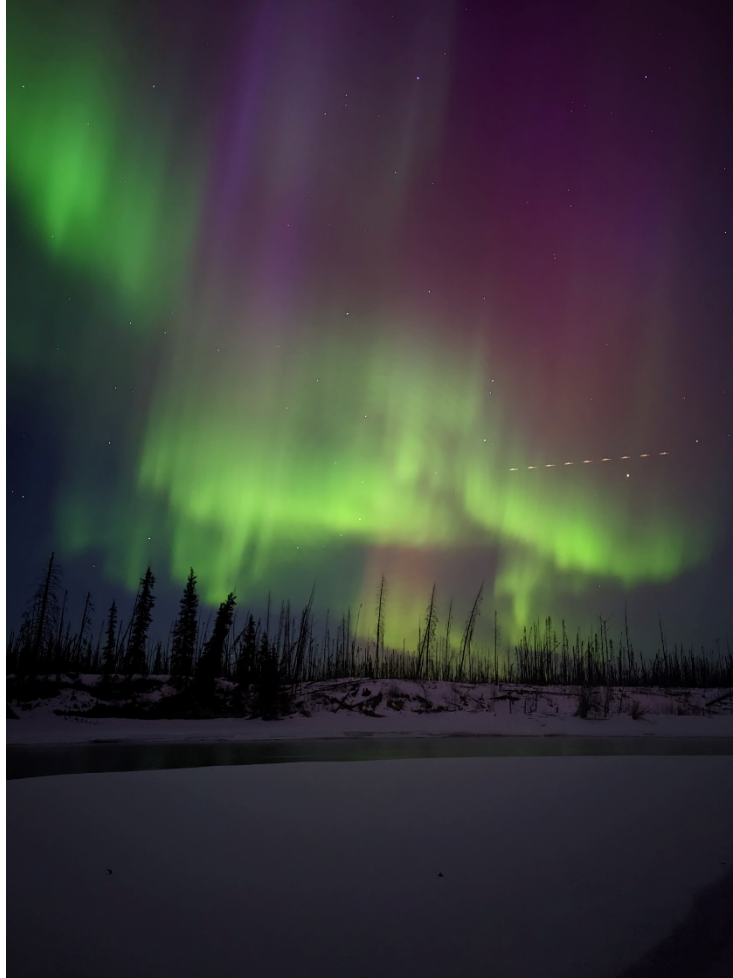
My “watching” notes included the typical details of activities and timelines, as well as more nuanced reflections on my own sensory experiences, the weather conditions, and the

cultural practices that were integral to camp life. This practice allowed me to document what was happening while also recording and reflecting on how it felt to be present in that space – physically, emotionally, and spiritually. These sensory experiences, along with the observations of the youth’s emotions and actions, provided insight into the relational dynamics between the youth and the Land. By engaging in these conversations and activities, I became part of the collective narrative, contributing to the shared experiences that were unfolding.

Recording notes throughout the day, and reflecting more deeply in the evening, I documented the environmental conditions, the cultural practices, and the sensory experiences that shaped our days learning with the Land at the camps. The importance of documenting Indigenous Knowledges, stories, and land-based practices, such as the preparation of traditional foods or the significance of specific landmarks, was a key aspect of the Land Stewardship framework. “Watching and doing” land-based practices and teachings at the camps was critical for me to foster a deeper relationship with the Land.

In summary, “watching and doing” was a methodical practice of relational accountability, knowledge co-creation, and Land Stewardship. By being fully immersed in the camp environments and engaging in the daily activities of the camps, I was able to build relationships with the youth, staff, camp community, myself, and the Land. Through “watching and doing”, I was able to better understand the youth’s experiences, as well as situate myself relationally within the research, acknowledging my own learning journey as part of the knowledge co-creation process. This practice fostered mutual learning and helped us support one another as we navigated our own relationships with the Land. This method allowed the research to remain responsive, emergent, and grounded in the lived realities of the camp community, rather than being externally imposed or pre-defined. “Watching and doing” aligns with our theoretical and

methodological frameworks, ensuring that the research remained grounded in relationality, reciprocity, and a deep respect for the Land and its teachings.



we are returning...

*returning home
returning to ourselves
returning to community
returning to the Land
returning to the past
returning to the present,
and re-turning to the future.*

Thematic Analysis

Our research analysis for Chapters 3 and 4 was guided by our theoretical and methodological frameworks, as well as *Thematic Analysis: A Practical Guide* by Braun and Clarke (2022). For a Western scientific research paradigm, analysis is a process of breaking down all the separate pieces and trying to put them back together in some coherent whole, which destroys all the relationships of those ideas. For an IRP, analysis is a process of looking at the whole network of relations, all the relationships and all the connections and using intuitive logic rather than linear logic (Wilson, 2008). Knowledge translation and presentation of ideas necessitates the continuation of relationality (Wilson, 2008). Sharing stories requires honour, respect, reciprocity, and responsibility to those stories, the peoples who shared those stories, and the places those stories were shared (Wilson, 2008). A challenge with an IRP is presenting these stories in a written form that is understandable to others (Wilson, 2008). In writing this dissertation and presenting the ideas that sew this project together, I maintain accountability to the peoples involved in this research, the relationships that connects us together, and the stories that were shared.

Thematic analysis, as described by Braun and Clarke (2022), is a method for identifying, analyzing, and interpreting patterns or themes within qualitative “data”. In the context of an IRP, thematic analysis is used to reveal perspectives, relationships, experiences, emotions, and processes as these relate to the research questions (K. Martin & Mirraboopa, 2003). By integrating the IRP framework into our analysis, we ensured that the themes we identified were deeply connected to the relationships developed between the researchers, youth, and the Land, acknowledging that this Knowledge cannot be separated from the northern land-based context in which it was generated. Analyzing, or interpreting, the stories was a process of building

relationships with the ideas shared until reaching a greater awareness of land-based education in the NWT (Wilson, 2008). Aligned with Wilson (2008), we asked ourselves the following: how will the analysis of the ideas further develop and build relationships that hold these ideas together?

As discussed previously, stories were gathered through the following methods: photovoice, sharing circles, participant observation, and informal conversations during the on-the-land camps. For Chapters 3 and 4, we conducted a multi-step thematic analysis process, starting with manual coding and followed by digital coding using NVivo. The thematic analysis began in Kakisa, NWT, where photovoice reflections and sharing circle stories were transcribed and then manually coded. This process involved printing the transcriptions and identifying recurring themes using coloured markers. Simultaneously, images associated with each story were displayed on a screen to guide the analysis.

This hands-on approach allowed us to immerse ourselves in the experiences of the youth and build relationships with the stories, which enhanced our understanding of their lived experiences and the relational dynamics that shaped their interactions with the Land. Specifically, our analysis was grounded in the principles of relationality and relational accountability (Wilson, 2008), which guided how we approached the stories and relationships fostered during the research process. The initial coding process involved identifying key ideas and recurring concepts that reflected the experiences of the youth.

Thematic codes were developed deductively, guided by our theoretical and methodological framework, which emphasizes the importance of relationships with the Land, community, and Indigenous Knowledges as central to the research process. By centring these relationships in our analysis, we were able to identify themes that captured the

interconnectedness of the youth's experiences. Each theme reflected not only the lived experiences of the youth but also emphasized the holistic and relational nature of Indigenous methodologies. Following the initial manual coding, we transferred the codes into NVivo to support the digital organization and identification of patterns within the stories, as well as to ensure we did not miss any themes during the manual process. This allowed us to group the manual codes digitally and engage in an iterative process of refining the themes using the software. During this phase, we recognized that many of the initial codes were deeply intertwined, reflecting the youth's relationships with each other, their communities, and the Land. To honour these relationships, we grouped the codes into overarching themes that better captured the multifaceted nature of the youth's experiences.

Researchers need to continually reflect on how tools and methods may carry embedded assumptions. The decision to use NVivo came after the manual grouping to ensure that we did not overlook any stories or patterns across the large volume of stories. The software was used to hold ourselves accountable to the breadth of what was shared, offering an additional layer of review and organization, and was not used as a replacement for the knowledge generated through relationships, reflection, and shared analysis. I acknowledge that using coding software in the context of Indigenous methodologies can reinforce western technical frameworks of knowledge categorization.

In this project, I navigated this tension by keeping the manual, relational thematic process as central to the analysis, with NVivo serving as a secondary tool to support the meaning-making process. The analysis remained grounded in the voices, reflections, and experiences of the youth and community partners, with the software simply acting as a practical aid to organize and revisit

the material. In this way, we approached NVivo as a supportive tool among many, accountable to the relationships and responsibilities that guided the research from the beginning.

Gathering and analyzing the stories was informed by the relationships developed with the youth and the communities involved. Additionally, our analysis was continually shaped by active participation in the camp programming, with observational notes and informal conversations contributing to our understanding of the youth's experiences. This relationally grounded approach ensured that the themes both reflected the stories and honoured the voices and perspectives of the youth. To maintain respect and relational accountability for sharing Indigenous Knowledges and personal experiences, all themes, text, and photographs were verified with the youth and community partners before finalizing the analysis (L. T. Smith, 1999; The First Nations Information Governance Centre, 2019; Wilson, 2008). Informed consent was an ongoing process throughout the research (Teran, 2016).

As we moved through each stage, we maintained consistent communication with the youth through email, text, and social media platforms like Instagram, allowing them to review their contributions and approve and/or edit their visual stories and transcriptions. We sent digital versions of the photographs and stories through encrypted OneDrive folders to ensure the security and privacy of their stories. Once the youth and research partners approved the content, the final selection of photographs and stories was included in photobooks and analyzed thematically. These photobooks, which featured the collective visual stories from each camp, were shared with all the youth and community partners, reinforcing the importance of Knowledge sharing, co-creation, mutuality, and reciprocity in the research process. The themes were also verified with research partners through co-analysis, reviewed documents, and final

approval before being incorporated into this dissertation, ensuring that the analysis remained accountable to the relationships and responsibilities established during the research.

To conclude, our thematic analysis reflects the holistic, relational, and context-specific nature of Knowledge co-creation within an IRP (Davies & Holcombe, 2009). By grounding our analysis in the principles of relationality and relational accountability, we were able to identify themes that honour the interconnectedness of the youth's experiences (Robertson & Ljubicic, 2019). The themes developed in this research capture the transformative impacts of the on-the-land camps and align with the Indigenous values that underpinned the research from the outset. Through ongoing collaboration with the youth and community partners, we ensured that the final analysis was both reflective of the stories and respectful of the relationships that continue to guide this research.

Reflexive Reflection Analysis

Reflexive reflection is a research analysis method co-designed by Carrie LaVallie JoLee Sasakamoose (2021). Using an Indigenous methodological paradigm, reflexive reflection was constructed as a respectful and relational approach for co-creating knowledge (LaVallie & Sasakamoose, 2021). The researcher reflects on the stories shared by privileging local Indigenous Knowledges to examine the researcher's positionality and co-create knowledge (LaVallie & Sasakamoose, 2021). Rooted in Indigenous methodologies, reflexive reflection is a process of relational accountability, personal transformation, and ongoing self-examination (LaVallie & Sasakamoose, 2021). As LaVallie and Sasakamoose (2021) emphasize, reflexive reflection involves the researcher actively reflecting on their own positionality, beliefs, and

emotional responses to the inquiry, recognizing that knowledge is co-constructed through relational dialogue.

In Chapter 5, I employed reflexive reflection as both a method of analysis and a relational practice for the interview I conducted with Tarek Leahy-Chicot. The interview with Tarek was part of a long-standing relationship built over years of spending time together—a space of mutual storytelling, shared memory, and relational dialogue. As we spoke, we revisited moments that had shaped both of us from the previous on-the-land camps and the photovoice project. Tarek's reflections brought forward layers of meaning that prompted me to consider how my own perspectives had shifted through knowing him and participating in this work together. The interview became a space where we reflected on what had happened and how it had changed us. It deepened my understanding of Land Stewardship, youth leadership, and relational ethics, and reminded me that knowledge is co-created through relationships, stories, and time spent together. Hence, the interview was more than a method—it was a continuation of our relationship and a practice of shared sense-making that revealed the emotional, spiritual, and intellectual dimensions of the research. The stories we shared and the meanings we unpacked together became a living reflection of how land-based research is always relational, and always transformative.

Through reflexive reflection as analysis, I engaged with Tarek's words and teachings for how they moved me, challenged me, and helped me un/re-learn what it means to live in relation with the Land and with others. Reflexive reflection allowed me to return to the conversation with a critical lens and a heart-centred approach to reflect on how our exchange shaped my understanding and my responsibilities as a white researcher from southern Canada living and working in the North. As I reflected on our conversation, I asked myself why did certain

moments in the interview stand out to me? What emotions did they stir? How did my own lived experience influence how I interpreted his words? Reflexive reflection, then, became a way to understand Tarek's narrative and the space between us—a space shaped by shared experiences, grief, laughter, and trust. After Tarek passed away, I returned to these reflections by walking alone through the forest, sitting near the lake, and letting the Land help me make sense of the knowledge Tarek had shared. This practice aligns with LaVallie and Sasakamoose's (2021) assertion that Indigenous methodologies invite contemplative, land-based reflection carried out through ceremony, time with the Land, and ancestral guidance.

By using reflexive reflection, I sought what was meaningful to Tarek, in that moment, shaped by his life, family, and community. In turn, my reflections on those truths also became part of the knowledge being co-created. Reflexive reflection is dialogue, a mutual sense-making process that reflects the relational core of land-based research (LaVallie & Sasakamoose, 2021). Through this practice, I honoured Tarek's stories as living teachings that could guide action, build community, and deepen relational knowledge. Therefore, reflexive reflection bridged the personal, relational, methodological, and theoretical elements of the research and ensured that analysis remained grounded in relationships (LaVallie & Sasakamoose, 2021).



I am re-reading my analysis, and I am reminded of the beauty of being on-the-land...that power of connection, the power of stories, the power of relationships. It's all connected. We're all connected....and that feeling...oh that sweet feeling...how I wish to be back in these places, with everyone, learning by *doing*, learning by *listening*, learning by *feeling*, learning by *experiencing*...learning with and from the Land.

Keeping Stories Safe

In alignment with the Ownership, Control, Access, and Possession (OCAP) principles (The First Nations Information Governance Centre, 2019), I ensured that all stories gathered during the project was managed with respect to the rights and sovereignty of the DFN, KTFN, and all participating communities. The OCAP principles provided a guiding framework for how stories were stored, shared, and ultimately returned to the community and the youth storytellers, while upholding the methodological and theoretical frameworks that underpinned this research. Throughout the project, the stories, including the youths' photographs, transcriptions, and my analyses, was treated as co-owned by DFN, KTFN, the youth storytellers. In alignment with OCAP, DFN, KTFN, and the youth storytellers maintained ultimate control and possession over the stories, ensuring that the community's rights to self-determination and sovereignty were respected throughout the research process.

To ensure we kept the stories safe, several measures were put in place. First, stories were stored on password-protected, encrypted devices. I maintained all electronic files on an encrypted computer and external hard drive stored in a locked cabinet in my home. Additionally, a password-protected, encrypted external hard drive was kept at the resource management coordinator's office in DFN's Band Office in Łíídlıı Kúé (Fort Simpson), NT. This ensured that the community always had access to the stories. Lastly, hard copies of any documents, such as transcriptions or participant information, were stored in a locked cabinet, ensuring that physical stories were also kept secure.

Throughout the research process, I adhered to relational accountability by maintaining ongoing communication with the research partners and the youth. This included regular check-

ins to ensure that the research was conducted in a way that continued to honour the OCAP principles, and the relational agreements made with the communities and youth. Informed consent was treated as an ongoing process, rather than a one-time event. Identifying information (such as first and last names, community affiliation, and contact information) was collected for purposes of contacting the youth to review their transcriptions, receive photobooks, and potentially conduct follow-up interviews. This information was kept separate from the stories to preserve anonymity and ensure privacy.

The youth had the option to have their identifying information included in the research or to remain anonymous, with clear instructions provided in the consent forms. If the youth wished to remain anonymous, their contributions were coded using neutral identifiers, such as Youth Participant 1, Elder 1, or Camp Staff 1, to maintain confidentiality in all reports, presentations, and publications. In all cases, no identifying information was attached to the stories, and any personal information was securely stored in a separate contact list. Additionally, all stories and transcriptions were sent back to the youth for approval via encrypted OneDrive folders, allowing them to review and approve their contributions before any analysis or dissemination.

The OCAP principles (The First Nations Information Governance Centre, 2019), paired with the IRP, emphasize that Indigenous Peoples retain ownership of the stories gathered about them. This was particularly crucial in ensuring that any stories shared during the camps remained under the control of the communities. DFN and KTFN retained ownership of all the stories, including photographs and transcriptions, and to be kept indefinitely in their archives for their own use and record-keeping. The stories were held with care to respect the sacredness of the Land. As this land-based research is embedded in Land Stewardship and an IRP, it was essential

that the stories were not (mis-)used in ways that could exploit or commodify the relationships between the youth, the Land, and their stories.

Thus, the community was consulted at every step of the analysis and dissemination process to ensure that the knowledge was shared respectfully and ethically. After the full dissemination of this research, I will release the caretaking responsibilities of physically holding their stories as part of the research, though I will always keep their stories safe in my heart, mind, body, and spirit. The full ownership of these stories belongs to the community partners and the youth storytellers, and to the Land itself. I am grateful for holding the responsibility of keeping them safe over the years of this research, but they do not belong to me. The stories will be returned to the communities, to the youth, and to the Land that holds them all.



their stories are sacred magic;

*the flames of Knowledge
are carried through generations
protected in the core memories of Elders
held in the paths of the forests
protected in the roots of the trees
etched in the markings on rocks
in the blood of the newborn Indigenous babies*

they carry that magic within themselves

*that magic could never be owned
and it will never be destroyed*

Knowledge Mobilization: Photo Exhibits and Photobooks

In alignment with our core principles – relationality and relational accountability – knowledge mobilization was a critical component of this project. Recognizing that knowledge does not solely belong to the researcher but is co-created with the youth and their communities, the visual stories created by the youth through photovoice were shared back with the communities in culturally relevant and meaningful ways. Photo exhibits and photobooks served as key methods of knowledge mobilization, honouring both the youth's contributions and the communities' relationships with the Land. To share the youth's visual stories from the on-the-land camps, three public photo exhibits were hosted, with three in-person and one virtual event. These exhibits were more than visual displays of photographs and stories; they were interactive spaces for dialogue, reflection, and collective learning, reinforcing the relational aspects of the research process.

KTCC Exhibit (August 2021, Kakisa): This in-person exhibit took place in the heart of the community, grounded in the Land that shaped the youth's experiences. The physical setting itself—the local community hall—offered a tangible connection to the Land and its stories in a cultural and relational gathering place where stories, knowledge, and teachings could be shared while remaining intimately connected to the surrounding environment. The large windows of the hall overlook Kakisa River and Kakisa Lake, offering a constant visual relationship with the water, the forest, the plants and shrubs, the berry bushes, and the visiting animals and birds. Through these windows, one witnesses the movements of the seasons, the shifts in weather, the dances of the sky, sun, moon, and stars, which are all part of the storying of the Land. The windows themselves act as portals between the gathering inside and the living Land outside, dissolving the boundary between interior space and the Land as teacher and relative.

Attendees, including the youth, Elders, and community members, gathered to view the photographs, but more importantly, to engage in conversations about the visual stories. As youth shared their photographs and stories within this space, the reflections captured in their images echoed the view from these windows—moments of connection, memory, and observation that were alive both outside and within the walls of the community hall. The stories shared in the community hall were deeply interwoven, happening with the Land, as the Land remained present, witnessing, shaping, and holding space for the dialogue. This physical merging of place, story, and relationship reflects the worldview at the heart of land-based education, where the Land is an active participant, relative, and teacher.

The KTCC exhibit provided a platform for the youth to articulate their experiences, while the community had the opportunity to ask questions, offer reflections, and share their perspectives on the themes presented. This event was also accompanied by a community feast, reinforcing the Indigenous values of reciprocity, communal gathering, and sharing, and fostering a relational environment where knowledge was exchanged in both visual and oral forms (Dombrowski et al., 2013; Islam & Berkes, 2016). The community hall is a site of continuity, connection, and cultural vitality, where Land, people, and stories co-exist and co-create meaning together.

DYETKC Exhibits: The virtual exhibit hosted in February 2022 was an adaptation to the COVID-19 pandemic, illustrating the flexibility of land-based research methodologies to adapt to changing circumstances while still prioritizing the sharing of Knowledge (Morgensen, 2012). The virtual format allowed for continued engagement, enabling the youth and community members to interact with the youth's visual stories in an online space. Later in November 2022, an in-person exhibit was held in Fort Providence and Lídłı́ Kúé (Fort Simpson) in March 2023,

both featuring a community feast and gathering where the youth, Elders, and community members came together. These spaces, like the KTCC exhibit, became a platform for dialogue and enabled the youth to explain their photographs and community members could offer their reflections.

These exhibits were not static events; they were living processes of knowledge exchange, embodying the relationality at the heart of Land Stewardship (Matson et al., 2021). The act of sharing visual stories in a communal setting emphasized the reciprocal relationship between the youth, their communities, and the Land. The exhibits created a space where the photographs became shared experiences, not just individual reflections, reinforcing the collective responsibility of caring for the Land (McAuley, 2004).

Furthermore, KTFN retained the exhibit as a permanent installation in their community hall. This decision underscores the community's desire to maintain these visual stories as part of their cultural and environmental heritage, ensuring that the knowledge created through the research continues to benefit future generations. This permanent installation reflects the long-term commitment to Knowledge preservation, one that aligns with the principles of sustainability and continuity inherent in Land Stewardship (Cunsolo et al., 2017). The youth were proud to have their photographs and stories displayed for people inside and outside the community to observe for years to come.

In addition to the public exhibits, photobooks were curated for all four on-the-land camps. These photobooks, featuring a collection of all the youth's visual stories from their respective camps, were distributed to all the youth and community partners. The creation and distribution of these photobooks were a deliberate act of Knowledge sharing and relational

accountability, ensuring that the youth's stories and experiences were not confined to the academic or research realm but returned to the communities and individuals who contributed to the project (Absolon, 2011; The First Nations Information Governance Centre, 2019).

Photobooks serve as physical memory-keepers that preserve and honour the visual stories and reflections of the youth. The photobooks are embodied pieces of relational knowledge, capturing the youth's experiences on the Land and their growing understanding of their roles as Land Stewards. Each photobook becomes a part of the community's collective memory, ensuring that the Knowledge generated is not lost but instead woven into the cultural fabric of the community. By providing photobooks to each participant, I ensured that the youth were recognized as Knowledge Holders and co-creators of the research. This practice aligns with the values of IRPs, which emphasize relational accountability and the importance of returning knowledge to those who contribute to it (Wilson, 2008). The photobooks validated the youth's experiences and gave them a sense of ownership over the stories they created, empowering them to share their knowledge with their families, friends, and broader communities.

I designed the photobooks for the youth and community partners, ensuring that the format was accessible and culturally relevant. Each photobook was curated to reflect the diverse perspectives of the youth, while also emphasizing the collective themes that emerged from their experiences. Furthermore, the photobooks served as mobile exhibits, allowing the youth to carry their stories with them and continue to engage in conversations about their experiences long after the camps had ended. In keeping with the principles of relational accountability in Indigenous methodologies, the photobooks also represented a reciprocal exchange—the knowledge generated during the camps was not extracted by the researchers but returned to the youth and their communities (Mcguire-Adams, 2021; L. T. Smith et al., 2018). This practice ensured that

the research remained accountable to the communities and that the Knowledge shared through the project continued to serve the Peoples and places involved (Ninomiya et al., 2017; Tuck & Yang, 2012).

Both the photo exhibits and photobooks functioned as tools for Land Stewardship by encouraging the youth and their communities to reflect on their relationships with the Land and their responsibilities as stewards. The visual stories captured through photovoice served as reminders of the deep connections that the youth developed with the Land during the camps, reinforcing the idea that Land is an active, living entity that they are responsible for caring for (McGregor et al., 2010). The exhibits and photobooks facilitated ongoing conversations about Land Stewardship within the communities. By sharing these visual stories in public and personal formats, the knowledge generated about the Land and the youth's roles as Stewards became embedded in the community dialogue, fostering a sense of collective responsibility for the environment. This process of Knowledge mobilization extended the life of the research beyond the camp setting, ensuring that the ideas, reflections, and responsibilities discussed during the camps continued to influence the community's relationship with the Land.

Through the public photo exhibits and photobooks, knowledge co-created during the on-the-land camps was shared in meaningful and accessible ways, aligning with the principles of relational accountability and Land Stewardship. These methods of knowledge mobilization not only validated the experiences of the youth but also strengthened the communities' connections to the Land. By returning the visual stories to the youth and their communities, the reciprocal relationships central to both IRPs and Land Stewardship were honoured, ensuring that the stories shared during the research continued to contribute to the well-being of the Land and the Peoples who call it home.



Ruby's story before making dry moose meat was so impactful. She connected her life (being born on-the-land) to the changes that have happened/are happening so beautifully. She spoke from the heart and her words resonated deeply with all of us in different ways. Her main points were that on-the-land camps are important to connect youth to the Land. When you take care of the Land, the Land will take care of you. She showed us how to make the dry meat – how to cut and peel the meat back. After demoing she gave us each a piece to cut and knives to use. I cut moose meat for the first time, and I was proud of myself for trying. We hung the meat on the drying rack over the fire and covered it with tarps to smoke because it started raining.

Personal journal entry from the 2021 Water Stewardship Gathering

**Chapter 3: "It's not being 'on-the-land', it's like we are a part of the Land":
Indigenous Youth share visual stories at "on-the-land" camps in the Dehcho**

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Abstract

In northern Canada, Indigenous Peoples face rapid environmental and sociocultural changes that disrupt access to traditional places and practices. This disruption limits cross-generational knowledge transfer and decreases opportunities for the youth to connect with the Land. Land-based education programs aim to provide Indigenous youth with spaces to learn about and connect with the Land, their language, and culture. However, there is limited research on what youth experience, enjoy, and learn during these programs. Our paper explores this through a study with Dene and Métis youth in the Dehcho region of the Northwest Territories. We investigate what youth experience and learn during “on-the-land” camps and how these camps provide spaces for youth to connect with the Land. Using a community-based, Indigenous research methodology, we employed photovoice, allowing the youth to share visual stories of their camp experiences and their (re)connection with the Land. Our results are categorized into three themes: (1) connections with the Land; (2) enjoyment of the camp environment; and (3) land-based learning. We argue that land-based education programs, such as on-the-land camps, are effective for fostering relationships between Indigenous youth and the Land. These camps teach youth various ways to connect with and protect the Land for future generations.

Keywords: land-based education; youth; community-based research; Indigenous research paradigm; photovoice

Introduction

Around the world, Indigenous Peoples' relationships with and knowledge of the Land value and respect the ways in which humans are a part of the Land (Bowra et al., 2021). Here, Land (capitalized), refers to Indigenous ontologies of Land as living, relational, spatial, and spiritual; Land is the interconnections between all living things (Twance, 2017). Land is a network of spatial relationships created in a dynamic process of remembering, storytelling, and sense-making, all of which are encapsulated in language (Sium & Ritskes, 2013; Wilson, 2008). Land is at the heart of Indigenous identity, culture, family, and community (Corntassel, 2012). Knowledge of the Land creates the foundation for Indigenous education systems, pedagogies, and programs, and builds the capacity for surviving, thriving, and adapting to sociocultural, political-economic, and environmental changes (Cajete, 1994). The Land is not simply the physical environment; it includes the relationships Indigenous Peoples have with the environment and the knowledge, history, language, and culture that comes from those places (Simpson, 2002).

For Indigenous Peoples in northern Canada, rapid environmental changes are disrupting access to traditional places and cross-generational mentorship, which decreases the knowledge of the landscape and the transfer of that knowledge (Trout et al., 2018). Access to traditional food sources and places are especially impacted, which significantly limits land-based activities and knowledge transfer to the next generation (Kenny et al., 2018). Moreover, the introduction of a wage-labour market and economy for food and necessities creates barriers for northern Indigenous community members to gather traditional foods, medicines, and materials from the Land (Wesche et al., 2016). There is a shared concern among many Indigenous Peoples and communities in the North that Indigenous youth are not as strongly connected with the Land, due

to the reduced time spent “on-the-land” learning via cross-generational knowledge transfer (Redvers, 2016). “On-the-land” refers to the spatial dynamics of being outside in a natural environment (e.g., forest, lake, river) (Polfus et al., 2016).

Past and current colonial systems and structures further restrict youth engagement in land-based activities, as well as youth capacity to envision and enact land-based solutions for their communities (Wildcat et al., 2014). Through Canada’s residential school system, countless Indigenous children were forcibly taken from their families, communities, cultures, and homelands, and suffered cultural genocide through sexual, mental, emotional, and physical abuse, and traumatic living conditions (Burrage et al. 2022). Thousands of Indigenous children died in the schools and families have fought for decades to release the information on their deaths (Eaton & Hughes, 2022). While the former residential schools are no longer operating, assimilative strategies continue to be enforced through modern education systems in Canada today. Many Indigenous children in northern Canada continue to be removed from their families to attend schools that are not available in their home communities. Moreover, ongoing underfunding of school infrastructure in northern communities further degrades the education experience for northern students (Anuik, 2009).

It is essential that Indigenous youth receive opportunities to be on-the-land with Elders, learning their language, culture, spirituality, and ways of life (Cuerrier et al., 2012; Ljubicic et al., 2021), and participating in decision-making processes related to both education and the environment (O’Sullivan et al., 2020). To reclaim self-governance in education for the continuity of Indigenous culture, language, history, identity, and knowledge, there has been an ongoing Indigenous-led movement across Canada since the 1970s (Bowra et al., 2021). In 1972, the Chiefs of the National Indian Brotherhood established the Indian Control of Indian Education

policy, which supported Indigenous peoples in reclaiming their right to educate within their communities (National Indian Brotherhood, 1972). Over time, there has been an increase in local control of education (e.g., administrative control of schools to First Nations), transfer of jurisdiction, and the development of Indigenous-led educational curriculum and facilities (Pidgeon et al., 2013).

Indigenous-led land-based education embodies and sustains Indigenous livelihoods and knowledge systems and contests colonists' drive to erase Indigenous ways of living and claims to "land" (Redvers, 2016). Here, "land" (lower case/quotations) refers to ideologies of land as property, an object to be used, owned, controlled, and dominated, for the benefit of the state (Fox, 2022). Land-based education is grounded in the Land and is about teaching and learning one's responsibilities to interact with and protect the Land (Simpson, 2014). Land-based programs teach cultural practices for living and being on-the-land, often bringing together Elders and youth to bridge generational gaps (Alfred, 2014). The rise in land-based education programs across Canada since the 1970s has also provided collaborative, culturally safe spaces to connect local Indigenous Knowledges with Western science, strengthening relationships between communities and the researchers who work in their territories (Tahsin, 2021). For example, some on-the-land camps create a space where Indigenous youth spend immersed time on-the-land with local Elders, Knowledge Holders, Indigenous leadership, Indigenous Guardians and land protectors, community members, and other youth, as well as scientists, local monitors, and researchers who study the area (Reid et al., 2021; Tahsin, 2021). Indigenous Guardians implement wildlife monitoring programs that bring together Indigenous communities, nations and organizations, industry, non-governmental organizations, and non-Indigenous governments (Popp et al., 2020). Overall, on-the-land camps create a learning space of connection that builds

community resilience to respond to environmental and sociocultural changes and supports the continuity of local knowledge and culture (Reid et al., 2021).

While a large base of literature documents the efforts of Indigenous communities to reconnect youth to Land, language, knowledge, and culture through land-based education programs, such as on-the-land camps (Bowra et al., 2021), there has been limited research focus on land-based education programs from the perspective of the youth participants. While these programs and pedagogies aim to create spaces for youth to learn about and connect with the Land and their language and culture, it is unclear the degree to which they are effective in responding to young people's needs—or what the youth are experiencing, enjoying, and learning during these programs. Considering the above, we sought to address two main questions through an exploratory study with Dene and Métis youth in the Dehcho region of the Northwest Territories (NWT):

- (1) What do youth experience and learn during on-the-land camps?
- (2) How do on-the-land camps provide a space for youth to connect with the Land?

Dehcho First Nations (DFN)—a regional Indigenous governing body—and Ka'a'gee Tu (also spelled K'ágee Tue) First Nation (KTFN) lead on-the-land camps for youth in the Dehcho region of the NWT. DFN delivers many land-based programs, such as Healing Programs, Youth Leadership, and Youth Canoeing. Each camp that DFN delivers has different goals depending on the type of program. Specifically, for DFN's Dehcho Youth Ecology and Traditional Knowledge Camps, the overarching goal is to engage, empower, and educate Dehcho youth through exposure to land-based, cross-cultural knowledge and practices, which can include language, harvesting, arts, and much more. For example, some camps include a focus on sciences,

wellness, healing, wilderness safety, cultural learning, and traditional food practices. Camp programming and planning for DFN and KTFN is conducted jointly through partnerships with local Métis Councils, Indigenous member organizations, academic institutions, and northern organizations and includes a mixture of language instruction, cultural programming, and science-based activities. Camps involve traditional activities (e.g., berry-picking, hunting, fishing, language instruction, sewing, beading) led by Dene and Métis Elders and Knowledge Holders, as well as hands-on science activities (e.g., water quality sampling, forest ecology, invertebrate analysis) led by graduate student researchers and Aboriginal Aquatic Resource and Oceans Management (AAROM) technicians and community monitors (referred to here as “camp instructors”). These camps are connected to the Dehcho K’ehodi Guardianship program, which monitors and protects the land and resources in the Dehcho. The youth learn about Dehcho K’ehodi Guardianship, the Dehcho Land Use Plan, and self-government agreement negotiations from local Indigenous Guardians and leaders.

In this paper we argue that land-based education programs, like on-the-land camps, are important and effective mechanisms for building relationships between Indigenous youth and the Land. More specifically, on-the-land camps demonstrate to youth different ways that they can connect with and protect the Land for future generations. First, we describe two on-the-land camps in the Dehcho region to establish the research context. Next, we outline the Indigenous Research Paradigm that establishes the foundations of this research, then our photovoice and thematic analysis procedures. The results and discussion section are organized according to three themes: connections with the Land, enjoyment of the camp environment, and land-based learning. Last, we share concluding remarks regarding land-based education.

Research Context

All research took place in the Dehcho region in the southwestern NWT. In August 2018, the first author attended the DFN-led, 6-day Dehcho Youth Ecology and Traditional Knowledge Camp at Willow Lake in Edézhíe to meet the research partners and co-develop the research questions, objectives, and methods for this project. The following summer, they attended two on-the-land camps for Dene and Métis youth and gathered stories using photovoice. Camp 1 (August 2019) was the KTFN-led, 5-day Ka'a'gee Tu Canoe Camp (KTCC) at Kakisa Lake and First River. Camp 2 (September 2019) was the DFN and Łíídlıı Kúé First Nation (LKFN)-led, 7-day Dehcho Youth Ecology and Traditional Knowledge Camp (DYETKC) at Maoste (6 Mile Creek) in the traditional area of LKFN. All three on-the-land camps took place independently of our intention to conduct this research, and youth participation in the camp did not demand participation in this study.

For the KTCC, KTFN invited youth ages 13+ from Kakisa to participate. Three youth attended the camp and participated in this research. In total, twelve Dehcho youth participated in the research (one youth attended both camps). For the DYETKC, DFN recruited participants. The office sent out a call for youth from the Dehcho to attend the camp through Facebook, local radio stations, newspapers, bulletin boards, and schools. Participants were required to be between the ages of 12 and 17 and self-identify as a Dene and/or Métis youth from the Dehcho. Twelve youth from Deh Gáh Got'ıé First Nation, LKFN, KTFN, and Sambaa K'e First Nation attended the camp, and ten youth participated in this research project.

During the KTCC, group members slept in tents along First River. The initial plan to camp in different traditional places around Kakisa Lake was thwarted due to low water levels

and stormy conditions. One Knowledge Holder, Chief Lloyd Chicot, attended throughout to share teachings and stories of the Land with the youth. One Elder, Margaret Leishman (KTFN), visited the camp for storytelling when weather conditions permitted. At the end of the camp, we hosted a dinner at the community hall in Kakisa for community members to learn about the camp. The camp began with a water ceremony, opening prayer, and introductions, followed by a paddle to First River. The daily schedule included breakfast, activity, lunch, activity, free time, dinner, photovoice reflections, storytelling. Activities included but were not limited to outdoor recreation (e.g., boating, scavenger hunts), wilderness skills (e.g., fire-making, shelter building), cultural and traditional practices (e.g., drum dancing, traditional games, berry-picking, canoeing, hunting), and educational and scientific activities (e.g., water quality analysis, recording forest fire impacts).

During the DYETKC, attendees slept in cabins along the Dehcho (Mackenzie River) at the permanent cultural camp at Maoste (6-Mile Creek). Two Elders and one Knowledge Holder (Dene Zhatie language instructor) attended throughout to share teachings with the youth. Additional Elders visited the camp at various points throughout the week to share knowledge and participate in camp activities. The camp began with a fire feeding ceremony, opening prayer, and introductions. The daily schedule included: breakfast, activity, lunch, activity, free time, dinner, photovoice reflections, free time, storytelling. The structure and activities of the two camps provided a culturally grounded, immersive environment that fostered relational learning and knowledge exchange, setting the stage for the research methodologies that guided the analysis and interpretation of the youth's experiences.

Methodology and Methods

Our research is rooted in an Indigenous Research Paradigm (IRP), as defined by Shawn Wilson's (2008) *Research is Ceremony*. The key tenets of Wilson's IRP, relationality and relational accountability, influenced our choice of research topic, methods, collection, analysis, and presentation/dissemination. Relationality refers to the ways we, as humans, are formed through our relationships (Wilson, 2008). Relational accountability refers to our roles, responsibilities, and obligations to build, maintain, and strengthen respectful, reciprocal relationships (Wilson, 2008). Moreover, research with Indigenous peoples involves learning about ways of sustaining reciprocal and respectful relations (Wilson, 2008). Hence, this is a collaborative project developed with partners at DFN and KTFN, and researchers at the University of Ottawa and Wilfrid Laurier University.

Findings from this research were verified with individual participants and collection, analysis, and verification were conducted collaboratively with the partnering First Nations. This project adheres to OCAP (Ownership, Access, Control, Possession) principles (The First Nations Information Governance Centre, 2019), the Tri-Council Policy Statement on research involving the First Nations, Inuit and Métis peoples of Canada (Canadian Institutes of Health Research, et al., 2010), the Dene Laws, and the knowledge exchange among all collaborators. Reports (written and digital media) were also shared with the communities. Publications from this research are co-written and co-authored with partners to acknowledge our shared contributions (Castleden et al., 2010). This research received ethics approval from Wilfrid Laurier University and the University of Ottawa, and an Aurora Research Institute License.

In alignment with our methodological framework and the principles of relational accountability central to an IRP, it is crucial to situate ourselves within this research. Steph Woodworth (they/them) is a trans nonbinary settler scholar living in Sòmba K'è (Yellowknife), on Chief Drygeese Territory, the homelands of the Yellowknives Dene First Nation and the North Slave Métis. Living in the North has deepened their awareness of the complex relationships between Land, peoples, and the impacts of colonization. Additionally, as a trans nonbinary person, they bring an intersectional perspective to the work, informed by their own experiences of navigating systems of power, identity, and belonging.

Kristen Tanche (she/her) is Łíídlı́ Kúé First Nation, Dehcho Dene with Icelandic and settler Canadian ancestry raised in Wynyard, Saskatchewan, and Whati, Gameti, Yellowknife, and Łíídlı́ Kúé (Fort Simpson). She has held several land-based leadership roles within DFN, such as the Regional On the Land Coordinator and currently is the Regional Health and Wellness Director. She brings extensive experience in land-based programming and continues to advocate for improved health and wellness access for communities in the Dehcho and throughout the North. Tanche co-developed this research since the start of the project.

Britney Nadli (she/her) is Deh Gáh Got'îê First Nation from Zhahti Kue (Fort Providence). She has been part of various leadership roles, such as the Regional On the Land Coordinator for DFN and Dehcho Community Advisor for the NWT On the Land Collaborative. She takes pride in the work she does for northern youth to advocate for her Land, culture, and language. Nadli has deeply supported the knowledge sharing of this research, including the photo exhibits.

Sonia D. Wesche (she/her) is an Associate Professor in the Department of Geography, Environment and Geomatics at the University of Ottawa. As a settler scholar who has strong ties

to unceded Anishinaabe Algonquin territory where she was born and now lives and works, she collaborates with northern Indigenous communities and partners to address local priorities related to environmental change and community health and well-being.

Lastly, Andrew Spring (he/him) is a settler scholar at Wilfrid Laurier University who conducts community-based research to support sustainable food system initiatives in the North, with a focus on issues of Land stewardship and sovereignty.

Our positionalities shape how we approached the research, particularly around themes of identity, community, and Land, with a deep sense of empathy and solidarity. However, we also remain aware of the distinct and specific positionalities and experiences of the Indigenous youth with whom we worked with, and we strive to hold space for their narratives in ways that are respectful and non-extractive. We are committed to ensuring that the outcomes of this research are aligned with the values and priorities of everyone involved.

Photovoice

Photovoice is a method that connects visual images with stories to understand the relationships and dynamics between people and place (Evans-Agnew & Rosemberg, 2016). In this research, Dehcho youth participated in an immersive, iterative photovoice project, where they captured photographs during each day and shared stories at night about what they learned, enjoyed, and experienced at camp. By adapting the conventional photovoice method to become an immersive experience of co-learning, we centred Indigenous youth's stories of, and relationships with, the Land, which celebrates their Dene and Métis cultures, identities, knowledges, and languages. Specifically, photovoice enabled Indigenous youth to share visual

stories of their experiences of land-based education and the ways they (re)connect with the Land. The youth's visual stories can only capture a part of these embodied experiences and connections; these stories cannot fully show what the youth feel when they are at an on-the-land camp.

We integrated photovoice into all aspects of the camps. Each of the youth was given a digital camera and instructed to capture photographs of what they learned and enjoyed during camp activities, followed by a daily reflection on their experiences. The youth were invited to share one or more photographs from the day, as well as share reflections orally—either individually, in pairs, or in groups—or via personal written reflections using a printed worksheet. All youth at the KTCC chose to record their daily reflections using the printed worksheet. At the DYETKC, all the youth completed written reflections on the first day using the worksheets, then all but one switched to sharing orally. Woodworth wrote down the youth's stories in a notepad and the youth approved the text after they finished sharing.

To close the photovoice project, we held sharing circles at the end of each camp. Sharing circles involve gathering a group of people to discuss concerns, priorities, ideas, and perspectives using prompted or guiding questions (Tomaselli et al., 2018). This method was used to create a space for the youth to share their concerns, ideas, and actions for land-based education in the NWT. Participants engaged in group dialogue through a series of guided questions and probes. Here, we focused on the following questions from the sharing circles (including the written answers provided by one participant): What was your favourite part of camp? Would you like to see more camps like this? What activities would you like to see? What does being on-the-land mean to you?

We supplemented the photovoice by documenting our observations and experiences while immersed in the camp environment. Detailed daily observations were recorded using notes, photographs, and videos (e.g., about features of the environment; expressions, activities, and emotions of people, including themselves; cultural meanings and practices; personal experiences; weather conditions; sensory experiences; detailed schedule of each day). These observations were deeply informed by conversations and interactions among all camp participants and staff.

Collecting and analyzing visual stories were deeply collaborative work held in Indigenous places and spaces, and all visual stories were approved with participants and partners before any knowledge was shared with the public. This research approach required five years of building personal relationships, being with Indigenous Peoples in their homelands, attending on-the-land camps, participating in community activities outside of the camps, sharing stories, engaging youth, listening to Elders and Knowledge Holders, learning place names and terminology in the local Indigenous language (Dene Zhatie), de-centring the “academy” in our relationships, and creating meaningful friendships. Our research values Dene and Métis knowledges, histories, and cultures.

To share the youth’s visual stories from the camps with their communities, we hosted three public photo exhibits, two in-person and one virtual. The KTCC photo exhibit was held in-person in Kakisa in August 2021. The DYETKC exhibit was hosted virtually in Fort Providence in February 2022 and in-person in November 2022. In-person exhibits included a community feast. The youth, Elders, and community members were present at the exhibits and had the opportunity to ask youth questions about their visual stories. KTFN has retained the exhibit as a permanent installation in their community hall. Woodworth also curated, designed, and shipped

photobooks featuring all the youth's photographs and stories from each camp to youth participants and community partners.



Figure 4. Two KTFN youth stand next to their visual stories and reminisce about their camp memories during the 2019 KTCC photo exhibit. Source: First Author (2021)

Thematic Analysis

Given the colonial extractive history (and ongoing practices) of research with Indigenous peoples (Smith, 1999), we avoid the term “data” in this paper. Instead, we refer to the photographs and reflections shared as “visual stories.” We conducted thematic analysis for the

youth's visual stories, based on the tenants in Braun and Clarke's Thematic Analysis: A Practical Guide (2022) and informed by the principles in Research is Ceremony (Wilson, 2008). Thematic analysis is a reflexive method used to identify, analyze, and interpret patterns and meanings that appear in the research (Braun & Clarke, 2022). Our analysis cannot be separated from the places or peoples from which the stories stem. As such, we identified, analyzed, and interpreted the themes in the context of the Dehcho region of the NWT.

The youth's stories (i.e., written and oral reflections) and sharing circles were transcribed and coded through NVivo by the lead author. However, since the NVivo platform limited our ability to analyze the stories and photographs simultaneously, we used dual monitors to examine the photographs in a gallery style with the corresponding transcribed text in NVivo. Our analysis was informed by the observational notes and our experiences at the camps. The themes and connections identified from the youth's photographs, stories, and sharing circles cannot be separated from our participation in the camps (pre/during/post) and relationships developed with the youth and communities.

It was essential to verify with the participants and partners what is (and is not) shareable outside of the camps. Visual stories were emailed to each participant for review and approval using an encrypted folder. We maintained engagement with the youth using a combination of email, texts, and social media. Following their final selection and approval, the authors analyzed the visual stories and sharing circle transcribed notes. To avoid any conflicts with sharing Traditional Knowledge or personal experiences and relationships, all visual stories were co-analyzed with a representative from DFN, Beth Hudson, and verified with individual participants.

We acknowledge the small scope of this study given the sample size and emphasize that our findings will not be representative of all the youth in the Dehcho. This study is not to be applied as a blanket/one-size-fits-all approach to doing research with Indigenous youth through land-based education. The findings from this research offer a glimpse into the dynamics of on-the-land camps and the pathways through which Dene and Métis youth are experiencing and learning in these contexts.

Results and Discussion

Stories for this project included nine total recorded days of photovoice (four from KTCC and five from DYETKC). While every participant was asked to share one visual story from each day, some opted out of sharing and others shared more than one story per day. A total of 20 visual stories were shared at the KTCC, and 46 were shared at the DYETKC. On the last night of the camps, the youth participated in a sharing circle to share their closing reflections about their experiences on-the-land. The sharing circles took approximately 1.5 hours.

Themes were first identified deductively from the youth's visual stories, then independently from the sharing circles, and later combined. Combined codes included water, forest, food, friends/friendships, mentorships, activities, camp life, future camps, being on-the-land, Elders, and camp instructors. Following the initial coding, we organized the themes as follows: (1) connections with the Land; (2) enjoyment of the camp environment; and (3) land-based learning. In the following sections, we highlight the youth's visual stories relevant to each theme. While these themes align well with the main ideas in the existing land-based education literature (Bowra et al., 2021), our findings bring a new, youth-oriented perspective of on-the-

land camps. Through visual stories, the youth share what they experienced and learned during on-the-land camps in the Dehcho. These stories demonstrate how on-the-land camps provide a space for the youth to connect with the Land.

Connections with the Land



Figure 5. As the creek flows, the sunlight helps the earth to grow. The world is bigger than I had realized. It teaches us to take care of the earth and be mindful of nature. – DYETKC Youth

All youth at the KTCC took photos of First River and Kakisa Lake and eight of the ten youth at the DYETKC captured photos of the Dehcho (Mackenzie River) and Maoste (6 Mile)

Creek. The waterways were showcased, from close-up photographs of the riverbed to more distant vistas of the surrounding landscape. When sharing stories, the youth drew on their personal connections to the waters.

... how there is little fog on the water can be a representation of how there are still some things I need to learn, don't understand, or how I don't know where I will be later in life. And the way that the rest of the water and forest is clear is an indication of how certain I am about stuff I know and what I want to do right now with my life. (KTCC Youth)

The youth shared how the waters are reflections of themselves and described their family ties to these sacred places. For the youth, it is more than a river or a creek; these waters are part of their sense of identity, culture, home, and traditional practices. Relationships between the youth and the Land are sacred, cared for through generation to generation, and connected by stories from their Elders (Goeman, 2008). Through their visual stories and sharing circles, youth from both camps captured how they feel like they are part of the Land. As illustrated by one participant's comment during the KTCC sharing circle, "It's not being 'on-the-land;' it's like we are a part of the Land" (KTCC Youth).

The youth connected what they were learning and experiencing at camp with their past experiences of being on-the-land and listening to Elders' teachings. Through the processes of remembering, storytelling, and sense-making (Gaudet, 2016), the youth captured the intricacies and connections among the plant life and the larger forest network while making connections between the plants and the teachings they learned from their Elders. The youth explored the life of the forest from the bottom of the forest floor to the highest treetops. They took photographs of treelines, tree trunks, trees along the water, trees in the forest, trees by camp, tree branches,

spaces in-between the trees, and the leaves of different plants and shrubs to signify teachings of the Land, as well as their perspectives of the world.

Through creative expression in their images and reflections, the youth show how they see themselves as being part of the Land. Specifically, the youth view the Land as their home, life source, tradition, history, and teacher, and identified their roles and responsibilities to the Land. Experiences of being on-the-land were described through words like: “life”; “traditional learning”; “home”; and “comfortable, peace”. The youth also shared their feelings of being on-the-land through their spatial relationships: “getting away from ‘all that’ and my family”; “learning, spending time with Elders and meeting new people like these guys here.” By remembering what it feels like to be on-the-land, the youth acknowledged their responsibilities to protect the Land, which strengthened their connections with the Land, through reciprocity and mutual accountability (Wilson, 2008). The Land is living and layered with memories (Goeman, 2008), and, for the youth, being on-the-land brings about a remembering of responsibilities and relationships.

Reclaiming and re-honouring kinship relations is essential to re-envisioning and living self-determination for Indigenous Peoples (Daigle, 2018). The youth are re-honouring their kinship networks and cultural identities by being in the traditional places of their ancestors, learning the stories from the Land, while sharing their own stories of the Land. The youth emphasized that they want more opportunities to deepen their connection with the Land, by learning the stories of the Land from local Elders and Knowledge Holders. The youth described that they care deeply about the places they live and where their ancestors had travelled, and they recognize their responsibility to protect the Land.



Figure 6. [...] the way the camera focuses on this particular plant signifies how important it can be because of its medicinal purposes; but this does not entirely block out the rest of the forest as it is important too for food, plants, useful materials, etc. [...] I tend to focus on myself and not anyone else, kind of like in my own little world. But not so oblivious to others that I don't pay attention to my family and friends, hence the rest of the forest in the photo that I chose. – KTCC Youth

Enjoyment of the Camp Environment



Figure 7. Waking up and watching the sunrise and the fog on the water. And drinking hot cocoa in the morning because hot cocoa is my favourite. [It means] everything. It is a part of my home.
– KTCC Youth

From waking up to falling asleep, the experience of living on-the-land is illustrated through the youth's visual stories. They documented their meals, crafts they made, activities they participated in, sunrises and sunsets, the dancing northern lights, the flowing rivers and creeks, rocks and eagle feathers, bear scat on the ground, and fish that they caught. Their photographs

also illustrated the spatial network at camp: the varying dynamics, roles, and responsibilities of attendees, such as people cooking, eating, learning, laughing, playing, teaching, fishing, harvesting, and walking, as well as photos of people taking photos.

Through their visual stories, the youth continually emphasized their love for eating food from the Land. For example, DFN Grand Chief Herb Norwegian travelled by boat to the DYETKC one afternoon and brought a goose for the group to enjoy. Three DYETKC youth reported that eating the goose soup was their favourite part of the camp that day. As illustrated by one DYETKC youth, “[My favourite part of the camp today was] the soup and all the food today. We are doing better things than doing schoolwork.”

For Indigenous communities, sharing traditional food contributes to the longevity of health and well-being and passing on local knowledge between generations (Wesche et al., 2016). The youth learned how harvesting wild foods and medicines supports the continuity, translation, and persistence of local knowledge and skills (Wesche et al., 2016). Activities at camp that involve food preparation and harvesting give youth opportunities to be on-the-land with Elders while learning cultural practices, skills, and language, and facilitate youth access to traditional foods. Overall, on-the-land camps provide experiential opportunities to learn traditional ways of hunting, trapping, gathering, and preparing traditional foods and medicines, which is key to the survival of local knowledge in rapidly changing northern environments.

Youth at both camps indicated favouring the camp over school. The camp was a safe space for youth to escape potentially unsafe environments or temptations (e.g., drugs and alcohol) at home or in their community. On-the-land camps create a space of comfort, peace, security, and safety, which promotes learning and engagement (Bowra et al., 2021). The camp

environment allowed for youth to connect to the places they were learning about—physically, emotionally, mentally, and spiritually.

It's fun and better than school. In ... class we don't do anything. ... Camp is better than school because we actually get to do fun stuff here. (DYETKC Youth)

Peaceful. I get to learn more compared to school. I get to spend time with my friends. It's nice, quiet. I get to get away from bad things like drugs and alcohol. (DYETKC Youth)

In the sharing circles, the youth unanimously agreed that they would like to return for another camp and recognized how these camps support their relationship with the Land. When prompted to imagine their ideal on-the-land camp, the youth emphasized the importance of including cultural activities and language lessons that reinforce how they are connected to their homelands, ancestors, history, and traditions, as well as provide opportunities to practice the hands-on skills they have learned. The youth reflected that they understand the importance of land-based education opportunities, such as on-the-land camps, because they recognize the ways this learning space is created and nurtured for them to support connections with their community and family. Learning on-the-land, from the Land, is a relational and reciprocal process between learner and environment that is interdependent and interconnected (Bowra et al., 2021; Wilson, 2008). The youth reflected that the Land is both school and teacher (Wildcat et al., 2014).

My relationships and connection to the land and lake are a deep and sacred one. It's a big part of tradition and ancestry from a long, long time ago. Camps out "on-the-land" does support and enhance that relationship; it's like reconnecting with an old friend, everything comes back and it's good to be with nature for a change, to get away from an urban rural lifestyle for a bit. And to strengthen my connection with the land and to

exercise things I've learned from parents and Elders. I'd definitely like to see more camps like this in the future. (KTCC Youth)

As shown through the youth's visual stories, on-the-land camps create a space for youth to learn about ways to protect the Land while experiencing it first-hand, and in doing so, the camp environment fosters relationality and reciprocity between youth and the Land. Waking up, eating, learning, and sleeping on-the-land is part of everyday life at camp, which enhances the youth's connections to the environments they are learning about. As shown at the KTCC and DYETKC, a collaborative, cohesive, and "care-full" camp environment is critical to effective youth education and engagement (Reid et al., 2021). "Care-full" refers to the values, relationships, and practices of being full of care, in ways that are embodied and felt by others (Dufty-Jones & Gibson, 2022). This space provides opportunities for Indigenous youth to become lifelong learners with a connection to and awareness of their community, culture, history, and language (Obed, 2017). Experiencing life on-the-land cannot be taught in a classroom, at mainstream schools, or through a textbook; it must be felt morning to night (Ieshonténhawe King, 2021).

Land-based Learning



Figure 8. As the sun casts shadows upon the ground, the people grow as they teach and listen and learn. A memory from a time I will remember as time goes on. [It means] to learn more every day. To listen to stories from my elders. – DYETKC Youth

Using a relational approach, these on-the-land camps nourished a deep cultural understanding and interconnectedness, where youth learned from the Land, camp instructors, and peers. The relationships between the youth and the others at camp were a foundational part of their experiences of living and learning on-the-land. The youth participants indicated a desire for further opportunities to be on-the-land, learning from Elders. They acknowledged that

Indigenous Knowledges are passed down from generation to generation, and that place matters: being in the places where that knowledge comes from is essential to effective knowledge transfer.

I'd like to be "on-the-land" as much as possible. Activities like traditional knowledge being passed down from old to young are very important to include stories are a big part of our tradition, it's how we pass down knowledge from one generation to the next.
(KTCC Youth)

Through storytelling, the youth's relationship with the Land grows and expands. The practice of spending time together on-the-land builds community and family relationships and fosters connection (Corntassel & Hardbarger, 2019). Building relationships on-the-land holds fosters an intergenerational community of people and holds immense value for knowledge co-production (Noah & Healey, 2010).

All the youth participants captured in their visual stories the various activities that were led at the camp and reflected on their experiences of engagement. The youth's visual stories showcased the activities that were led by camp instructors, including traditional activities such as making medicine bags, drum dancing, fishing, hunting, berry-picking, learning the Dene Zhatie language, cooking and eating traditional foods, learning about the Dehcho Land Use Plan, and science-based activities like testing the water quality of the waterways, and measuring different components of the forest ecosystem (e.g., tree diameter, forest coverage, plant identification). These activities taught youth ways to understand and protect the Land through a process of learning and introspection. The youth reflected how the on-the-camps show "two-ways of seeing" the world (Mack et al., 2012), which foregrounds Indigenous Knowledges and ties in

Western knowledge systems. At the on-the-land camps, everyone and everything is a teacher. The camp instructors teach youth how to respect and honour the Land. The lessons shared at camp are directly tied to the community's needs, values, and ways of knowing.

Youth participants highlighted the importance of hands-on learning, and the activities they enjoyed the most were those where they were physically undertaking a task (e.g., sampling water, collecting tree cores, measuring tree width, beading, sewing, fishing, berry-picking, cooking traditional foods, hunting) rather than those with lecture-based content. The youth liked activities where they could apply their knowledge and skills, and they were very interested in similar future opportunities. The youth recognized the ways that science and Traditional Knowledge systems complemented each other. They emphasized the importance of including both cultural activities and science activities at camps; however, there was a stronger preference for the cultural activities, as well as a strong desire to spend more time doing cultural activities at future camps. During the sharing circles, the youth described their ideal future camps, which featured more cultural activities that can teach them how they are connected to their homelands, ancestors, history, and traditions, as well as provide opportunities to practice the things they have learned. The youth want opportunities to be on-the-land learning from Elders and Knowledge Holders, and to spend more time doing cultural activities compared to science activities in school.

Conclusion

Indigenous communities across the North are working to reconnect youth to the Land through land-based education programs, such as on-the-land camps. Using an IRP, we explored what Dene and Métis youth experienced and learned during on-the-land camps in the Dehcho region of the NWT, as well as the ways these camps provided a space for the youth to connect with the Land. Our research indicates that land-based education programs, like on-the-land camps, are effective and possibly critical mechanisms by which relationships may be fostered between youth and the Land, particularly for youth who have limited opportunity to experience land-based activities otherwise. This paper reveals the ways on-the-land camps create a space for youth to see themselves as part of the Land.

To assess the efficacy of land-based education programs, it is important to understand the perspectives of the participants involved. By creating a space for participants to share their experiences, such as what they learn and enjoy, we can observe the impacts of land-based education on those who participate. Indigenous Peoples have been educating youth through land-based pedagogies since time immemorial, and it is essential to support the continuation of land-based practices, stories, and teachings. On-the-land camps offer transformative experiences for Indigenous youth to connect with their peers, Elders, ancestors, and the Land that holds those relations. As one KTCC youth said, “Too bad someone who wasn’t there to experience it won’t have the same breathtaking and ‘in awe’ experience as strongly as when you witness it first-hand on-the-land.”

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no matter how deep
you try to bury us
we will always
find a way
to grow

Chapter 4: Empowering northern youth as Land Stewards through land-based programs in the Northwest Territories

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Abstract

Indigenous land-based programs, including on-the-land camps, have a long history in the Northwest Territories (NWT) and are increasingly being recognized across the broader Arctic regions. While existing literature primarily documents the impacts of these educational programs on cultural and environmental engagement, comprehensive research into their role in fostering leadership and Land Stewardship among northern youth remains limited. This study, conducted in partnership with Ecology North, Ka'a'gee Tu (K'ágee Tue) First Nation, and Wilfrid Laurier University, explores the empowerment potential of on-the-land camps through photovoice. We engaged 19 northern youth from Nunavut, Yukon, and the NWT, ages 18 to 30, in two on-the-land camps held in August 2021 to explore their land-based experiences and leadership development. This paper delves into how these camps are more than educational spaces for youth engagement, but also as platforms for youth to emerge as community leaders and Land Stewards. Our results suggest that on-the-land camps facilitate leadership development and Land Stewardship by creating spaces where youth can safely engage in learning, caring, belonging, sharing, and nurturing practices. These findings contribute to a nuanced understanding of how land-based programs can play a crucial role in addressing environmental and socio-cultural challenges through youth empowerment and leadership development.

Keywords: land-based education; youth empowerment; Land Stewardship; leadership; photovoice

Introduction

Indigenous Nations have been practicing land-based education since time immemorial – it was the way children and youth were taught to live in relation to the Land (Bowra et al., 2021). However, colonial power systems have and continue to attempt to disconnect Indigenous Peoples from the Land, their identity, language, culture, and ways of knowing and being (de Leeuw & Hunt, 2018). Colonial mechanisms of dispossession include the forced removal of Indigenous Peoples from their Land, suppression of languages and cultural practices, and imposition of colonial education systems that alienate Indigenous youth from their identities, communities, and the Land (Harris, 2004; Lees et al., 2021). As a direct response to colonial power systems and accompanying mechanisms of dispossession, Indigenous land-based education and land-based programs have been developed and implemented by Indigenous Peoples for decades around the world (Cluderay et al., 2022).

Indigenous Peoples use land-based education and land-based programs to reconnect communities to the Land, revitalize local Indigenous Knowledges, and foster cultural identity while promoting Land Stewardship, resurgence, and Indigenous self-determination (L. B. Simpson, 2014). Land Stewardship is capitalized to emphasize the deeper, relational meaning of the Land and caring for the Land through Indigenous ways of knowing. interconnected cultural, spiritual, and land-based practices. Land Stewardship is rooted in reciprocity, respect, and a recognition of the Land's agency and teachings. By capitalizing the term, we align with Indigenous ways of framing the Land as central to identity, governance, and knowledge systems and Stewardship as an act of relational accountability and sovereignty.

In this paper, we refer to “land-based education” and “land-based programs” as terms that include cultural specificity and relationality with the Land (Bartmes & Shukla, 2020).

Specifically, land-based education refers to the foundational epistemology of land-based programs, encompassing local Indigenous Knowledge systems, worldviews, and relationships with the Land (Bang et al., 2014), while land-based programs are the practical applications of local Indigenous Knowledges through activities and teachings that occur on the Land (Ljubicic et al., 2021). Indigenous epistemologies and pedagogies are central to land-based education, which centre and reflect the needs, values, teachings, and cultures of the Indigenous Nations where the programs are hosted (Cluderay et al., 2022; Hansen, 2018).

Land-based programs, rooted in Indigenous Knowledges of the Land⁸, work to (re)establish reciprocal relationships with the Land through the sharing and practice of land-based education (Cajete, 1994; Cluderay et al., 2022; J. Redvers, 2016). Land-based programs include a breadth of practices, activities, peoples, and places – ranging from individual mentor-mentee relations to programs that include many stakeholders, individuals, communities, staff members, mentors, and participants (Bowra et al., 2021; McDonald, 2023). Land-based programs in northern Arctic and sub-Arctic regions of Canada, such as the Northwest Territories (NWT), are often hosted in sacred or traditional locations in areas identified by the local Indigenous Nation or community and are centered around the sharing of local Indigenous Knowledges (J. Redvers, 2020). Indigenous communities have described these programs as opportunities to come together to learn, share, and discuss important topics that are community-

⁸ Land (capital L) is a relational term that moves beyond a description of the physical environment (Tahsin, 2021). Land includes relationships with peoples, animals, ancestors, cosmos, and ideas (Goeman, 2008)

relevant (Reid et al., 2021). Importantly, land-based programs are unique to every community that hosts them (H. Gill & Lantz, 2014).

While there are many types of land-based programs, this research focuses on the impacts of *on-the-land camps*, which are spaces to share knowledge between generations, connecting communities to the Land through experiential and relational learning (Ljubicic et al., 2021; Redvers, 2016). Moreover, on-the-land camps can create a learning space for individual and collective healing with the Land (Bowra et al., 2021; Redvers, 2016). For example, through a land-based research study in the Dehcho region of the NWT, Woodworth et al. (2024) demonstrated the ways in which on-the-land camps foster and support relationships between Dene and Métis youth and the Land by creating a space for the youth to see themselves as part of the Land. However, there remains a gap in understanding how such programs can foster leadership development and Land Stewardship among northern youth. Moreover, there is limited research that explores the ways land-based programs can create a space to empower northern youth to be leaders in their communities through the values and practices of Land Stewardship.

In this paper, we explore northern youth's visual stories from two on-the-land camps held in 2021 in the NWT, bringing together Indigenous and non-Indigenous youth (hereby referred to "northern youth") participants from Nunavut, Yukon, and the NWT. Through this land-based research, we answer the following question: How do on-the-land camps empower northern youth to be leaders and Land Stewards in their communities? To answer this question, our paper focuses on two key objectives: (1) exploring youth experiences and lessons learned during on-the-land camps and (2) understanding how on-the-land camps can empower and support youth as community leaders and Land Stewards. We argue that on-the-land camps foster leadership and Land Stewardship by creating safe spaces for learning, caring, belonging, sharing, and nurturing,

thus equipping youth to address sociocultural and environmental challenges and changes in their communities.

Research Context

The research described here is the product of a longstanding partnership between Ecology North, Wilfrid Laurier University (WLU), and Ka'a'gee Tu First Nation (also spelled *K'ágee Tue*, (KTFN)). These groups co-hosted the Water Stewardship Gathering (WSG) and the Young Leaders' Summit on Northern Climate Change (YLS) in August 2021. These camps are annual events facilitated by EN and the lead author's involvement was offered to support the planning and implementation of the camps.

The 5-day WSG was held in Kakisa on First River (co-facilitated by Ecology North, KTFN, WLU, and the Government of the Northwest Territories), and the 5-day YLS was held at B-Dene Adventures on Great Slave Lake on the territory of Yellowknives Dene First Nation (co-facilitated by Ecology North, Yellowknives Dene First Nation, Arctic Council, WLU, Trent University, the University of Victoria, the Government of the Northwest Territories, the Government of Canada, and Youth Forums Canada). At both the WSG and YLS camps cultural activities were led by Dene and Métis Elders and Knowledge Holders; science-based activities were led by local community monitors, land-users, and researchers; and leadership discussions were facilitated by local climate leaders and policymakers (collectively referred to as “camp instructors”).

In each case, Ecology North recruited youth between the ages 18-30 who self-identified as living in the NWT (for WSG) or as living in Nunavut, Yukon, or the NWT (for YLS). Recruitment strategies included asking local First Nations for nominations, and sharing information via email newsletters, Facebook posts, local radio stations, and news outlets. Both camps took place independently of our intention to conduct this study, and youth participation in the camp did not require participation in the study. Ten youth attended the WSG, seven of whom participated in this research. Fourteen youth attended the YLS, all of whom participated in this research.

In total, 19 northern youth participated in this research. The northern communities represented (including the number of youth from each community) were Cambridge Bay, NU (1); Dawson City, YK (1); Hay River, NWT (1); Inuvik, NT (1); Iqaluit, NU (5); Marsh Lake, YK (1); Ulukhaktok, NT (1); Whitehorse, YK (2); and Yellowknife, NT (6). The participants were gender-diverse, including self-identified men, women, two-spirit, and non-binary youth. The youth participants decided whether they would like to remain anonymous in this work or not: 3 participants chose to remain anonymous, and 16 participants chose to have their names shared.

Methodological and Theoretical Framework

Our research is grounded in an *Indigenous Research Paradigm* (IRP) and theoretical framework of Land Stewardship. Wilson (2008) shared how Indigenous Research builds relationships and bridges distance between peoples, ideas, the Land, and the cosmos. Indigenous Research refers to “research done by or for Indigenous peoples” (Wilson, 2008, p. 16). An IRP

utilizes Indigenous methods to explore the meaning of stories through land-based practices and leadership (McGregor et al., 2010, p. 111). Furthermore, an IRP is rooted in relationality and relational accountability, which guide the research process from start to finish, influencing the choice of research topic, methods of data collection, approaches to analysis, and presentation of ideas (Wilson, 2008).

Using an IRP for research with northern Indigenous and non-Indigenous youth was a deliberate choice to align the research process with the Indigenous values, contexts, and relationships that shape northern regions. Moreover, the North is shaped by the profound influence of Indigenous Knowledges, cultures, and governance structures. Hence, an IRP provides a framework that is inclusive of both Indigenous and non-Indigenous youth, recognizing their unique roles and contributions while fostering a collective sense of responsibility toward the Land and one another. Relationality, relational accountability, and Native scale are the elements of an IRP that guide our analysis and presentation of ideas. *Relationality* refers to the relationships that form us as people – in other words, we are our relationships (Wilson, 2008). *Relational accountability* refers to the roles, responsibilities, and obligations for building, maintaining, and strengthening respectful, reciprocal relationships (Ljubicic et al., 2021; Ward et al., 2021; Wilson, 2008). *Native scale* recognizes that past, present, and future happen simultaneously and interdependently through “a web of connections and relationships” (Wilson, 2008, p. 77). These elements are circular and are intrinsically tied to community (H. Martin, 2021; Wilson, 2008).

The stories shared within this paper are recognized relationally, and we consider all the relationships that form the context of this research. Every story is made up of thousands and millions of relationships coming together – from the past, present, and future (Page et al., 2022).

These relationships form us, our world, cosmos and realities; we exist while/by/*being* in relation (J. Redvers, 2020).

Embedded in our IRP is the theoretical framework of Land Stewardship, which broadly refers to the protection of the Land through relationality, relational accountability, responsibility, reciprocity, care, and guardianship (Popp et al., 2020). Land Stewardship acknowledges the Land as a spiritual and living entity (Russell et al., 2021), which is central to Indigenous identities, cultures, and governance systems (Mashford-Pringle & Stewart, 2019). By actively engaging in Land Stewardship, Indigenous communities (re)connect with the Land and pass on teachings to the next generations, which supports the resurgence of cultural practices tied to the Land and self-determination of Indigenous Peoples (Ward et al., 2021).

Resurgence involves the revitalization of Indigenous land-based practices, languages, and ways of life that were disrupted by colonization (Cunsolo et al., 2017). Land Stewardship is a direct expression of *self-determination*, which refers to the rights of Indigenous Peoples' sovereignty as caretakers of the Land with their values, practices, and ways of knowing (Corntassel, 2012; Dylan & Smallboy, 2016a). Self-determination supports Indigenous sovereignty to ensure communities can thrive and sustain themselves on their own terms (Grey & Patel, 2015).

Within relational research, it is crucial to identify and position ourselves, the researchers, within the context of this study, as who we are as people informs how we explore this topic. In positioning ourselves within this research, we aim to uphold relational accountability to the communities, youth participants, and Land that guide and inform this work. Our approach is shaped by a recognition of responsibilities, respect, and reciprocity, and we are committed to

ensuring that the outcomes of this research are aligned with the values and priorities of the communities and participants involved.

The lead author, Steph Woodworth (they/them), is a trans-nonbinary settler scholar from Dryden, ON, located in Treaty #3 on the territory of the Anishinaabeg. They currently live in Sòmba K'è, Denendeh (Yellowknife, NWT), on Chief Drygeese Territory, the homelands of the Yellowknives Dene First Nation and the North Slave Métis. They are completing their PhD in the Department of Geography, Environment and Geomatics at the University of Ottawa and working full-time as the Project Director for Northern Youth Leadership, a charitable organization that leads on-the-land camps and land-based programs for northern youth. In their research and work, they contribute to land-based programs that create spaces for northern youth to deepen their connections with the Land and develop leadership skills.

Beth Hudson (she/they) is nêhiyaw originally from Treaty 8 territory and currently living in Łíídlıı Kúé (Fort Simpson) in Denendeh (NWT). She is a passionate community programmer, facilitator, and researcher who has delivered and evaluated programs across the NWT and believes that amplifying the voices and stories of Indigenous youth is important when working closely with northern communities. She has been a part of multiple research projects and programs in the Deh Cho Region that primarily focused on exploring the lived experiences of Indigenous youth participating in land-based, wellness, sport, and recreational programming.

Brandon Pludwinski (he/him) grew up in Toronto, Ontario and now lives in Sòmba K'è, Denendeh (Yellowknife, NWT). Brandon is a full-time PhD Candidate in the Department of Geography, Environment and Geomatics at the University of Ottawa and Environmental Education Manager at Ecology North. In his doctoral research and non-profit work, he explores

the relationships between capitalism, colonialism, and environmental change, and how different programs and services can reinforce or reject these relationships. He works to support land-based programs and services for leadership development, Land Stewardship, and social justice.

Sonia D. Wesche (she/her) is an Associate Professor in the Department of Geography, Environment and Geomatics at the University of Ottawa. As a settler scholar who has strong ties to unceded Anishinaabe Algonquin territory where she was born and now lives and works, she collaborates with northern Indigenous communities and partners to address local priorities related to environmental change and community health and well-being.

Andrew Spring (he/him) is an Assistant Professor in the Department of Geography and Environmental Studies at Wilfrid Laurier University. As a settler scholar who has worked with northern Indigenous communities since 2014, he conducts community-based research to support sustainable food system initiatives in the North, with a focus on Land Stewardship and Indigenous food sovereignty.

Aligned with our methodological and theoretical framework, we implement an adapted photovoice method to explore the ways land-based programs, specifically on-the-land camps, can create space to develop leadership and Land Stewardship for northern youth. We argue that photovoice is a powerful method for youth to share their concerns and priorities for Land Stewardship in the North, and the ways land-based education programs empower Indigenous land-based leadership practices.

Method: Photovoice

Using an IRP through a theoretical framework of Land Stewardship, we adapted and implemented photovoice for relational storytelling. *Photovoice*, which is a participatory and community-based research method, combines photographs and storytelling to share experiences of the world (Woodgate et al., 2020). Within an IRP, photovoice can be used as a decolonizing tool to disrupt colonial research hierarchies (Ahmed et al., 2022). Instead of the researchers controlling the narrative, participants shape the process of Knowledge production, choosing what they document and how it is shared (Abma & Schrijver, 2020). The visual components reflect Indigenous Knowledge systems, which often include non-verbal, experiential forms of learning and expression (B. E. W. Hudson, 2017; Luig et al., 2011).

Photovoice empowers participants to take an active role in the research process, giving them control over what aspects of their lived experiences they want to represent and share (Woodgate et al., 2020). Within participatory and community-based research studies, photovoice is conducted by participants separately from researchers and is shared back after the visual stories are recorded (Evans-Agnew & Rosemberg, 2016; Lines & Jardine, 2019). We adapted photovoice to be an immersive and collaborative experience on-the-land where participants took photographs daily at the camps and shared stories about their images every night with the lead author.

We integrated photovoice into all aspects of the camps as an immersive activity. On the first day of each camp, every youth participant was invited to use their own personal device or borrow a digital camera to capture photographs of what they were experiencing and learning, then reflect on their experiences at the end of each day. Reflections could be shared orally, either

individually, in pairs, or in groups, or via written reflections using a printed worksheet. In summary, each day at the camps, the youth were asked to share photographs and reflections about their favourite part of the camp and the most important teaching they learned, as well as describe how their photographs show and tell others about what they learned and enjoyed.

For each camp, we conducted photovoice over the course of three days. While several of the youth did not share stories every day, others shared more than one story per day. In total, the WSG participants shared 18 visual stories and the YLS participants shared 36. During the two on-the-land camps, participants captured photos that represented their relationships with their surroundings—the Land (including waters), traditional foods, camp community, and cultural practices. These images provided a medium to express their personal and communal experiences in a way that was grounded in their relationship with their surrounding environment.

Storytelling was central during the photo-sharing sessions, as participants explained the meaning behind their photos to convey their experiences at the camps to others. This process is relational, as the participants were not just talking about the subject but also engaging in a reciprocal sharing of teachings and perspectives. The youth participants shared stories through pictures and words that are made up of all their relations; their past, present, and future realities that are entangled in an interconnected web.

On the last full day of the WSG, we closed the photovoice project with a sharing circle where the youth discussed their concerns, priorities, ideas, and perspectives regarding land-based education in the NWT. The 3-hour sharing circle was facilitated by the lead author using a question guide (see [Appendix 4](#)) and was audio-recorded. While we were unable to host a

sharing circle during the YLS due to programming time constraints, we felt it important to include insights from the WSG group in our analysis.

To supplement the photovoice process, the lead author was immersed in the camp environment and recorded detailed observational notes of their daily experiences, alongside photographs and videos. These observations were heavily informed by informal conversations with the youth, camp instructors, and camp staff. Observations included, but were not limited to, the following: environmental features and weather conditions; peoples' expressions, activities, and emotions; self-reflections and sensory experiences; cultural practices and activities; science lessons and activities; the camp schedule; camp meals and preparation of traditional foods.

This method was a process of co-constructing knowledge, rather than extracting information. Photovoice created a platform where knowledge was collaboratively built between participants and researchers. The method enables a collaborative environment where participants not only share their perspectives but also interpret their own contributions in dialogue with their peers, camp instructors, camp staff, and researchers. As the lead author facilitated this process, they became a co-learner rather than an outsider, fostering mutual respect and shared meaning-making.

Thematic Analysis

Our analytical approach was informed by our IRP, theoretical framework, and Braun and Clarke's (2022) *Thematic Analysis: A Practical Guide*. Themes were identified, analyzed, and interpreted by Woodworth and Hudson in a northern land-based context and cannot be separated

from the places or peoples from which the stories emerge. Furthermore, the thematic analysis was informed by the researchers' relationships developed between them and the community partners, youth, camp instructors, and camp staff. We remain accountable to these relationships from the design phase of the research to the dissemination of the results, and long after the project is finished.

Photovoice reflections and sharing circle discussions were transcribed, then coded thematically in Kakisa, NWT by Woodworth and Hudson. First, we printed the transcriptions and then identified and coded themes using coloured markers. Concurrently, we displayed the images associated with each story on a screen to aid in identifying the themes. We began our qualitative analysis by immersing ourselves in the data collected through photovoice and participant narratives from the on-the-land camps.

Specifically, we used relationality and relational accountability as our foundation then analyzed the stories and images shared by the youth through these principles. Next, we created codes that were guided by our theoretical and methodological framework. These themes not only reflected the lived experiences and practices of the participants, but they also emphasized the importance of relationships—with the Land, the community, and Indigenous Knowledges—at the core of Indigenous worldviews and methodologies. By using concepts that emphasize relationships, our themes reflect the interconnectedness valued in Indigenous methodologies.

Initial coding was performed to identify recurring concepts and ideas expressed by the youth participants, which included: systems of power; activities; learning; feelings and experiences; changes; concerns; priorities; community; camp environment; connections with the Land; intergenerational connections; memories of home; bringing Knowledge home; life in the

North; and North-South comparison. Informed by our IRP, each of these codes were developed deductively. Conducting a deductive analysis ensured that our research was grounded in and contributed to our theoretical and methodological framework. We started with clear definitions of the values and principles at the centre of our IRP, then identified and interpreted the themes through the data set. The themes and codes were then transferred to NVivo. We recognized that these initial codes were interconnected and reflective of the participants' relationships with each other, their communities, and the Land. To honour these relationships, we engaged in an iterative process of grouping related codes and identifying overarching patterns. From this process, we developed the final themes for analysis: learning; caring; belonging; sharing; and nurturing.

Our IRP and theoretical framework guided us to explore the multifaceted ways in which the on-the-land camps empowered youth, aligning with the principles of relationality and honouring the voices of the participants. Moreover, we understood that the initial codes were not isolated but rather deeply interwoven and braided, reflecting the holistic and relational nature of the participants' experiences. By examining how these codes intersected and complemented each other, we were able to distill the essence of the data into coherent themes that honour the participants' voices and the relational context of the research.

It was essential to verify with the youth and partners what is (and is not) publicly shareable. To maintain respect and relational accountability for sharing Indigenous Knowledges and personal experiences (Wilson, 2008), all text and photographs were verified with every youth participant. Informed consent was an ongoing process with the youth and researchers as we moved through the research stages. Specifically, we maintained contact with the youth via email, texts, and social media (i.e., Instagram direct messaging). We sent digital versions of photographs and transcribed stories to each participant for approval using an encrypted One

Drive folder. The identified themes from the analysis were verified with the research partners before the publication of this paper. Additionally, the youth participants and research partners received a photobook which featured a collection of all the youth's visual stories from their respective camp(s).

Results

It is critical to understand this research relationally, as the stories shared are inherently relational. We use photovoice as a method to explore relationships on-the-land. Importantly, we are not forming or discovering “new knowledge”; we are creating a new set of relationships with ideas, peoples, and places. The ideas shared in this research are not fixed objects; they exist relationally. The youth's visual stories are alive, becoming and being, and ever evolving. Therefore, this research cannot be taken out of context, time, place, and scale, and we recognize that the youth's stories will grow and change as they themselves grow and change.

The use of photovoice at the two on-the-land camps provided the youth a space and reflective practice to observe, document, and share their experiences. This method supported the youth in capturing daily moments of connection, learning, and transformation. Moreover, the youth were able to express their relationships with the Land visually and narratively, highlighting how the camp activities and accompanying land-based teachings influenced their perspectives, values, and sense of identity. We structure our photovoice results around five key themes reflected in the key experiences described by the youth through their visual stories: learning; caring; belonging; sharing; and nurturing. The youth's visual stories bring insights into the ways that on-the-land camps empower youth to be Land Stewards in their communities.

Learning



Figure 9. Image from Siku Rojas of their beading project during a workshop at the YLS.

It's really showing the importance of being able to just connect into the moment with what's going on around you. I personally think it's important in the way we learn we are able to learn in the way we need to. I think Elders are really good at knowing, being able to read people, and being able to give people what they need in the moment. I think that's definitely lost in our education system in Canada, different ways of learning different ways of being able to know things. For me, being able to bead while I'm listening to things, being able to keep my hands busy during something, helps me feel like I am having a more whole experience rather than just having things come into my mind. – Siku Rojas (YLS)

Both on-the-land camps fostered a dynamic connection between leadership and learning, where the youth participants developed leadership skills by engaging directly with the Land and through shared experiences within the camp community. As the youth learned about the Land through local Indigenous Knowledges, Land Stewardship practices and values, and cultural teachings, they were encouraged to take on leadership roles within their communities, regions, and territories. The camp activities and accompanying photovoice stories demonstrate how land-based programs nurture a sense of responsibility, empowerment, and youth leadership.

The youth frequently discussed acquiring teachings, skills, and cultural practices through hands-on activities from Elders, camp instructors, peers, and from the Land itself. At camp, everything offers a teaching moment, and everyone is a teacher. By experiencing and observing changes to the environment first-hand, the youth learn about the changes that are impacting the environment. The youth highlighted how Elders respect the Land by holding a deep responsibility to the Land. Using a camera to document how the Land informs their identity, practices, and Knowledge, the youth shared stories about how the camp provided an empowering, holistic, safe learning space. The camp leaders helped the youth feel confident in

sharing their stories and having their voices heard, and they contrasted it to the school setting.

YLS participant Emily Ross shared,

The setting definitely challenges the traditional [Western] conception of what learning space is. I think it's also a reminder of how much power and learning there is in normal, personal conversations. This was also a great setting to talk about challenging preconceptions of "activism" and using story to make change.

During activities about non-violent direct action, the youth engaged in conversations about different forms of activism, particularly those grounded in Indigenous values, storytelling, and land-based responsibilities. These sessions challenged dominant conceptions of activism as only large-scale, confrontational events, and instead emphasized story as a powerful tool for social change. Non-violent direct action broadened the youth's view of what activism can look like as it relates to Land Stewardship.

When youth learn *from* the Land, they connect with the Land, with themselves, with their families and ancestors, with the community of people at camp, with their communities back home, with ideas, and with the cosmos. The youth draw from their surroundings and connect what they have learned, to what they are learning, and to their visions for the future all at the same time. They carry memories and relationships from their past to the spaces and places they are in the present, which impact how they will take in their learning, as well as how that will impact their future. Moreover, the youth are considering environmental and sociocultural changes in the North, in Canada, around the world, across space-time. They are taking in what they are learning in that moment and applying it to the future and how they will bring that Knowledge home. Aislyn Omilgoetok (YLS) shared their photograph of the moon:

The moon is so bright. It's so bright. There's light all throughout the day, but it shows there's as beautiful light at night. It gives me hope for the future days, the future beautiful days, and getting to learn more in the future.

At the camps, the youth make linkages between the activities they were engaged in and the broader impacts of environmental and socio-cultural changes on northern communities, especially Indigenous communities. Changes identified in the youth's visual stories included personal growth, shifting relationships, and socio-environmental transformations, particularly as they relate to climate change and cultural adaptation. Whether changes in the environment or in the lives of people, these shifts are understood as part of a dynamic relationship between people and the Land. Specifically, the youth continually voiced their concerns about the ways climate change adversely impacts northern Indigenous communities and low-income areas. As Myrah Graham (WSG) shared:

Spending time with Elders, one of them was telling me about the future how the world is going to be losing water. They [settlers] are going to look at this area that is water rich and they are going to want it. So that we need to protect our water. [...] To me, like why is water important it's because water gives us life. Like when we were thirsty that was hilarious to me. Like omg the irony. And when people couldn't leave because the water. Like wow here we are talking about water, and water is showing us all of her ways. So, with climate change, one of the themes we heard is that it's getting more unpredictable. I'm glad we talked about real tangible things that are used day to day because that's what ties into us not just the fact that it's beautiful, but how do we feed our family, our community. And if you can't get on the water because it's so unpredictable then you can't go hunting and feed your community. And the concern for me is that is going to impact

indigenous communities and communities that are lower on resources. So, it's very burdensome on those communities.

The youth also voiced concerns about the limited opportunities for young people to spend time on-the-land with Elders. To build and strengthen their connections with the Land, the youth emphasized the importance of learning from Elders at land-based programs, like on-the-land camps. Reegan Jungkind (WSG) reflected on growing up in the Northwest Territories in the closing circle:

[...] when you grow up on the land with nature, surrounded by it, you learn to respect it, it teaches you, the land teaches you to respect it. That's something that builds the connection between you and nature. You are not above nature; you are part of it.

Caring



Figure 10. Image from Emily Ross of Elder Paul leading a medicine walk at the YLS.

Leadership is caring – this was brought up by Bridget at the gender and leadership session. I think this is important because this kind of leadership is so often invalidated under current systems (capitalism/colonialism), but it is a path to reconnection – with land and community – that can combat the disconnect so deeply related to anthropogenic climate change. For me, this photo really embodied the importance of connection to Land in the face of climate change. So often, climate change can feel abstract/removed, but walking with Paul was a reminder of what we have to lose in the climate crisis, and everything we have to save. It was also a reminder personally of how much more learning and connection building I have to do with the land. – Emily Ross (YLS)

The on-the-land camps taught the youth practices of care and of rebuilding connections with the Land that colonial and capital power systems work to destroy. The youth are aware of and concerned about the colonial-capitalist underpinnings of education systems in Canada and their visual stories show an ongoing resistance to such systems by acknowledging that leadership and Land Stewardship must be rooted in caring for the Land. The youth expressed deep care for their communities, the environment, and each other. Their concerns and priorities centered around Land Stewardship and socio-cultural well-being and reflected a relational accountability to the Land and their people. The feelings and experiences expressed by the youth in their visual stories reflects how Knowledge is more than intellectual—it is also embodied and lived. As researchers, we demonstrate accountability to the youth's well-being and narratives through an ethic of care by honouring the emotional aspects of their experiences at camp. Caring is to live in relation with the Land, which is a style of Indigenous Guardianship, Land Stewardship, leadership, and mentorship.

Youth expressed how they felt cared for by the Elders, their peers, the camp instructors, and camp staff at both on-the-land camps. When youth are cared for, they learn how to care for others in return; the care received nourishes the care that can be given. This care ripples through the camp community and is cultivated out of learning, sharing, belonging, remembering, and nurturing. This care also extends beyond the camp and into the youth's home communities. To illustrate, the youth discussed how land-based practices with Elders and family members at home, such as medicine walks, berry-picking, hunting, harvesting, and fishing, are foundational in supporting their relations with the Land through an ethic of care. When youth care about the Land, they care about what's happening to the Land, what happened in the past, and what's

going to happen in the future. Their care develops simultaneously through memories of the past, experiences in the present, and visions for the future. As illustrated by Tiana Lemon (YLS):

To take a step back and remember and appreciate where we came from, what we have, and that we need to take care of it. It's really important to appreciate what we have and realize how lucky we have it, and to keep it this way for our future generations.

Youth also discussed the need for self-care practices while on-the-land, such as sitting by the fire, drinking tea, watching the sunrise and sunset, stargazing, listening to and observing their surroundings, going on walks, playing with dogs, laughing with friends, swimming, canoeing, boating, amongst others. Learning on-the-land needs to be balanced with these moments of self-care, as being on-the-land involves substantial physical, emotional, mental, and spiritual energy (Rasmus et al., 2014). The youth described how it is necessary to care for yourself to be able to care for others. As Lena Korgak-Stokes (YLS) shared:

To take care and work on issues like climate change, you've got to remember to take care of yourself too.

The youth expressed concerns about the ways people do not care for the Land because they are not connected with the Land. The youth shared how it is essential for people to care for the Land to form a land-based identity and combat the colonial-capital disconnect. The youth expressed concerns that there are not enough opportunities to be on-the-land to learn, heal, and connect. The youth are worried for others who do not have the same opportunities to be on-the-land with Elders, to establish that relationship between themselves and the Land. As Issie Thomas (WSG) questioned during the closing circle:

How do we expect people to care about the environment and love that Land if they don't have that connection to the Land?

Belonging



Figure 11. Image from Reagan Jungkind at the WSG of the youth cooking food on the fire.

[...] when we were doing the closing circle today and everybody was talking about their experiences being people and their experiences being young leaders doing things in their communities. It reminds me that there are other people like me, helping to do different things in the Northwest Territories, and the goodness that we all have and the connections that we are making here, which will help us in the future. These are really good people to reach out to if I ever need anything. Everyone is so willing to help. I think that will stick with me and it always sticks with me when I do this kind of stuff, like the connections that I make. [...] The sense of community that we had during the camp, us all working together towards a common goal, and the differences of cultures reflected by different people. – Reegan Jungkind (WSG)

Throughout their visual stories, the youth demonstrated how on-the-land camps cultivate community and nurture a sense of belonging. Deep social bonds were created through helping each other learn new skills, encouraging one another, and supporting each other's mental health and emotional well-being. Conflict resolution and communication skills were developed through shared challenges, team decision-making, and collective problem-solving. The sense of belonging extends beyond the camp environment, the youth feel that they belong in networks of support that can carry them into other parts of their life, which include mentorship pathways for intergenerational knowledge sharing and leadership development. Overall, the connections between community and belonging highlight the interconnectedness of the youth participants within the broader social and ecological systems of the North.

The community of care at the on-the-land camps nourishes a sense of belonging. As the youth learn together, their connections strengthen – connections between themselves, each other, the ideas, the Land, their families and ancestors, and the cosmos. Throughout the camps, the youth formed close bonds with each other and frequently highlighted how they enjoyed the time

spent together on-the-land. After a year of isolation due to COVID-19, the youth felt especially happy to connect and learn with others. The youth expressed their feelings and experiences of belonging through words, such as: appreciation; closeness; collaboration; comfort; community; connection; cooperation; companionship; enjoyment; fun; happiness; laughter; listening; love; respect; uplifted; and valued. To illustrate, Kate Shanrey Mendoza (YLS) described:

It was super uplifting and inspiring to see youth being engaged and participating. Being confident and voicing out your thoughts and opinions is so powerful.

The youth's photographs amplified their stories of belonging and visually showed the dynamics of the camp environment to support a sense of belonging, learning, and relational development, as the Land itself is an active participant in the process. The camp environment facilitates a space for relational learning and engagement, where the Land becomes a co-teacher alongside Elders, mentors, Indigenous Guardians, local leaders, scientists, researchers, peers, and community members. The youth told stories about how their different perspectives were valued, respected, and embraced by everyone at camp. They described the ways the camp environment, camp instructors and staff, and peers supported, encouraged, and empowered them to share their voices. The dynamics of living, working, and learning together on-the-land strengthened a sense of belonging within the camp community of people, as well as the Land itself.



Figure 12. Image from Joshua Komangapik at the YLS of the youth laughing in the lake.

I think it shows the experience of us really enjoying the place that we're in right now.

Connecting with other people in a friendship way. After going through an entire pandemic and being able to [gather together with people you don't know from different places], which I think is a very special thing to experience again. You can really feel it. And in this one too, everybody is just laughing. – Joshua Komangapik (YLS)

The youth's sense of belonging extended beyond the camp to their community. They were remembering time spent on-the-land with their families as it connected to what they were learning and experiencing at the camp, and how it would impact the future of their communities. Moreover, the youth's memories of home evoked personal and cultural ties to the Land, place, and community. These memories are relational and represent deep connections to place and space, reinforcing the importance of home as a source of identity and belonging. The youth's visual stories highlight how the Land holds memories and is a source of continuity and cultural heritage. In summary, the camp environment creates a safe and supportive space for learning, caring, sharing, and nurturing, which cultivates a sense of belonging between each other and the Land.

Bridget told us 'You are the result of the love of thousands.' This is definitely a message I'll carry with me through the journey of reconnection and climate spaces. Emily Ross
(YLS)

Sharing



Figure 13. Image from Margot Flemming at the WSG of Ruby Simba preparing moose meat for drying.

I think the most important teaching I had today was how much meat and the land are respected here and the sharing of something like meat brings so much community. I took this picture because I was so impressed with the ease in which Ruby cut the meat and the knowledge she had and was willing to share with us. – Margot Flemming (WSG)

Throughout the camps, the youth were continuously encouraged to share their own stories, experiences, and Knowledge, to ask questions, and to listen deeply. Sharing their perspectives during the camp activities strengthened confidence in sharing with others and nurtured a sense of belonging. When the youth learned different teachings throughout the camp, they shared their own Knowledge, memories, stories, and cultural practices from home.

Everyone has a different perspective as to what is the most important, what their relationship is to the land and water, what needs to be addressed, our experiences shape our passions, and young people have so much to say on what we see and our hopes for the future. – Emma Butler (WSG)

They also shared their dreams of the future and their considerations for the generations to come. The youth frequently emphasized the importance of sharing Knowledge with others and to “use your voice” to raise awareness of the changes happening to the Land. Some of the youth talked about how they were typically afraid to share their Knowledge with others, but they felt safe and comfortable to share at the camps with the support and care from their peers and instructors. One of the youth (YLS) shared:

I really appreciate hearing about using your voice and not saying sorry. I have a really hard time speaking up, I am much more of a listener. I think that really encouraged me to realize that I do have things to say and that I should not be afraid to get involved and speak up. To be present and participate that way.

The community at the two on-the-land camps centred around the sharing of teachings, memories, stories, dreams, cultural practices, food, gifts, and space.

Ultimately, the space shared at the camps is the foundation for the camp community; not simply the tangible physical space of the camp itself (e.g., cabins, physical environment, teepees, boats, canoes), but also the intangible dynamics and connections that are created by the people at the camp (e.g., social relationships, roles, responsibilities, skills). This was captured by Meesha Wittkopf (YLS) when she described her photo of people sharing bannock and moose meat by the fire:

I have become so close with everyone and have enjoyed the closeness and feelings of love shared by each other. Connecting with each other, connection to the food we are eating.

Sharing food together on-the-land nourishes the relationships between people at the camp. When asked what their favourite part of the camp was each day, the youth frequently highlighted the country food we shared. For example, a youth (YLS) said:

My favourite part of the camp today was when we were cutting up moose meat and cooking, watching them cook the moose meat with the onions, and the fried bannock. That was my favourite part. I love bannock, that is what we make at home too. I love country food. Moose meat is a little different than caribou, but it was still really good.

However, it was not *only* about consuming the food, rather the sharing of Knowledge around the hunting, fishing, and harvesting of country food. As Nika Silverfox Young (YLS) discussed:

That was my favourite part of today, not the food aspect of lunch, but to be able to be together and ask questions over our lunch and how that is. I feel like there's such a big disconnect. People don't know where their food came from. A lot of times people don't know that chicken had a life or that cow had a life, so it was really nice to see how he

was like 'yeah we caught this fish this morning for you guys and we're going to feed you with this!' It was so cool to see. From water to table.

The youth repeatedly voiced their concerns about food sovereignty and food security in the North. The youth are also concerned that there are many people around the world who are not interested in being on-the-land doing traditional activities due to the escalating disconnect between people and place.

Through their stories, the youth document the value of bringing Knowledge back to one's community. Bringing Knowledge home highlights the responsibility to ensure that the benefits of learning are returned to the community, ensuring that stories are shared in a way that honours the communities.

Nurturing



Figure 14. Image from Joshua Komangapik at the YLS of a youth in the marsh.

[...] when Bridget was talking about nurturing each other and going past individual identities that we have as people, and how we nurture each other to give back to the community. That really resonated with me because within politics we encounter people who actively believe in policies that perpetuate the genocide of Indigenous peoples. It's hard for me to have that mindset, but going in it now, I think that it will be a little easier to deal with those people if I was ever in that position of power. That was one of my favourite teachings today, nurturing each other to give back to the community. – Joshua Komangapik (YLS)

Nurturing each other to give back to community was an important teaching the youth captured in their visual stories. An on-the-land camp environment is a nurturing space that empowers youth to be leaders in their community. Being cared for and caring for others encourages a nurturing leadership style. As illustrated by a youth (YLS),

Collaboration, respect, and cooperation will bring success. It is an important lesson that our colonial and capitalist society must learn.

Youth at the camps continually reinforced how the colonial-capitalist system must be dismantled to resolve environmental and sociocultural injustices, such as *environmental racism*.

Environmental racism refers to the ways governmental policies and practices cause disproportionate violence against Black, Indigenous, and people of colour (BIPOC) (Bullard, 2002). As Myrah Graham (WSG) explained:

For me it's stepping outside of the colonial capitalist mindset. Going down South and always thinking about working. Being in the North you start to see that relationships matter a lot more than all of that, to the Land and to each other; also, [it's] really important because climate change is based in that colonial-capitalist system. Stepping outside of that helps me personally. Especially knowing that the effects of climate change are going to impact Indigenous communities way more, communities of colour way more. Leaving that system from my life.

The youth's comparisons of experiences between "the North"⁹ and "the South"¹⁰ highlighted the differences in relationality, Knowledge systems, and approaches to environmental and social issues in northern and southern regions. These differences are crucial in understanding how on-the-land camps empower northern youth and highlight the unique perspectives that emerge from their lived experiences. The youth described feeling a stronger sense of belonging and connectedness in northern settings, where relationships are nurtured, and the Land is respected. In contrast, they critiqued that southern contexts lack the communal support systems they value, leading to feelings of isolation.

The youth's distinction between the North and the South reflects their frustrations about the southern dominance in governance, research, and decision-making that affects their communities, despite many of these decisions being made far from the Land itself . Given the history of colonial interventions in the North, these perspectives are deeply valid and important to acknowledge. While the youth highlighted differences in the connection with the Land and cultural continuity, this should not obscure the struggles that many Indigenous Peoples in the South face in maintaining relationships with the Land due to dispossession, privatization, environmental destruction, and urbanization. Many Indigenous youth South of the 60th Parallel continue to practice Land Stewardship, engage in ceremony, and reclaim their territories despite systemic barriers. Indigenous connections to the Land are shaped by relationships, histories, and ongoing struggles for self-determination and not dictated solely by geography. Additionally, while youth comments in the results reflect their lived realities in the North, they also reflect

⁹ "The North" refers to the territories and regions above the 60th parallel in Canada: Yukon, Northwest Territories (NWT), and Nunavut, and includes parts of northern Quebec and Labrador, such as Nunatsiavut.

¹⁰ "The South" refers to the provinces and areas below the 60th parallel in Canada, where majority of the country's population resides.

gaps in cross-regional dialogue between northern and southern Indigenous youth. The perception that the South is disconnected from the Land may stem from a lack of shared experiences rather than an inherent truth.

The youth emphasized that their identities are intertwined with their community and environment. The Land is viewed as a relative and holds spiritual significance and is central to cultural practices and Knowledge sharing. In the youth's visual stories, there was a strong emphasis on community well-being over individual pursuits, which considered how their decisions impact their community and future generations to come. For example, local community monitors, such as Melaine Simba (KTFN), demonstrate a nurturing leadership style in their work in Denendeh. Melaine monitors local waterways and fish populations to understand the health of the freshwater ecosystems and how that influences the health of the communities in the area. She cares for the lakes, rivers, creeks the ways she cares for her family, and acknowledges how these systems are inseparable. At both camps, the youth learned how the waterways around the North are connected and what happens to the water, happens to the people. As Carmella Klengenberg (WSG) shared:

you can see that we are all connected, even being so far away from each other we all have one thing in common is that we need to keep our land and water clean and protected for future generations.

Fundamental elements of nurturing leadership style, as identified by the youth, include honouring, encouraging, empowering, inspiring, and uplifting each other; collaboration, cooperation; collaboration; respect; care; reciprocity; and love. Living, learning, and working together on-the-land supports a space of nurture for the youth – to be nurtured, to nurture

themselves, and to nurture others. The on-the-land camp space is healing and transformative and provides safety and comfort for the youth to express themselves. As Lena Korgak-Stokes (YLS) reflected: “Leadership is about submitting to duty and not about rise to power. The energy that you feed is the energy that will grow.”

Discussion

On-the-land camps can empower northern youth as land-based leaders through the values and practices of learning, caring, belonging, sharing, and nurturing. Learning in a land-based context is reciprocal and relational, rooted in listening to the Land, Elders, and community and prioritizes Indigenous Knowledges and epistemologies, fostering a resurgence of cultural teachings that have been disrupted by colonization (Wabie et al., 2021). Land-based education can nurture leaders who are lifelong learners, valuing humility and adaptability over authority and control. These leaders understand that learning comes from relationships with the Land, community, and self, which challenges the hierarchical, expertise-driven model of leadership often found in colonial frameworks. The Land is more than just a physical space; it is a living entity that interacts with and shapes the people who engage with it (Shawanda, 2023)

Activities, particularly those tied to the Land, are opportunities for learning, connecting, and engaging with local Indigenous Knowledges and cultural practices (Reid et al., 2021). In Indigenous contexts, activities are often embedded with cultural meaning and are viewed as a form of experiential learning (Wildcat et al., 2014). Engaging in land-based activities reflects the Indigenous principle that the Land is a teacher, reinforcing the importance of relationality between people and the natural environment (Gaudet, 2019). Activities at on-the-land camps are

held in the forest, by the water, around the fire, in the teepees, and in the cabins. This learning space includes formal and informal teachings (Brayboy & Castagno, 2008), shared through structured activities as well as sharing stories with others during free time.

Elders create space for the youth to discover land-based relationships and connections for themselves (H. Martin, 2021). The passing down of teachings and traditions through generations is central to Indigenous Peoples, ensuring continuity and survival of cultural practices (Mashford-Pringle & Shawanda, 2023). In this context, relationality involves the exchange of stories between Elders and youth, honouring the role of intergenerational learning and reinforces the idea that Knowledge is held collectively and is strengthened through relationships across generations (Mowatt et al., 2020; Wabie et al., 2021). The intergenerational exchange between Elders and the youth highlighted the importance of learning as a relational process (Shawanda, 2023). Learning is holistic, involving emotional, spiritual, and relational dimensions, which is often rooted in oral traditions, storytelling, and direct experiences with the Land and community (Cajete, 1994).

Learning is relational, recognizing that Knowledge is co-constructed and passed through generations in a way that respects both the learner and the Land (Johnson-Jennings et al., 2020). The youth's visual stories demonstrate the ways Knowledge is nurtured through relationships with the Land. Learning from the Land strengthens relationality between people and the Land, and this builds relational accountability to the Land (Wilson, 2008), which teaches the youth that they are part of the Land (S. Woodworth et al., 2024). Therefore, learning and connecting with the Land nourishes the actions and feelings of care, and caring for the Land is enacted through respect, responsibility, and reciprocity (Absolon, 2011; Kimmerer, 2013), sustained through relationality and relational accountability (Wilson, 2008).

When a group of people spend time together on-the-land, living and working together, a community is established (Tahsin, 2021). Friendships and mentorships are formed through respect, cooperation, and collaboration, and people embrace their roles and responsibilities for caring for each other and the Land around them (Hickey et al., 2020). Community is central to Indigenous ways of living (Johnson-Jennings et al., 2020), whereby knowledge exchange, identity, and decision-making are viewed as collective and relational (L. Hall, 2014). Community is cultivated through the acts of sharing food and cooking together on-the-land (Spring et al., 2019). For Indigenous Peoples, sharing food builds community and creates a space for Knowledge transfer (Ljubicic et al., 2018). The importance of sharing food is foundational to land-based programs (O'Hare-Gordon, 2016).

The value of “caring” is central to Indigenous ways of knowing and forms part of the relational accountability that connects individuals to their community, ancestors, and the Land (Chatwood et al., 2017). Leadership as caring emphasizes the importance of mutual respect and responsibility, reflects Indigenous principles of caring for the Land, others, and oneself, and fosters a sense of interconnectedness. The youth prioritized care as a central value and emphasized the importance of leading with empathy and stewardship, with a focus on the well-being of their communities and the Land. Furthermore, caring as a leadership model contrasts with colonial-capitalist leadership models that prioritize profit, productivity, and individual achievement over collective care. The colonial system works to destroy this sense of belonging and community, which leads to a loss of connection to the Land and identity rooted in the Land (Tondur et al., 2014).

A sense of belonging is critical for leadership styles rooted in caring practices and values. Belonging strengthens identity and relational accountability, which supports the youth in

reconnecting with the Land and nurtures a sense of community and purpose critical for Land Stewardship. As Indigenous Knowledges are held relationally with the environment, the space between people and place is understood as sacred (Wilson, 2008). The sacred relationships that the youth hold with the Land leads to a sense of belonging and spirituality. The self cannot be separated from the history of land-based relationships (McGuire-Kishebakabaykwe, 2010). Land-based practices foster cultural belonging by strengthening intergenerational connections between the Elders and youth (Ioana Radu et al., 2014; Wabie et al., 2021). The transfer of Knowledge involves a reciprocal learning process through storytelling, immersive experiences, and hands-on activities (Korteweg et al., 2010), and encourages youth to take on leadership roles within and beyond the camp environment. Kinships fostered on-the-land decreases social isolation and individualism (Bowra et al., 2021; Gaudet & Chilton, 2018), which was magnified after experiencing COVID-19 stay-at-home orders.

Sharing what you have and what you know nurtures relationality (MayoralBaños, 2018). Sharing in reciprocity fosters relational accountability (Lafferty, 2022; J. Price, 2007). We shared our gifts with each other and the Land. Gifts are a way of showing respect, reciprocity, and relationality, and they can be presented in countless ways (e.g., physical objects, teachings, affirmations, stories, dreams, crafts, skills, offerings, etc.) (Kimmerer, 2013). Gift-giving bonds people and is a practice of caring, sharing, and nurturing (Kimmerer, 2013; Sium & Ritskes, 2013). Everyone has a gift to share within themselves (Kimmerer, 2013), and the camp environment supported the youth to share their gifts with others.

Sharing as a practice and value of leadership focuses on strengthening the collective well-being of communities, which is integral to Indigenous ways of knowing and being. At the on-the-land camps, the youth were shown the value of sharing through the structure of the camp and

associated activities. Sharing prioritizes collaboration and the co-creation of knowledge. Hence, land-based leadership is a collective effort, where power and decision-making are distributed rather than concentrated. In other words, sharing challenges hierarchical models of leadership by nurturing a sense of belonging and building communities of care. At the on-the-land camps, youth learned about leadership styles that are collaborative and inclusive, which resist and deconstruct the individualistic, competitive styles associated with leadership in colonial-capitalist contexts.

Nurturing reflects the intergenerational transmission of knowledge and the care necessary for growth and healing, which emphasizes the importance of creating spaces for individuals and communities to flourish. Nurturing youth at on-the-land camps supports their personal growth and healing within their communities. Rooted in Indigenous Knowledges and land-based practices, nurturing as leadership prioritizes care, reciprocity, and respect over dominance, individualism, and control. Learning and sharing together on-the-land, from the Land, with the Land develops relational accountability between people and place (Ljubicic et al., 2021; Wilson, 2008), which extends beyond the camp and into communities. To combat colonial-capitalist systems of separation and alienation, it is critical to nurture those around you with care, respect, and reciprocity (L. B. Simpson, 2014). We must tend to our relations with love (McGregor, 2013), and feed our communities with the same nurturing leadership.

Land-based education is about forming and nurturing a reciprocal relationship with the Land, recognizing its role as a core element of identity and home for Indigenous communities (Corntassel & Hardbarger, 2019). To delve deeper, Land Stewardship is rooted in nurturing, practiced through respect, care, love, responsibility, relationality, and relational accountability (Fischer et al., 2022; Kimmerer, 2013; L. B. Simpson, 2014; Wilson, 2008). Nurturing the Land

nourishes the people; hence it is critical to protect and care for the Land (Dragon-Smith & Lahey, 2022; Spring et al., 2019). Nurturing is premised on teaching gently, and so through nurturing, reciprocity occurs and “gentleness is returned” (Hansen & Antsanen, 2016, p. 8).

Each theme reflects relational values embedded in Dene, Métis, and Inuit leadership principles, which fundamentally challenge dominant notions of leadership and create space for relational approaches to leading and living. Through Land Stewardship, youth learn to lead with a sense of relational accountability to the Land. Land-based leaders are caretakers, not rulers or managers exerting control over resources and populations. The two on-the-land camps prioritized relationships over individuality, understanding that leadership is a collective and reciprocal process that nurtures a sense of belonging and sharing networks.

As a powerful expression of Indigenous resurgence and self-determination, on-the-land camps should teach both Indigenous and non-Indigenous youth to become caretakers of the Land through the revival and practice of Indigenous land-based traditions, languages, and ways of life that colonization sought to disrupt. These camps are particularly significant in the context of the North, where relationships with the Land are deeply embedded in cultural, social, and environmental systems. For northern Indigenous youth, these camps can provide an opportunity to reconnect with cultural teachings, fostering a sense of pride, identity, and belonging while equipping them with the knowledge to sustain their communities and territories.

For non-Indigenous youth, on-the-land camps are equally critical, as they can offer a way to build understanding and respect for Indigenous worldviews and relationships with the Land, challenging colonial perspectives that prioritize extraction and ownership. Youth who participate in on-the-land camps are not just learning about resurgence—they are actively enacting it. Land-

based programs can support self-determination by equipping youth with the skills, knowledge, and relationships necessary to continue Land Stewardship, revitalize traditional practices, and engage in governance processes.

While the youth's experiences on-the-land were diverse and unique, rooted in their own family histories, home communities, and personal identities, they also shared similar concerns and priorities for the Land. The youth's visual stories demonstrated how land-based education and land-based programs can empower youth with the teachings and skills to protect the Land by supporting and developing reciprocity and relational accountability (Wilson, 2008). On-the-land camps can cultivate a learning space and nurture a sense of belonging for youth through an ethic of care (Goeman, 2008; Liebenberg et al., 2019).

Conclusion

Our research contributes to the rapidly expanding land-based literature by exploring the experiences of northern youth (ages 18–30) at two on-the-land camps in the Northwest Territories through the lens of an IRP and Land Stewardship. By understanding how on-the-land camps can empower youth to be leaders in their communities through the values and practices of Land Stewardship, we gain insight into their environmental and socio-cultural concerns and priorities for land-based leadership, emphasizing the centrality of relationships between people, community, and the Land. In this paper, we argue that on-the-land camps can empower youth as land-based leaders and Land Stewards by cultivating safe spaces of learning, caring, belonging, sharing, and nurturing, which are foundational elements of relationality and relational

accountability. On-the-land camps, as spaces of healing, empowerment, and transformation, can contribute to a shared future grounded in mutual respect and sustainable relationships with the Land.

Given the unique socio-environmental context of the North, which is shaped by rapid climate change, resource extraction, and intergenerational impacts of colonization, teaching both Indigenous and non-Indigenous youth through these camps is essential. On-the-land camps provide meaningful engagement and experiential learning opportunities for youth to voice their concerns and work collectively against social and environmental injustices. Further research should explore youth experiences post-program to understand how they continue to engage in learning and leadership development, ensuring that the relational commitments established during the camps are sustained.

Furthermore, to support youth relationships with the Land and uphold the principles of relationality, land-based programs like on-the-land camps should be embedded in public school curricula across all levels—elementary, middle, and high school. Continued land-based programming should also be available for the youth not currently in school, including older youth groups (ages 18–30). Providing these opportunities allows northern youth to engage in land-based leadership and Land Stewardship practices, reinforcing their relational connections to the Land and community. Additionally, Land Stewardship values and practices must extend beyond land-based education into broader contexts. Leaders shaped by Land Stewardship are better equipped to address complex, interconnected challenges such as climate change, social justice, individualism, and capitalist accumulation, embodying approaches that prioritize collaboration, care, and community.

In conclusion, this land-based research demonstrates how on-the-land camps can serve as spaces that empower youth with the leadership skills and Land Stewardship values and practices necessary to protect the Land, embodying the concept of relational accountability to both their ancestors, communities, and future generations to come. By integrating theoretical perspectives of Land Stewardship rooted in an IRP and demonstrating methodological innovations through participatory approaches like photovoice, our research advances scholarly discourse and offers practical applications that honour Indigenous ways of knowing and contribute to community well-being.

Table 2. List of activities at the on-the-land camps

Activity	Camp
Berry-picking	DYETKC, KTCC
Boating	DYETKC, KTCC
Canoeing	KTCC
Checking, setting, and taking down fish nets	DYETKC, KTCC
Collecting and chopping wood	DYETKC, KTCC
Dehcho Land Use Plan	DYETKC
Dene Zhatie language instruction	DYETKC, KTCC
Drum dancing	DYETKC
Feed the fire ceremony	DYETKC
Fire making & opening jack pinecones	KTCC
Habitat-food-water-shelter game	KTCC
Hunting	DYETKC, KTCC
Invertebrate water quality analysis	DYETKC, KTCC
Pay the water ceremony	KTCC
Photovoice	DYETKC, KTCC
Preparing traditional foods and medicines (fish filleting, dry moose meat, cranberry jam, bush tea)	DYETKC, KTCC
Recording impacts of forest fires	KTCC
Scavenger hunt	DYETKC, KTCC
Searching for eagle nests	DYETKC
Sewing, beading	DYETKC
Sports and games	DYETKC, KTCC
Storytelling	DYETKC, KTCC
Testing water pH, dissolved oxygen, conductivity, and temperature	DYETKC, KTCC
Traditional games (stick pull, arm wrestling, leg wrestling)	DYETKC
Tree and plant identification	DYETKC, KTCC
Tree measurement	DYETKC, KTCC
Water embodiment exercise	KTCC
Watershed management	KTCC
Youth-led water celebration	KTCC



it feels so hard to write
without you

i am writing alone
about our relationships

i need you here with me
how do i find you
in a sea of blank pages?

i hold onto the memories on-the-land
i hold onto our friendship

your trust in me
fuels me to write
our stories
about our relationships

Chapter 5: Re-storying relationships with the Land through land-based research

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Abstract

Community-Based Participatory Research (CBPR) has shifted the narrative of northern research by emphasizing collaboration, shared power, and the inclusion of Indigenous voices. While significant improvements have been made in community-based research approaches in the North, researchers must move beyond CBPR by grounding the entire research process in Indigenous methodologies and understandings of the Land, fostering meaningful co-creation of knowledge with communities. However, there is a significant gap in research that explores how land-based programs foster reciprocal and relational spaces for research. Therefore, this paper addresses: how can land-based programs serve as reciprocal, relational spaces for land-based research and contribute to re-storying relationships with the Land and the communities involved? Our objectives are to (1) explore how land-based programs foster reciprocal and relational spaces for research by integrating community-driven goals, Indigenous methodologies, and Land Stewardship; and (2) examine how land-based research contributes to re-storying relationships with the Land by fostering open, reflective, and critical dialogue between researcher and participant. Using an extended interview with Tarek Leahy-Chicot, Ka'a'gee Tu/K'ágee Tue First Nation youth, as a central narrative, this research honours his teachings and highlights the deep, relational nature of land-based research to re-story relationships with the Land. We argue that on-the-land camps foster trust, respect, and reciprocity while addressing community-driven goals. These spaces strengthen researchers' responsibilities to the communities most impacted by their work through shared experiences on the Land.

Keywords: land-based research; land-based programs; on-the-land camps; re-story-ation; northern Indigenous communities

Introduction

Northern research has long been marked by violent, extractive, and colonial practices (McGregor et al., 2010). To improve research approaches with northern communities, *Community-Based Participatory Research* (CBPR) started to be implemented in the North in the 1970s between southern non-Indigenous and Indigenous researchers (McGregor et al., 2010). Specifically, CBPR strives to achieve social change and transformation and is intended to empower communities by creating opportunities for communities to actively participate in research and tell their stories (Tobias et al., 2013). For CBPR, community needs are evaluated, and action is taken for the purpose of social and political change (Tobias et al., 2013). Through the widespread implementation of CBPR in the North and other areas of the world, CBPR has become labelled as “best practice” for research (de Leeuw et al., 2012).

At the onset, CBPR represented a significant shift in academic research approaches in the North. CBPR challenged parachuter research (also referred to as helicopter research) practices by emphasizing collaboration, relationship-building, and community involvement (Tondur et al., 2014). Parachute research refers to when researchers, primarily from southern academic institutions and urban cities, enter remote and rural communities to collect data and then leave without meaningful engagement or collaboration with the community members, involving communities in the sharing of results, or the ownership of the research (Reid et al., 2021). Despite the advances, many of these harmful practices persist today.

Researchers utilizing CBPR approaches partner with communities to answer community-driven questions in their projects and emphasize collaboration and shared power (Castleden et al., 2012; Saxinger, 2018; Tondur et al., 2014). However, CBPR frameworks often fall short of

addressing the deeper systemic issues of extractive research. The majority of northern research is conducted by southern, non-Indigenous researchers traveling to northern regions (Aldred et al., 2021), which perpetuates parachuter practices in a contemporary and less visibly extractive way.

CBPR sustains power imbalances, as researchers frequently "parachute in" to northern communities, extract physical data and local Knowledge and stories, and return south, without leaving lasting capacity within the communities involved. Moreover, CBPR projects are designed, analyzed, and disseminated to fulfill academic priorities more than community impacts. Researchers travel to communities for short periods and spend limited time building meaningful relationships outside of the CBPR project. Lastly, researchers and southern academic institutions ultimately retain control over the research process and its outcomes. These contemporary parachuter practices repackaging colonial extractivism under the guise of partnership, continuing to marginalize Indigenous ways of knowing and living.

While framed as a more ethical and collaborative approach to research, CBPR frequently positions Indigenous communities as participants rather than co-designers or co-creators of knowledge, reinforcing a hierarchical dynamic where power and control remain with the non-Indigenous researchers or institutions driving the projects (de Leeuw et al., 2012). Furthermore, CBPR can unintentionally reinforce discourses that position Indigenous Peoples and communities as weak, marginalized, vulnerable, traumatized, and in need of capacity-building (Aldred et al., 2021). By focusing on external interventions and assistance, CBPR often perpetuates a deficit-based narrative that overlooks the strengths, agency, and resilience inherent in Indigenous communities (Bryant et al., 2021). The emphasis on "capacity-building" often implies that Indigenous communities lack the skills, knowledge, or agency to address their own

challenges, when in fact, they have long demonstrated profound expertise, leadership, and Land Stewardship (Bryant et al., 2021).

Additionally, in CBPR approaches, Indigenous Knowledges are incorporated into non-Indigenous frameworks embedded in colonial-capitalist discourses of “land.” Such discourses of the “land” as property and resource are the foundational underpinnings of colonialism and colonization, past and current Canadian government structures, and education systems (Goeman, 2008; Grande, 2015). Discourses of “land” are tied to the false narratives and promises of freedom and prosperity, and premised in capitalistic gain through conquering and dispossession (Grande, 2015; Lees et al., 2021).

Despite improvements for community-based research practices in the North through CBPR, northern research across academic disciplines remains primarily *about* Indigenous Peoples rather than *with* or *by* Indigenous Peoples (de Leeuw et al., 2012; Watchman, 2024) and contributes to a storying of the North that is embedded in colonial-capitalist power systems (E. Cameron, 2015). There remains a disconnect between community and researcher interests, lack of recognition of Indigenous Knowledges, and deep suspicion of research(ers) in Indigenous communities “mining” Indigenous Knowledges to incorporate into non-Indigenous knowledge systems (Aldred et al., 2021; McGregor et al., 2010). Privileging colonial-capitalist frameworks, much of northern academic research, including CBPR, fails to capture the relational, cultural, and spiritual dimensions of the Land that are central to Indigenous worldviews. Researchers have a responsibility to move beyond extractive practices and engage in approaches that are ethical, relational, and grounded in Indigenous priorities. Listening to Indigenous stories of the Land and working collaboratively with Indigenous Peoples requires addressing past harms and creating spaces for knowledge co-creation. By addressing these limitations, researchers can enhance

participatory approaches by prioritizing and centring relational accountability and centre Indigenous worldviews. One such approach is land-based research, which provides a way to honour the interconnected, cultural, and spiritual relationships with the Land while fostering ethical and reciprocal knowledge co-creation.

Recent studies contextualize the importance of land-based research projects in the North by examining the impacts of land-based programs, such as on-the-land camps (Ballantyne, 2014; Dragon-Smith & Lahey, 2022; Luig et al., 2011; Woodworth et al., 2024; Woodworth et al., 2025). However, there is a significant gap in research that explores how land-based programs foster reciprocal and relational spaces for research and invites participants to reflect on and critique the research they were part of. Most research approaches, including CBPR, often prioritize the researcher's objectives and perspectives and not the experiences of participants involved. There is also a lack of openness of researchers regarding the ways the research had changed and challenged their knowledge and biases.

I do not argue that CBPR as a methodology is inherently ineffective, as CBPR has played a significant role in shifting the research landscape toward more collaborative, community-driven approaches. However, as CBPR has become more widely adopted, it has often been applied superficially or without genuine community leadership. Many researchers claim to be doing CBPR while still retaining control over research design, data analysis, and knowledge dissemination. This leads to situations where CBPR becomes a buzzword rather than a meaningful methodology. Even when implemented well, CBPR often remains within a framework that is still grounded in Western research structure, which limits how deeply CBPR can engage with Indigenous relational methodologies, Land-based epistemologies, and community-driven goals for research. Furthermore, the issue remains with southern researchers

and institutions dominating northern research and parachuting or helicoptering in and out of communities for short periods without considerable time spent together outside of the research itself.

While CBPR can be an effective tool, land-based research requires methodologies that are fully embedded in Indigenous ways of knowing, being, and relating to the Land. Therefore, in this paper, we ask, how can land-based programs serve as reciprocal, relational spaces for land-based research and contribute to re-storying relationships with the Land and the communities involved? Our objectives are to (1) explore how land-based programs foster reciprocal and relational spaces for research by integrating community-driven goals, Indigenous methodologies, and Land Stewardship; and (2) examine how land-based research contributes to re-storying relationships with the Land by fostering open, reflective, and critical dialogue between researcher and participant.

Theoretical and Methodological Framework

This section presents the theoretical and methodological framework of this land-based research. *Land-based research* is a relational process where relationships with participants, the Land, and the partnering communities are prioritized (Hecht & Nelson, 2021; Ollier, 2019; Wilson, 2008). Land-based research must emphasize relationship-building, wherein trust and reciprocity are fostered and strengthened between researchers and communities. Critically, land-based research is not extractive – it is grounded in mutual respect and a commitment to honouring the community’s values, ways of living, knowing, and being on-the-land.

First, defining key terms is important to understand the context of this research, namely: land-based programs, land-based education, and on-the-land camps. *Land-based programs* involve the hands-on implementation of land-based education, encompassing activities and teachings that take place directly on-the-land (Clarke, 2015). *Land-based education* refers to the underlying epistemological framework rooted in local Indigenous Knowledge systems and interconnected relationships with the Land (Obed, 2017; Virtanen, 2022). *On-the-land camps* are healing spaces that provide opportunities for intergenerational knowledge exchange, fostering connections to the Land through relationship-based learning (Ljubicic et al., 2021).

Respecting the Land (capitalized) as a living entity, a source of identity, a teacher, and the foundation of relationships is central to Indigenous Knowledges (Cluderay et al., 2022; McGregor et al., 2010; J. Redvers, 2020; Robertson & Ljubicic, 2019). By embracing this profound connection with Land, a land-based research approach honours these relationships. Our land-based research is grounded in a theoretical framework of Land Stewardship and Indigenous methodologies.

Land Stewardship

Land Stewardship, from an Indigenous perspective, is a holistic and relational approach to maintaining reciprocal relationships with all living and non-living entities (Bédard, 2008; Kimmerer, 2013), which is grounded in local Indigenous Knowledge systems and relationships with the Land (Vasquez, 2021). Land Stewardship is capitalized to represent the holistic and sacred responsibility that recognizes the Land as a living entity with which humans are in

relationship. Land Stewardship refers to the responsible use and protection of the Land through socio-cultural and environmental practices (Popp et al., 2020).

Land Stewardship is deeply rooted in local Indigenous Knowledges and spiritual relationships with the Land (Vasquez, 2021). From an Indigenous perspective, Land Stewardship is a holistic and relational approach to strengthen reciprocal relationships with all living and non-living entities (Marshall et al., 2022) and specifically focuses on the care and Guardianship of the Land through relational accountability (Popp et al., 2020). Linked to the rights of Indigenous Peoples to manage the Land according to their laws and customs, Land Stewardship reinforces sovereignty and self-determination (L. B. Simpson, 2016b).

As a theoretical framework, Land Stewardship honours the Land as a living and spiritual entity, teacher, and participant in the research (Cluderay et al., 2022). By applying Land Stewardship as the central lens, this research demonstrates that land-based education is not merely an educational approach but a strategic means of empowering youth to become responsible caretakers of the Land. Moreover, this framework acknowledges in which ways land-based education contributes to the cultivation of Land Stewardship among youth. Land Stewardship is embedded in the values and practices of care, protection, and Guardianship of the Land through relational accountability (Popp et al., 2020), which is inseparable from cultural identity, self-determination, community, and sovereignty for Indigenous Peoples, and involves sustaining the Land as a living entity (L. B. Simpson, 2014). The Land is respected as a relative and is an integral part of Indigenous identity and existence (Wilson, 2008), and Land Stewardship involves honouring these relationships through respectful, responsible, and reciprocal practices (Kimmerer, 2013).

This research identifies how land-based education promotes Land Stewardship among northern youth through Indigenous Knowledges and stories of the Land. In the face of escalating environmental challenges, fostering a sense of Land Stewardship among youth is crucial for the protection of the Land and Indigenous futurities (Benton, 2017; Korteweg et al., 2010). By engaging relationally with, and developing profound respect for, the Land, youth develop a sense of responsibility and commitment to Guardianship and Stewardship (Clarke, 2015). Hence, Land Stewardship, as a theoretical framework, profoundly informed our methodological choices by aligning our research approach with principles that honour the Land as a living entity and a central participant in the research process. This framework emphasizes a reciprocal and respectful relationship with the Land, which necessitates a methodology and accompanying methods that are relational, participatory, and reflective of Indigenous ways of knowing.

Indigenous Research Paradigm (IRP)

An Indigenous Research Paradigm (IRP) is a process of relationship building through trust, respect, and reciprocity to address community-driven projects, which will be different depending on the context of the relationships (Gaudet & Caron-Bourbonnais, 2015; Wilson, 2008). IRPs can be used by Indigenous and non-Indigenous researchers (Wilson, 2008); however, as non-Indigenous researchers using an IRP with Indigenous collaborators we cannot offer an Indigenous perspective. Moreover, we must earn the rights to start and continue research through ongoing consent (K. Martin & Mirraboopa, 2003). Aligned with Wilson (2008), the two core principles of our IRP are relationality and relational accountability. *Relationality* encompasses the connections that define us as individuals; our identities are shaped and formed through the relationships we have (Wilson, 2008). Following relationality, *relational*

accountability involves the roles, responsibilities, and obligations we hold to create, sustain, and strengthen respectful and reciprocal relationships (Wilson, 2008).

Central to our IRP is re-story-ation, which requires learning and enacting our responsibilities and obligations for kinship through love, care, and gratitude (Justice, 2018). Re-story-ation requires time, sharing food, and learning by experiencing the relationships with the Land (Twance, 2020)., is built through reciprocity, relationality, and relational accountability (Kimmerer, 2013), and is dependent on viewing the Land as identity, home, teacher, which is both life and living (Kimmerer, 2013). Re-storying is expressed through artistic, creative, and imaginative methods, such as storytelling, poetry, painting, music, ceremonies, and beadwork (Justice, 2018).

Re-storying relationships requires acknowledging that the researcher's stories, subjectivity and positionality are embedded in the Land (Absolon, 2011). Moreover, IRPs require researchers to critically reflect to situate the self in the research (Absolon, 2011). The research process cannot be reduced to an individual unit, and everything is always viewed in terms of its relationships (Tuck & Yang, 2014). Nothing is studied through an isolated lens of the "individual", but instead, is seen always in terms of its networks, relationality and collectivity (Absolon, 2011). Whether it is a quantitative approach to understanding plant cells or a qualitative approach in understanding people-plant relations, the researcher's relationships influence every aspect of the study (Absolon, 2011). Researchers are viewed as intimately connected to the environment they are studying, and the researcher fundamentally shapes the processes of the research (Absolon, 2011). Who the person is, where they come from and what their relationships are will lead to the topics that are explored, what questions are asked, how the

methods are used, the forms of analysis employed and the avenues of sharing stories (Wilson, 2008).

Our methodology maintains that emotions are inseparable from land-based research, as our emotions guide our thinking and decision-making as people/Peoples (Lavallée, 2009). Our emotions—such as motives, desires, hopes, dreams, passions, feelings, thoughts, and memories—are integral to our ways of knowing, being, and doing, and cannot be separated from our research (K. Martin & Mirraboopa, 2003). Emotions influence every aspect of this research process, from the questions asked to the methods, analyses, and knowledge sharing (J. Cameron et al., 2009). By acknowledging, understanding, and reflecting on our emotions, we are shaped and guided by our responsibilities and commitment to maintain and honour our relationships in this research (Wilson, 2008).

Lastly, researchers must know and observe local protocols, recognizing that such protocols will be different depending on location and context (K. Martin & Mirraboopa, 2003). While there are many similar values among Indigenous Peoples, each community and nation have diverse geographies, languages, cultures, and social structures, hence, there is no singular IRP (K. Martin & Mirraboopa, 2003; Wilson, 2008). IRPs will be different depending on the Peoples and places that knowledge comes from (Land) (Loppie, 2007). Everything must be understood within the context of the relationships it represents (Wilson, 2008). The Dene Laws, nine principles passed down by Dene Elders to respect and value the Land, ourselves, and each other, are essential protocols for this research (Dehcho First Nations, 2019):

1. *Share what you have - Eleghaets'edendih* (p. 4)
2. *Help each other - Elets'áts'ëndi* (p. 5)

3. *Love each other as much as possible - Eleghonets'etq* (p. 6)
4. *Be respectful of elders & everything around you - Qhndah gots'edihchá & godhah ahsú azhq chu* (p. 7)
5. *Pass on the teachings - T'ahsı'ı ots'edihshq gogháts'ızáh* (p. 8)
6. *Be happy at all times - Láqlıh t'áh gogha gonezu* (p. 10)
7. *Sleep at night & work during the day - Tedhe ts'ete & dzenę eghálats'enda* (p. 11)
8. *Be polite and don't argue with anyone - Dene ts'ę nahzu gots'ęh thá t'áh dene ahdahndı ile* (p. 12)
9. *Young people should behave respectfully - Ts'élıq gots'ęh denelıq elegendihchá gha gózq* (p. 13)

Our land-based research prioritizes the Dene Laws and values of the Land as foundational to the methodological framework and our approaches to conducting the research. By honouring and strengthening intergenerational community relationships, the Dene Laws express our relational responsibilities to the Land and to build a collective conscious of care, love, gratitude, respect, sharing, caring, and balance. Through the Dene Laws, we learn how to live with each other, how to take care of ourselves, each other, and the Land. As we are accountable for our actions to our relations, we must uphold natural and sacred laws within the research (Wilson, 2008). In my research, the Dene Laws inform and guide how research relationships are structured (relationality) how knowledge is shared (reciprocity), and how ethical and responsible research practices are enacted (relational accountability).

Methodologically and theoretically, the Dene Laws grounded the research in relational accountability and governance. They offered a governance framework that shaped the design and

facilitation of the camps and how I approached research relationships, storytelling, and knowledge sharing. The Dene Laws align with IRPs that centre respect, reciprocity, and relationality—and they tangibly directed the work by setting the ethical, cultural, and spiritual foundation for the co-creation of knowledge. By practicing the Dene Laws, land-based learning and research are embedded in land-based governance.

At the on-the-land camps, the Dene Laws were actively lived, taught, and upheld. Youth were introduced to the Dene Laws at the start of the camp, and they were revisited daily through stories, reminders, and reflective discussions. I learned the Dene Laws alongside the youth, and through that process, came to understand how they shape relationships—with the Land, with one another, and with oneself. The Dene Laws offer lessons to survive on-the-land and strengthen intergenerational community relationships, as well as provide guidance for how to live well with respect, humility, care, and responsibility.

Practically, the Dene Laws were embedded in the social and physical environment of the camp. They were displayed in the cookhouses and cabins, guiding how we treated the Land, how we prepared and shared food, and how we resolved conflicts or offered help to one another. Youth were celebrated for demonstrating the Dene Laws in action—such as helping each other set up tents, respecting the Land, offering food to Elders first, and showing patience and care while learning new skills. These moments demonstrated how the Dene Laws serve as a governance framework for Land Stewardship, enacted through everyday acts of leadership and relational responsibility.

Methods

Research Context

Over the course of six years, we worked in collaboration with Dehcho First Nations (DFN), Ka'a'gee Tu First Nation, spelled as K'ágee Tue First Nation (KTFN) in Dene Zhatie, academic partners, and Ecology North (a northern non-profit organization) to explore the perspectives of northern Indigenous and non-Indigenous youth at four on-the-land camps in the NWT. This land-based research was part of the lead author's doctoral research at the University of Ottawa and Wilfrid Laurier University.

Locating the Researcher in the Research

“The source of a research project is the heart/mind of the researcher, and ‘checking your heart’ is a critical element of the research process. The researcher ensures that there are no negative or selfish motives for doing the research, because that could bring suffering upon everyone in the community. A ‘good heart’ guarantees a good motive, and good motives benefit everyone involved.” (Wilson, 2008, p. 60)

A critical component of land-based research is checking our heart, to locate and situate ourselves, as the researchers, within the research itself (Absolon, 2011; Wilson, 2008). Land-based research is an act of re-storyation – remembering and reconnecting to the Land (Absolon, 2011). Remembering who we are and where we come from contextualizes what we know (Absolon, 2011). Locating and situating the ‘self’ links our personal experiences with the

experiences of others, which facilitates relationality and relational accountability between the reader and the storyteller – we, too, are in relation (Absolon, 2011).

I¹¹ (Woodworth) co-developed this land-based research with community partners, and guidance and support from my supervisors (Wesche and Spring). It is important that you, the reader, come to know me as a person to understand the context of this work, as this land-based research is deeply rooted in my personal relationships and the contextual conditions of my life and reality (Lomawaima, 2016; Moreton-Robinson, 2016). As I grew and changed throughout the years of this research, so did the research itself.

First, it is important to contextualize how I came into this research through the relations of my supervisors. Sonia Wesche (she/her) is my supervisor and an Associate Professor in the Department of Geography, Environment and Geomatics at the University of Ottawa. A settler scholar, she collaborates with northern Indigenous communities and partners to address local priorities related to environmental change and community health and well-being. Sonia accepted me as her doctoral student at the university and then connected me with Andrew Spring (he/him) to support a land-based research project in the NWT.

Andrew is my co-supervisor and an Assistant Professor at Wilfrid Laurier University, who conducts community-based research to support sustainable food system initiatives in the North. Engaging youth as part of local stewardship and research and monitoring efforts was identified as a community priority in Kakisa during Andrew's PhD with KTFN (Spring, 2018). The first on-the-land camps took place in Kakisa in 2016 and 2017, bringing together the

¹¹ Any time first-person pronouns (I, me, my, mine, myself) appear in this paper, they reflect Woodworth's narrative, except in instances where they are part of direct quotes from Tarek.

researchers, youth, Elders, and community members to exchange knowledge about the effects of climate change in the North. KTFN continued hosting these camps through a partnership with WLU and organizations like Ecology North. Andrew was later invited to collaborate on DFN's on-the-land camps. Recognizing the need for a land-based research initiative, DFN and KTFN requested Andrew lead the project; he then invited me to be the primary researcher.

I am a queer, trans nonbinary, white settler with English and German ancestors born and raised in Dryden, Ontario, a settler community in Treaty 3 territory, the homelands of the Anishinaabek. I first travelled to the NWT in 2018 before my doctoral research began to attend the Dehcho Youth Ecology and Traditional Knowledge Camp (DYETKC) and begin building relationships with my research partners. We spent a week together in the Edézhíe at Willow Lake, learning and healing together. Slowly, through time spent on-the-land, building trust and respect, sharing deep conversations and food, and drinking coffee and tea around the fire, we co-developed the questions and methods for this land-based research.

In 2019, I travelled to Kakisa¹² to co-coordinate the Ka'a'gee Tu Canoe Camp (KTCC) where I met Lloyd Chicot, who has been the Chief of KTFN since 1990. Chief Lloyd Chicot has held many land-based leadership roles advocating for the health and wellbeing of his community and the Land. Additionally, he has worked with various researchers for community-driven projects in KTFN territory, including several projects with Andrew Spring. I became connected to Lloyd through Andrew's relationship, which made it possible for my doctoral research to be developed with KTFN.

¹² Kakisa is the community settlement of KTFN located in Treaty 11 territory within the Dehcho region of Denendeh, the homelands of Dene and Métis peoples.

Following the KTCC, I travelled to Maoste¹³ for another DYETKC. In February 2020, I was invited back to Kakisa for a Climate Change Adaptation Workshop with KTFN and Sambaa K'e First Nation to facilitate a youth-focused climate change adaptation plan. My plan to return in the summer of 2020 was put on pause due to COVID-19, though fortunately, I was able to return in the summer of 2021. For two months, I lived in Kakisa and co-coordinated the 2021 Water Stewardship Gathering (WSG) with KTFN and Ecology North, as well as supported Ecology North's Young Leaders Summit on Northern Climate Change (YLS).

At the DYETKC, KTCC, WSG, and YLS, I gathered the youth's visual stories using an adapted photovoice method. Photovoice was woven into every aspect of the camps as an immersive activity, with the youth capturing photographs throughout the day and sharing their reflections each evening about what they had learned and enjoyed. The photovoice projects were supplemented by my own "watching and doing" practices at the camps, where I actively engaged in camp activities while learning alongside the youth and staff, participating in cultural practices, and working in partnership with the Land.

At the beginning of July 2022, I moved from Ottawa to Kakisa for 11 months. In August, I co-led another WSG with KTFN and Ecology North, and in September I attended and supported another DYETKC at Telemia Lodge¹⁴. Neither of these camps were included in this land-based research; however, they informed my own ways of knowing, being, and relating to this work, as well as strengthened the relationships with my community partners. Between

¹³ Maoste (6-Mile Creek) is in the territory of Łíídlıı Kúé First Nation.

¹⁴ Telemia Lodge is a culture camp and tourism lodge located in the territory of Deh Gáh Got'ıę First Nation. Telemia Lodge is owned and operated by Deh Gáh Got'ıę First Nation.

October 2022 and May 2023, I wrote the first draft of my dissertation and worked as the Family Learning Program Coordinator in Kakisa, as well as a substitute teacher at Kakisa Lake School.

I spent many days and nights with the youth, Elders, and community members, on-the-land and in our homes, developing deep relationships that will last a lifetime. One such relationship was with a 2019 KTCC participant, Tarek Leahy-Chicot (Dene-Métis youth from KTFN), who worked at two of the subsequent on-the-land camps in Kakisa. Tarek was born and raised in Kakisa where he cultivated a strong love for hunting, fishing, boating, and spending time with his family. We became very close friends, and his teachings inform so much of what I have come to know of this research. Tragically, in June 2023 Tarek passed away in a horrible accident at the young age of 21. This research is dedicated to Tarek, whose wisdom, humor, and profound connection to the Land continue to shape this work and my own journey of re-story-ation.

Qualitative Methods

This research is deeply informed by the insights and narratives shared through previous photovoice projects, including Tarek's participation in these initiatives. These projects provided a foundation for understanding how youth engage with the Land, express their experiences, and articulate their perspectives on Land Stewardship. Tarek's contributions to the photovoice projects were particularly significant, offering reflections that have shaped the broader research themes.

In August 2021, I revisited the research with Tarek, with whom I had built a strong relationship of trust and respect, through an in-depth, semi-structured interview. Our friendship

allowed us to engage in an open and honest dialogue about the project as a whole and his experiences participating in it. Tarek was invited to critique his role in the research and how the project integrated into a land-based program, offering unique insights that challenge conventional research methodologies. The interview builds upon the 2019 photovoice data, offering an opportunity to delve further into Tarek's experiences, teachings, and evolving relationship with the Land.

Interview questions were divided into two sections: (1) reviewing Tarek's photographs and stories from the 2019 KTCC; and (2) critiquing photovoice as a research method. The first section included questions about observations of the photographs and stories shared, interesting or important details to highlight, memories and emotions that arose in reflecting, and teachings from the visual stories for strengthening relationships with the Land. The second section critiqued photovoice as a method with questions about the experience using photovoice, safety and comfort in sharing, feeling heard and valued in the research, suggested changes/recommendations to the method, and willingness to participate again.

Tarek and I sat at the kitchen table at the research house, where I lived during my time in Kakisa and where we spent significant amounts of time together. The interview took place immediately after the 2021 WSG, two years after his participation in the KTCC and the associated photovoice project. While I had an interview script prepared, I let the conversation flow naturally so Tarek could speak about what was important to him. Our conversation was heartfelt and genuine, covering the significance of his connection to the Land, the impact of on-the-land camps on his personal growth and leadership journey, and how photovoice played a role in capturing and sharing transformative moments on-the-land.

Our close friendship and years of trust created a space where he felt comfortable sharing deeply personal reflections, his dreams, and his vision for future on-the-land camps. Tarek shared details about his life, intergenerational teachings, and his hopes for strengthening cultural practices within his community, revealing insights that were both intimate and visionary, some of which are too personal to be shared within this research. I specifically interviewed Tarek to explore the impacts of our land-based research because of the trust and respect we built together and his willingness to share openly with me. Through living, healing, and growing together, Tarek changed me as a person, which changed me as a researcher. We learned from the Land, addressed intergenerational impacts of colonization through relational practices, and we developed a reciprocal relationship through our time spent together.

I analyzed the interview through reflexive reflection to understand the impacts of land-based research and relational methods used at on-the-land camps to a youth who fundamentally shaped the foundations of my un/re-learning journey. Reflexive reflection is a research analysis method co-designed by Carrie LaVallie JoLee Sasakamoose (2021). Using an Indigenous methodological paradigm, reflexive reflection was constructed as a respectful and relational approach for co-creating knowledge (LaVallie & Sasakamoose, 2021). The researcher reflects on the stories shared by privileging local Indigenous Knowledges to examine the researcher's positionality and co-create knowledge (LaVallie & Sasakamoose, 2021). Rooted in Indigenous methodologies, reflexive reflection is a process of relational accountability, personal transformation, and ongoing self-examination (LaVallie & Sasakamoose, 2021).

As LaVallie and Sasakamoose (2021) emphasize, reflexive reflection involves the researcher actively reflecting on their own positionality, beliefs, and emotional responses to the inquiry, recognizing that knowledge is co-constructed through relational dialogue. The analysis

was a process of reflecting on my own un/re-learning journey through Tarek's teachings. Returning to this research after Tarek's passing gave me a space to heal from the grief of losing Tarek and gave me new perspectives on his teachings. By reflecting on and critiquing the photovoice project through the interview with Tarek, this study seeks to weave together multiple layers of knowledge and storytelling, creating a deeper exploration of the themes central to land-based research and education. As I revisit our conversation in the context of his passing, his words take on an even deeper resonance, serving as a guiding light for this land-based research and a testament to his enduring impact. While he is no longer physically here, Tarek continues to teach me every day – he is part of the Land, and when I am lost, I can look to the Land to find him there.

By using reflexive reflection, I sought what was meaningful to Tarek, in that moment, shaped by his life, family, and community. In turn, my reflections on those truths also became part of the knowledge being co-created. Reflexive reflection is dialogue, a mutual sense-making process that reflects the relational core of land-based research (LaVallie & Sasakamoose, 2021). Through this practice, I honoured Tarek's stories as living teachings that could guide action, build community, and deepen relational knowledge. Therefore, reflexive reflection bridged the personal, relational, methodological, and theoretical elements of the research and ensured that analysis remained grounded in relationships (LaVallie & Sasakamoose, 2021).

Results: Stories of the Land, From the Land

Stories *of* the Land, *from* the Land, shape how we come to be in the world (L. B. Simpson, 2014; Styres et al., 2013). Stories of “land”/Land are not immaterial, they have socio-

spatial and material realities (E. Cameron, 2015). In other words, “stories matter” (E. Cameron, 2015, p.10). Indigenous Peoples¹⁵ have always passed on Knowledges, histories, cultures, and governance, economic and social structures through stories (Sium & Ritskes, 2013). Indigenous stories of the Land are embedded with generations of Knowledges, connecting the past, present, and future (Green et al., 2020). Storytelling is the basis of Indigenous philosophies and methodologies, where the Land is central (King et al., 2022; McGregor et al., 2010; Popp et al., 2020; Wilson, 2008). In the North, Indigenous stories show how the Land is teacher, relationships, alive, identity (Cluderay et al., 2022; McGregor et al., 2010; J. Redvers, 2020; Robertson & Ljubicic, 2019). Moreover, stories of the Land illustrate the inseparable and synergetic relationship between Indigenous Peoples and the Land (E. Cameron, 2015; Coulthard, 2014; Daigle, 2016).

By directly asking a participant to reflect on their experience, this research centres relationality, relational accountability, and reciprocity. The following section explores how land-based research is re-storying relationships with the Land through values that recognize the Land as teacher, relational, living, and central to identity. Additionally, I include my own personal reflections of un-/re-learning to demonstrate the ways my knowledge and perspectives changed through this research process.

¹⁵ In this paper, Indigenous Peoples refers to the First Nations, Dene, Métis, and Inuit, and Inuvialuit [Inuvialuit are Inuit] of northern sub-Arctic and Arctic regions of Canada (hereby referred to as “the North”). Indigenous Peoples, capitalized and pluralized, reflects the diverse and distinct Knowledges, languages, cultures, placenames, stories, governance systems and traditions deeply rooted in the Land, which have sustained their communities for generations and form the foundation of their identities and ways of living (Coulthard, 2014; Lines & Jardine, 2019; McGregor et al., 2010).

The Land is Identity

Through shared experiences and teachings from Elders, on-the-land camps strengthen cultural values and practices for land-based identities and ways of living, knowing, and being. To illustrate, Tarek said: “Grandpa has all these ways of skinning and preparing, when you see an Elder do that you don’t ask, you just do it.” Tarek’s stories reflected that when going out on-the-land, with Elders and Knowledge Holders, “young people should behave respectfully – *Ts’élhą gots’eh denelą elegedihchá gha góꝛꝛ*” (Dehcho First Nations, 2019, p. 13). When talking about learning from his family, he showed how it was essential to “be polite and don’t argue with anyone – *Dene ts’é nahꝛų gots’eh thá t’áh dene ahdahndı ile*” (Dehcho First Nations, 2019, p. 12).

During the photovoice project at the 2019 KTCC, Tarek described his efforts to show others “the way” through a photograph of two people – a researcher, Ari, and his Uncle, Chief Lloyd Chicot – traveling down the river by boat searching for a moose. In his interview, Tarek elaborated on what “showing them the way” means:

Showing them the way to go. Showing them the way, which is showing them the path up the river and coming back safely in one piece. Since this picture was when the water levels were so low, this boat we were dragging it over a bunch of rocks. It had this edge in the back where it made a hole, so water was slowly coming in. We tried our best even though the water was low, it’s just being careful. When we saw that hole, we slowly made our way back. It wasn’t a serious issue; it was just something to watch over. Showing them what to watch out for when you do go out or something does happen. Showing them our way, like Llyod’s, Dawson’s, mine, the Elders’ and the way they showed me. Showing

them that way, not a specific way, just being traditional. Respecting, being traditional, and showing them the way we do it, which is respect, enjoy your time, not having big speakers or parties or whatever, just soak up what's around you.



Figure 15. Tarek's photograph of Ari and his uncle Lloyd looking for a moose on First River while Tarek operated the boat.

As shown in Tarek's quote, he valued the opportunity to "pass on the teachings [the laws] – *T'ahsi'í ots'edihsho gogháts'ízáh*" and "share what you have – *Eleghaets'edendih*", including to those outside his community (Dehcho First Nations, 2019, p. 4-8). He viewed photovoice as a method to educate and showcase his way of life to a broader audience.

To me, it's really hard to get the youth of nowadays to get them to do this. Right now, where everything is going, this is the way of life right now where this is turning into a pastime. We used to do this because it was a necessity to get food, to travel, for around here, having two lakes, so they needed food, they needed the furs to go down to Providence to get a bunch of furs and supplies. They did this to get by, but nowadays it's not to get by, it's just a pastime, which makes it so much harder for the youth to get to do it because there [are so many] other options now. So now if these kids want to do this, good for them, it's a great life. I don't know if I'd be as happy if I didn't have this. If I had to choose what life to do, if there was no money involved, I'd do this because I started young, I loved it, still love it.

Learning from a young age from his family that his identity is tied to the Land, Tarek learned how to "be happy at all times – *Láqlíh t'áh gogha gonezu*" (Dehcho First Nations, 2019, p. 10). His land-based identity was nurtured through his family and land-based practices, which made him grateful and happy for his life in his community. He said, "Just being on the land, the traditional way, eating the food off it. I couldn't ask for a better community to do that in."

Tarek's desire to share his Knowledge with others, specifically other northern youth, underscored the importance of land-based education and the continuation of cultural practices. The need for land-based programs is highlighted as crucial for self-determination and

resurgence. Tarek spoke about how can photovoice can showcase the importance of on-the-land camps and connecting with the Land:

Well, if you didn't have this work, I would still take pictures, show people, and tell them a story about it. Me, I have family friends, but if you have this, it's public and gets the word out more. It's kind of the same thing, but this gets it more out there. Your work, like a lot of the North has probably seen it. If I were to do the exact same thing, it would just be friends and family. So having this work is good to get the word out.

Land-based research can increase on-the-land opportunities for northern youth by co-designing land-based programs with communities. Photovoice and accompanying knowledge sharing approaches like photobooks and photo exhibits can inspire young people to attend land-based programs. During the interview with Tarek, he emphasized how taking photographs and telling stories about his experiences on the Land deepened his connection to place and how seeing his own and others' photographs displayed publicly reinforced a sense of pride, belonging, and confidence. For Tarek, the project made him feel recognized and could inspire others to seek similar experiences.

From Tarek's perspective, photovoice and visual storytelling approaches do more than capture moments—they actively contribute to youth leadership development and engagement. When youth see their contributions valued, displayed, and celebrated, it signals that their relationships with the Land, and their ways of knowing and expressing that relationship, are important. More youth can be inspired to participate in future land-based programs by seeing themselves reflected in stories told by youth during these programs. It invites youth into the work

of Land Stewardship as active knowledge holders and storytellers, shaping the future of land-based education and community well-being.

The Land is Relationships

When I asked Tarek during a sharing circle at the 2019 KTCC what it means for him to be on-the-land, he responded, “it’s not being ‘on-the-land’; it’s like we are part of the Land”. Tarek’s statement profoundly reframed my own understanding and approach to land-based research and on-the-land camps. This was a critical moment in my un-/re-learning journey, one that I re-turn to continuously. Through years of research at on-the-land camps, and with Tarek’s wisdom, teachings, stories, friendship, and guidance, I began to shift from engaging on-the-land as an external subject to understanding myself as part of the Land. This transformation required listening deeply—not only to Indigenous stories and teachings but also to the Land itself, which communicates through its rhythms, changes, and interconnectedness.

During our interview, I reflected on how his teaching changed me, and how it consequently changed my approach to the research. In this sharing, I asked him to elaborate on what “being part of the Land” means for him. Tarek said:

“Being part of the Land helps you mentally, physically, psychologically [...] Going out hunting and just cruising around it’s a calming thing. [...] there’s nobody out there but you and the animals, to me that’s calming. I use the animals for food and other stuff, it’s not really a sport, but to me it’s a therapist I never asked for. I’m thankful for that.”

Tarek's personal memories of the Land are intertwined with broader communal experiences, showcasing the spatial network of relationships created with, through, and as part of the Land. Land-based programs, such as on-the-land camps, teach all people/Peoples that we are part of the Land, by guiding us through Indigenous stories of the Land and cultural practices of Land Stewardship.

When flipping through the photobook created from the 2019 KTCC photovoice project, Tarek reflected on how “having this work is good to get the word out”, emphasizing the relational aspect of the images and how they encourage people to engage in land-based experiences. The use of photovoice creates a space of reciprocity, remembering, storytelling, and sense-making to share with others. With love for the Land and his community, Tarek spoke to how sharing this research to a broader audience will “show people down in Ontario how lucky we are up here.” Furthermore, he highlighted how this land-based research is important for other youth to understand the importance of connecting with the Land.

It's about capturing a good photo and if they see that then they'll want to come and experience that. [...] It's good to have a book like this to see oh these photos are nice, it's got food, it's got people, it's got family, and so [many] others, friends [...] if there was more books like this, other ways of letting the youth know. [...] Maybe where they're living it's hard to do all of this, but maybe just a little bit of it. Going for a walk, shooting chickens on the side of the road, in an area where it's legal.

Tarek shared that he felt his voice, ideas, thoughts and perspectives were heard and valued in this research project. When I asked him what I was doing to help him feel that way, he said “Just coming here”. Our mutual respect and trust were strengthened beyond the on-the-land

camps themselves; it was through living together in community and spending significant time together – cruising in his boat, truck, quad and snowmobile, watching the sunsets, having coffee and tea, eating country food, walking by the river, and much more. We spent many hours, days, weeks, and months together, which allowed us to build a deep mutual respect through a strong foundation of trust, and as a result, a deep relationship with each other as part of the Land. Despite our different identities, upbringings, and understandings of the world, we found ways to “love each other as much as possible – *Eleghonets’etq*” and “help each other – *Elets’áts’endt*” through this research (Dehcho First Nations, 2019, p. 5-6).

On-the-land camps can provide a space for fostering meaningful relationships among participants, researchers, communities, and the Land. Trust and mutual respect can be built by bringing people together in collaborative and relational ways, reinforcing the importance of collective care. Inherent to Land Stewardship, these relational moments cultivate knowledge co-creation and relational accountability, illustrating the interconnectedness of Peoples/people and the Land. By emphasizing relationality, land-based programs can act as spaces for research where learning and growth emerge through mutual respect and reciprocity, and develop a shared responsibility to maintain the health and wellbeing of the Land for all who are connected to it.

The Land is Alive

By spending time on-the-land, observing, and participating in land-based practices, I came to see the Land as a living, active presence that shapes and is shaped by those who engage with it rather than a passive backdrop of where the research took place. Tarek describes reciprocity as when you take care of the Land, the Land takes care of you:

I give offerings to [the Land]. [...] Mostly tobacco, matches, anything I have. I leave some meat on the trees. If I shot a moose, leave some meat on the trees for the birds and other animals, help them out a bit.

[The Land] gives me something, I give back. You give me something I give it back. Respecting [the Land] when you go out. It's not a chore to look after [the Land], it's something that you do. [...] When you're out there, [taking care of the Land] is not a chore, not like 'ugh I have to give back', you just think 'yeah I got to give back because it gave me an animals life'. It's a good way. It's just something you do because you know it's a good thing.

The Land provides food, healing, and guidance, and, in return, there is a duty to show gratitude and care for the Land. Interacting with the Land—such as giving offerings, showing respect, and practicing traditional harvesting methods—highlight the relational accountability inherent in Land Stewardship. Land Stewardship is not a chore, it is reciprocal relationship.

My relationships with Indigenous Peoples of the North, like Tarek, were central to respecting the Land as a teacher, relative, and living entity. They generously shared stories, teachings, and practices that illuminated the profound responsibilities tied to being part of the Land. These relationships challenged me to reflect on my positionality and the privileges and assumptions I carried as a white researcher. They also taught me that understanding the Land requires humility, reciprocity, and accountability—not just to the people who live there but to the Land itself. They showed me how to listen and learn from the Land, how to connect with and relate to the Land, and how to respect the Land.

During the interview, Tarek spoke at length about the teachings he received from Elders and family members, such as hunting and harvesting practices, and how these experiences were vital to his understanding of Land Stewardship. He described the Land as both a place of healing and a site of cultural transmission, where local Indigenous Knowledge is lived and practiced. Tarek sees the Land as a living entity, deserving of respect, reciprocity, and careful, mindful interaction.

Being quiet, calm, collected, not being so loud or crazy out there. Calm, collected, relaxed and not too tense. You don't want to be on edge, just enjoy the time you have out there because you don't know when you're going to be out there again.

Hence, land-based research through a framework of Land Stewardship is more than research conducted on-the-land – the approaches and methods of land-based research must honour cultural and spiritual relationships with the Land. We must honour the gifts of the Land through relational accountability to the Land and Peoples. Our methods must reflect care, love, and nurturing practices. As researchers, we must reflect on, understand, and be open about our emotions as they guide us through this process of healing on-the-land.

For this land-based research, I had to open myself up to the spirit and sentience of the Land, as well as to the Peoples who invited me to be in their homelands. In this opening, I had to (un-/re-)learn how to live in relation. Being open requires vulnerability, honesty, critical self-reflection, unsettling, and reframing my identity as a white researcher. On-the-land camps can serve as healing spaces for connecting with the spirit of the Land. By participating in and contributing to land-based programs and activities with communities, researchers can develop a

deeper sense of responsibility and care for the Land as a living entity and learn how to listen to the teachings from the Land.

The Land is Teacher

Central to land-based education, the Land is recognized as an active teacher, sharing lessons to those who listen, and guiding people to understand their responsibilities as caretakers. Knowledge is not abstract or detached, but rather experiential and relational, emerging from the interplay between people and the Land. To illustrate, Tarek spoke about how spending time on-the-land helps to build practical survival skills, deep respect, and a sense of responsibility, which are crucial aspects of Land Stewardship.

If I am out on-the-land by myself, I need to know all these skills in case something happens that we haven't planned for, then you know all this stuff. If you want to eat some good meat, you need to know the skills how to get it and prepare it the right way, so when it comes to the table it is clean and easy, just do a little bit of cutting then you're cooking. It's a clean way of life, and I like that way of life.

Land-based programs, such as on-the-land camps, offer immersive and meaningful experiences to observe, and learn from the Land, fostering a space to “share what you have – *Eleghaets'edendih*” (Dehcho First Nations, 2019, p. 4). Aligned with this Dene Law, Tarek emphasized the importance of “showing people as much as we can of what we still have for as long as we have it.” By co-designing land-based programs with local Indigenous Knowledges and scientific methods, communities and researchers teach youth to holistically understand the environmental changes affecting their homelands and equip them with adaptation solutions and

Land Stewardship practices. For example, Tarek reflected on the changing water levels and unpredictable weather patterns in Kakisa, and how the co-creation of knowledge at on-the-land camps helps contextualize his observations of environmental changes with explanations of why those changes are happening.

Before, in 2019, we kind of knew what to expect, but now the weather is all over the place, so we don't know what to expect. Seeing the low-low water in 2019 and this really high-high water [in 2021], I don't know if it's going to go down next year or go even higher next year.

Before you guys came, I had no clue about all this stuff, the science part, so it does help. It informs me about stuff on-the-land, about water levels and permafrost melt, knowing how much bugs are in there and how healthy it is. I see all these bugs in there and reminds me of Ari's work where he counts bug for how healthy it is. So, all these bugs are a good sign. It helps me when I look at some stuff. The burn, like Genevieve's work, like the burn and how moose come back after a while, knowing all this stuff helps me for what I do when I go out. It helps me understand what's going on, on a scientific level, about what's actually happening. Stuff like that helps me.

Northern communities are continuously observing the changes happening to the environment. Combined with scientific research methods, youth can better grasp why the changes are happening and find solutions grounded in local Indigenous Knowledges and scientific approaches to adapt and respond to such changes. Importantly, science alone cannot fully provide insights into the reasons behind environmental changes, as it often overlooks the impact of colonial-capitalist power systems. When researchers and communities gather on-the-

land, they learn from the Land through direct engagement—such as observing wildlife behaviour, harvesting traditional foods, and adapting to seasonal changes—which develops the knowledge and skills for Land Stewardship.

Furthermore, land-based research at on-the-land camps is not about prioritizing “data collection”; rather, it is about prioritizing co-learning from the Land with community members to “help each other—*Elets’áts’endi*” through knowledge co-creation and quality time spent together on-the-land (Dehcho First Nations, 2019, p. 5). Recognizing the Land as our teacher, we see the stories revealed in natural elements—the soil, rocks, plants, trees, waters, animals, mountains, sky, stars, sun, moon, and beyond. For land-based research, the Land must be recognized as our teacher and understood through relationships.

Discussion: Re-Storying Relationships with the Land

Four key themes emerged in this study: the Land is teacher, relationships, alive, and identity. This section synthesizes the research findings to show how land-based programs foster reciprocal, relational spaces for research and the ways land-based research contributes to re-storying relationships with the Land. Additionally, I include my own reflections of re-storying my relationship with the Land to demonstrate the transformative impacts of land-based research on the researcher.

Land is at the heart of Indigenous identity, longing, and belonging. For Indigenous Peoples, identity is inextricably tied to the Land, and ways of knowing, being and doing are guided by one’s relations to the Land (Absolon, 2011; K. Martin & Mirraboopa, 2003; Trout et al., 2018; Wilson, 2008). Family is the glue that holds Indigenous Peoples to their identities,

communities, and Nations (Wilson, 2008), and the Land is part of that family. The Land serves as a repository of both personal identity and shared history, with each location holding specific stories and emotions, transferred between generations of people (Goeman, 2008; Johnson-Jennings et al., 2020). Location and community are the networks that establish a person's reality, which are held by the relationships formed with the Land (Wilson, 2008).

Land-based programs function as spaces where communities can reconnect with their cultural and familial ties to specific places, which shape their sense of self and belonging. Upholding the value of the Land as identity, land-based research can support community priorities such as safeguarding sacred sites, revitalizing traditional practices, and nurturing relationships and intergenerational knowledge transfer. The use of photovoice to document youth experiences at on-the-land camps emphasized the deep connection between memory and place. The visual stories serve as tangible links to the past, capturing moments and emotions tied to the Land.

The Land is a sacred and spiritual living entity. The Land must be cared for, just as peoples do (McGregor et al., 2010; Sepulveda, 2018; Tobias et al., 2013). Indigenous Peoples' relationships with, and Knowledges of, the Land value and respect the ways humans are a part of the Land (Bowra et al., 2021), and relationships with the Land are sacred, spiritual, and interconnected (Wilson, 2008). The health of the Land and people are inseparable—when the Land is sick, the people are sick too, (Tobias et al., 2013).

The Land is layered and living with memories, told through stories and connected through generations from the cosmos to the earth, tended to carefully by words, emotions, memories and locations (McGregor et al., 2010). Relational accountability to the Land as living

is enacted through offerings of love, respect, humility, gratitude and reciprocity (Absolon, 2011; K. Martin & Mirraboopa, 2003; Wilson, 2008). The Land cannot be owned (Coulthard, 2014), but the Land requires human caretakers for protection (Kimmerer, 2013). Hence, reciprocal relationships are integral to Land Stewardship (Kimmerer, 2012). This relational approach fosters a deeper understanding of the Land as a living network of stories, traditions, and teachings.

Natural scientific research disciplines (e.g., biology, ecology, environmental science, geography, geology, hydrology, physiology, permafrost and soil science, and many more) are limited in their ability to critique and analyse the sociocultural structures influencing these changes (Ninomiya et al., 2017). Indigenous Peoples observe the changes happening to their Land with deep awareness rooted in lived experience, carrying the memories of colonization while continuing to navigate the ongoing impacts of colonial-capitalist systems on their environments and communities (Fischer et al., 2022; Ioana Radu et al., 2014). When combined with scientific approaches, Indigenous stories of the Land can teach natural science researchers how to approach environmental issues more comprehensively, gain a deeper understanding of what is happening, and better equip youth with a holistic framework for Land Stewardship.

Recognizing the Land as living ensures that research is rooted in the relational accountability and reciprocity that are central to local Indigenous Knowledges, which shifts the focus of research from an extractive approach to one that is responsive and reciprocal. Respect and trust are built through reciprocity and shared experiences of living together on-the-land (Clarke, 2015; Ioana Radu et al., 2014; Marom & Rattray, 2022), which strengthens a mutual sense of belonging to the Land (Woodworth et al., 2025). Respect and trust are earned through a reciprocal exchange of care, love, nurturing, and sharing, which requires a commitment to being

present, listening, and valuing the contributions of the everyone involved (Arellano et al., 2019; Dombrowski et al., 2013; Hatala et al., 2020; Lavallée, 2009; McGregor, 2013).

Building respect and trust requires consistent and genuine interactions over long periods of time—sharing stories, respecting cultural teachings, and creating space for people/Peoples to express themselves in ways that feels authentic and comfortable (Castleden et al., 2012; Woodward & Marrfurra McTaggart, 2016). The Land's cycles, changes, and responses are sources of guidance, offering teachings that inform how research should be conducted to align with the needs and values of the community. This perspective also ensures that land-based research respects the Land as an active participant in the knowledge-creation process, rather than a physical environment to be studied externally.

The Land is a constellation of relationships. Encapsulated in language, the Land is a network of socio-spatial relationships created in a dynamic process of reciprocity, remembering, storytelling, and sense-making (Sium et al., 2012; Wilson, 2008). Deep emotional and spiritual connections are nurtured through reciprocal relationships with the Land (Dylan & Smallboy, 2016b; Jacobs et al., 2021; Sepulveda, 2018). On-the-land camps can function as relational and transformative spaces for researchers and northern Indigenous communities to co-create land-based research projects with foundations in mutual respect and trust.

To re-story the Land, northern research must centre Indigenous Knowledges and methodologies at every stage of the research process. How we connect with, come to know, and tell stories of the Land *matters* (Absolon, 2011; E. Cameron, 2015). Re-storying relationships involves shifting narratives about the Land and transforming the relationships and processes within the research itself. Inviting participants to reflect on and critique the research process is a

key component of relational accountability and reciprocity. Locating the researcher in the research through critical self-reflection demonstrates the transformative potential of land-based research on the researcher.

The Land carries sacred knowledge and wisdom and shares stories to those who listen. Indigenous Knowledges flow from the Land and through the Peoples (L. B. Simpson, 2014). The Land offers teachings and gifts to those who observe, listen, and act respectfully and reciprocally (Kimmerer, 2013). With increased time spent on-the-land, the Land teaches us the connections among all living and non-living relations (Cluderay et al., 2022), and increases awareness of sociocultural and environmental changes and the subsequent impacts on communities. By spending time on-the-land, we observe environmental changes, learn to examine seasonal changes, and develop skills to identify local animal habitats, migration patterns, and plant species along with their medicinal uses (Guyot et al., 2006; Pearce et al., 2010; M. J. Price et al., 2022). We can also learn to locate areas for fishing, hunting, and harvesting, as well as places of cultural importance and significance, especially as the landscape is changing (van Luijk et al., 2022).

My journey of understanding the importance of re-storying the Land began with a profound relational transformation—one that unfolded over years of unlearning and relearning. This process required me to confront and dismantle the colonial-capitalist narratives I had been raised with and internalized, which taught me the “land” was an object to be studied, used, or controlled, something outside and external to people. Instead, I learned to engage in relational re-story-ation—a process of re-establishing relationships with myself, the Land, and Indigenous Peoples.

My journey of re-story-ation redefined my approach to research. It became clear that relationality—not objectivity—was the foundation of ethical and meaningful knowledge co-creation. My experiences taught me that to understand the Land, I had to embrace a process of ongoing transformation, one that required me to continually unlearn colonial-capitalist frameworks and relearn what it means to be in reciprocal relationship with the Land and Peoples. This process continues to shape how I engage with the North, as both a researcher and a person striving to honour the interconnectedness of all things. My journey of un/re-learning grew exponentially when I moved from Ottawa to the NWT. Moving to the North permanently transformed my approach to northern research as a non-Indigenous person from southern Canada. Living in the North deepened my understanding of the responsibilities and relational practices necessary to engage with the Land and communities in ways that would not be possible living in southern Canada. The meaningful relationships I have formed, such as the one with Tarek, have profoundly influenced the methodological choices in this research.

Tarek's untimely passing came one month after I moved from Kakisa to Sòmba K'è¹⁶ to begin a new job as Project Director for Northern Youth Leadership. As Project Director, I oversee programs that empower youth through land-based education, leadership development, and cultural engagement. My job has allowed me to maintain the relationships formed during this land-based research while putting into practice the teachings and experiences throughout my re-story-ation journey. Working closely with KTFN, we have co-developed an annual on-the-land camp in Tarek's honour, titled the Tarek Leahy-Chicot (TLC) Camp. The TLC Camp is inspired by Tarek's vision for his ideal on-the-land camp, a vision he shared with me during the

¹⁶ Sòmba K'è (Yellowknife) is situated in the NWT on Chief Drygeese Territory, in Treaty 8—the traditional home of the Yellowknives Dene First Nation and the North Slave Métis.

interview in this research. Postponed due to the wildfires in Kakisa in September 2024, our inaugural camp was hosted in March 2025. In my work and research, I honour Tarek and the meaningful relationship we built over years of friendship.

Conclusion

CBPR played an important role in shifting the narrative of northern research, emphasizing collaboration, shared power, and inclusion of Indigenous voices (Castleden et al., 2012; Tondu et al., 2014). Land-based research broadens and enhances participatory approaches by rooting the entire research process in Indigenous methodologies and understandings of the Land. Indigenous Knowledges, which are inherently land-based, shape the research from start to finish (Kimmerer, 2013). Importantly, land-based research is not meant to be applied as a one-size-fits-all, blanket-approach to conducting northern research. Every research context will be different depending on the researcher, their positionality and relationships, and the communities the research takes place, and hence requires a unique relational research approach designed within that context. Specifically, we argue that researchers must prioritize listening to Indigenous stories of the Land and work collaboratively with Indigenous Peoples as Knowledge Holders, co-researchers, and leaders. This research challenges colonial-capitalist narratives that position Land as a resource to be managed, rather than a relationship to be upheld. Through land-based education, youth engage with Land Stewardship in ways that reflect Indigenous governance, cultural continuity, and reciprocal responsibilities.

This paper demonstrates how land-based programs, such as on-the-land camps, are effective spaces for conducting collaborative, reciprocal land-based research. Moreover, on-the-

land camps can provide a context in which research can be conducted in a way that respects and upholds Indigenous Knowledges and stories of the Land. Through shared land-based experiences, trust, respect, and reciprocity is established and nurtured between researchers and community partners, and among the entire camp community. By spending time together at on-the-land camps, land-based research projects can better address community-driven goals by strengthening researchers' responsibilities to the communities most impacted by their work.

Centring Tarek's teachings and perspectives demonstrates his impact on this land-based research and the co-creation of knowledge. I also share reflections of my un-/re-learning journey to highlight how the research transformed through the relationships that are embedded in it, ultimately re-storying my relationship with the Land. As I grew and changed, so did the research. Land-based research is living—shaped by the Land, shaped by my own personal journey, and shaped by the relationships embedded in it. The Land is our teacher, the Land is relationships, the Land is alive, and the Land is identity.



that ~magic~
finds its way
into your spirit
when you
fall in love
with the Land

Chapter 6: Conclusion

This chapter provides concluding remarks for the dissertation by connecting the research to the land-based education literature and northern context. This conclusion chapter ties the research objectives to the advancement of knowledge for land-based research and Land Stewardship.

Summary of Findings

Indigenous Peoples have utilized land-based education since time immemorial (Bowra et al., 2021). Land-based programs reframe relationships with the Land beyond colonial-capitalist constraints, recognizing the deep kinship ties that exist between Indigenous Peoples and the Land (Sepulveda, 2018). For Land Stewardship, it is essential to support the resurgence of land-based pedagogies, practices, stories, and teachings (L. B. Simpson, 2014). This research contributes to the rapidly expanding land-based literature by documenting the important roles that land-based programs hold for northern youth. As documented throughout this dissertation, Indigenous communities across the NWT are working to reconnect youth to the Land through land-based programs, such as on-the-land camps (Ballantyne, 2014; Dragon-Smith & Lahey, 2022; J. M. Redvers, 2020).

Specifically, **Chapters 3 and 4** explored what northern youth experienced and learned during on-the-land camps in the NWT. By facilitating a space of creative reflection for the youth to share visual stories of their experiences at on-the-land camps, we observed the impacts of land-based education northern youth. Together, these research studies show how on-the-land

camps can provide a space for the youth to connect with the Land and empower them as Land Stewards.

Chapter 3 illustrates the experiences of Dene and Métis youth (ages 12-17) during two on-the-land camps in the Dehcho region of the NWT. This chapter reveals the ways on-the-land camps can create a space for youth to see themselves as part of the Land. The results conclude that land-based education programs, like on-the-land camps, are effective and possibly critical mechanisms by which relationships may be fostered between youth and the Land, particularly for the youth who have limited opportunity to experience land-based activities otherwise. Following these findings, **Chapter 4** explores the experiences of older northern youth (ages 18-30) at two on-the-land camps in the NWT. This study identified the ways on-the-land camps empower youth to be leaders and Land Stewards in their communities. The results give insights to northern youth's concerns about socio-environmental changes and impacts in northern communities, as well as their priorities for land-based leadership.

Together, **Chapters 3 and 4** highlight how the youth's stories connect to their memories on-the-land, as well as the stories of their ancestors. Through the processes of remembering, storytelling, and sense-making (Gaudet, 2016), the youth connected what they were learning and experiencing at camp with their past experiences of being on-the-land and listening to Elders' teachings. When youth care about the Land, they care about what's happening to the Land, what happened in the past, and what's going to happen in the future. Their care develops simultaneously through memories of the past, experiences in the present, and visions for the future. In summary, using photovoice at four on-the-land camps illustrated how northern youth are re-storying their relationships with the Land at land-based programs.

Broadening CBPR approaches for northern research, **Chapter 5** examines how land-based research can enhance participatory approaches by rooting the entire research process in Indigenous methodologies and understandings of the Land. This chapter demonstrates how on-the-land camps are effective spaces for conducting collaborative, reciprocal land-based research and provide a context in which research can be conducted in a way that respects and upholds Indigenous Knowledges and stories of the Land. Based on a long-standing relationship with KTFN youth, Tarek Leahy-Chicot, and through exploring his perspectives shared in an in-depth interview, this research honours his impact on my personal (un/re-)learning journey and demonstrates how Tarek's teachings emphasize the deep, relational nature of land-based research.

Through exploring the perspectives of northern youth at on-the-land camps in the NWT, I document the ways land-based programs support land-based leadership by empowering Land Stewards. Additionally, the impacts of on-the-land camps for northern research(ers) are articulated and illustrated through the framework of land-based research. Lastly, through a critical self-reflection on my journey of unlearning and relearning using poetic inquiry, photography and practices of writing care-fully, I show how land-based research can re-story relationships with the Land.

Research Implications

Northern Youth

This research documents the impacts of land-based programs, specifically on-the-land camps, in the NWT through the perspectives of the youth participants. The findings amplify that

on-the-land camps offer transformative experiences for Indigenous youth to connect with their peers, Elders, ancestors, and the Land that holds those relations. On-the-land camps can provide a space of meaningful engagement and experiential learning for youth to voice their concerns and priorities to work collectively against social and environmental injustices. On-the-land camps can be a catalyst to equip youth with the skills and knowledge of protecting the Land for current and future generations. For example, hands-on learning activities that foster both practical skills and relational responsibilities to the Land include:

- Harvesting practices (e.g., fishing, snaring, trapping, hunting, preparing traditional foods, berry-picking)
- Plant identification and medicine walks (e.g., learning about local plant species and their uses for food, medicine, and ceremonies)
- Water monitoring (e.g., testing water quality, learning about watersheds, health of the rivers, lakes, and streams)
- Wildlife monitoring (e.g., animal signs, migration patterns)
- Community and regional mapping (e.g., Indigenous Conserved and Protected Areas, remote sensing, harvesting places, traditional place names)
- Survival skills (e.g., fire-building, making shelters, navigation, reading the weather, safe canoeing and paddling practices, emergency preparedness)
- Dene Laws (e.g., traditional protocols, stories, responsibilities to the Land)
- Leadership development (e.g., conflict resolution, fostering teamwork, accountability, ability to lead group activities safely and respectfully, non-violent direct action, leadership qualities and values)

Climate change education (e.g., learning about the impacts of industrial development, resource extraction, and climate shifts on local ecosystems) On-the-land camps are effective in creating a space for youth to learn about ways to protect the Land while experiencing it first-hand, and in doing so, the camp environment can foster relationality and reciprocity between youth and the Land. Moreover, on-the-land camps can empower youth to be leaders in their communities by cultivating a safe space of learning, caring, belonging, sharing, and nurturing. The transfer of knowledge involves a reciprocal learning process through storytelling, immersive experiences, and hands-on activities, which can support and encourage youth to take on leadership roles within and beyond the camp community.

Theoretical

By focusing on Land Stewardship as the central theoretical framework, our research highlights the significance of land-based education in cultivating responsible land-based practices among both Indigenous and non-Indigenous youth. Within the context of Land Stewardship, this dissertation contributes to ethical, relational, and reciprocal research practices that engage participants in reflecting upon and expressing their relationship with and accountability to the Land. This research demonstrates that land-based education empowers youth to become responsible caretakers, protectors, and stewards of the Land. Furthermore, I highlight the ways land-based education supports the values and practices of Land Stewardship among northern youth. By engaging relationally with the Land through on-the-land camps, youth can develop a sense of responsibility and commitment to Land Stewardship.

By focusing on northern youth experiences at on-the-land camps, these studies show the impacts of experiential and immersive land-based learning in fostering a deep, personal commitment to Land Stewardship. By learning how to become Land Stewards, youth are demonstrating resurgence for Indigenous governance and self-determination. This research reframes discourses of environmental stewardship and outdoor education through a framework of Land Stewardship and land-based education. This research challenges settler-colonial models of environmental management by demonstrating how Land Stewardship is a relational, lived responsibility.

Moving beyond environmental stewardship as a theoretical framework, Land Stewardship allows for a deeper exploration of reciprocal and respectful relationships with the Land for Indigenous Peoples and non-Indigenous peoples. Moreover, our theoretical framework, paired with methodologies which are relational, participatory, and reflective of Indigenous ways of knowing, supported the development of strong, mutually beneficial, reciprocal relationships between researchers, research partners, participants, and all those involved in making the on-the-land camps successful.

Methodological

At its core, geography is rooted in the assimilation, domination, and dispossession of Indigenous Peoples and Indigenous ways of knowing, being, and doing (Coulthard, 2014; Daigle, 2016). While CBPAR methodologies are often referred to as “best practice” for northern research, these approaches limit the depth at which we can connect and relate to each other, the Land, and the ideas shared, and ignores the sacredness of research. On the contrary, land-based

research, shaped by an IRP, offer pathways for relationality and relational accountability through research. This research was co-designed with community partners through relationality and relational accountability, and as such, this research serves the communities it was designed with. This research approach is an act of love and care, built through respect, responsibility, relationality, continued by nurturing relational accountability and refuses a storying of the North that portrays Indigenous Peoples and communities as weak, vulnerable, traumatized, and lacking capacity.

In this dissertation, I explore the importance of land-based programs to northern youth through the youth's teachings, experiences, relationships, and stories. By applying innovative and adapted methods, knowledge co-production and mobilization, and digital technologies and creative arts, this research showcases, celebrates, and re-stories relationships with the Land. While experiences being on-the-land are diverse and unique, rooted in personal identities, family histories, home communities, and ancestral roots, photovoice can show what youth are learning, experiencing, and enjoying during land-based programs.

Specifically, this research demonstrates how photovoice and knowledge mobilization methods, such as photo exhibits and photobooks, are powerful ways to document the impacts of land-based programs for youth. My approaches for knowledge mobilization focused on strengthening the transfer of knowledge from the camp into community. As part of the photovoice projects, all the youth received a photobook of their photographs and stories, accompanied by the other youth's photographs and stories at that camp. Research partners also received a photobook for their camps. The 2019 DYETKC and 2019 KTCC youth participants also had their photographs and stories featured in photo exhibits in their communities (i.e., Kakisa, Fort Providence, Líídlı́ Kúé). The photobooks and photo exhibits provided opportunities

for the youth to share what they learned, experienced, and enjoyed on-the-land outside the camp community, with their friends, family, relatives, mentors, teachers, and other members in their communities.

To apply photovoice methodically and methodologically within the dissertation itself, I included my own photographs to connect sections together. As photovoice was used in this research for the youth to share visual stories of their connections with the Land, I included my personal photographs to share the re-storying of my relationship with the Land. The moments captured in my photographs show alternate expressions of writing and intend to connect the reader to the feeling of being on-the-land in ways words alone cannot. Poetic inquiry supports the reader to develop their own relationships with the writing. This experience is contextualized within the reader's web of connections; as you read, you bring in the ideas into your own context, community, and relationships, and you find ways to be accountable to what you have learned through these stories (Wilson, 2008). By reading the poems and seeing the images captured, the reader can feel the emotions embedded in this research, the love, gratitude, care, and connection held in this work, and the strength of the relationships formed through this work.

Research Relations

This research demonstrated how on-the-land camps can be an asset for collaborative community-based research projects and strengthening researcher-community relationships. Such strengthened relations are also tied to our everyday interactions of living and working together. My relationships with the community partners, camp staff, and youth exceed the one week on-the-land camps, as well as the timeline of this doctoral degree. Our relationships have been built,

nourished, and maintained through time spent together, getting to know each other, sharing our goals, values, and dreams, and becoming lifelong friends.

This dissertation was written care-fully and socially through our interactions and conversations in community, out on-the-land. To illustrate, the time spent in Kakisa writing the first draft of this dissertation for 11 months provided countless opportunities to connect with community members and build strong relationships rooted in relational accountability and mutual respect. Living in the North provided more opportunities to visit research partners, the youth, and camp staff in Fort Providence and Łíídlıı Kúé (Fort Simpson), coordinate and support more on-the-land camps outside of this research and increase knowledge mobilization efforts.

Northern Communities

The impacts of this research for community include, but are not limited to, short-term employment for camp staff, opportunity for Elders, Knowledge Holders, and community monitors to transfer local knowledge and land-based practices, cultivating a space for youth to learn from and connect with the Land and share those experiences back with community, strengthened intergenerational relationships, collaborative community-based research projects, and strengthened researcher-community relationships. While each camp has a similar structure, the activities of the camps depend on the local experts and land-based leaders who collaborate and teach activities. This ensures that the teachings are connected to the places in which the camps are held and taught by local community members. Knowledge comes from the Land, so depending on where the camp will be held, different ways of knowing and relating to the Land will be the focus of that camp.

During the on-the-land camps, camp staff are hired locally from the hosting community as the camp cooks, camp maintenance, wildlife monitors, boat operators, Elders and Knowledge Holders, and community monitors. Camp staff have a short-term employment before, during, and after the camp, which brings in revenue into the community, strengthens local capacity, and knowledge transfer. Hiring within community also provided an opportunity for Elders, Knowledge Holders, and community monitors to transfer local knowledge and land-based practices. As Indigenous Knowledges are rooted in the Land they come from, it is essential to have local community members, such as Elders, share their teachings and stories of the Land in the place that Knowledge is from.

Beyond employment opportunities, Indigenous adults and Elders need time and space to heal their relationships with the Land. On-the-land camps not only provides a space of healing for youth but also serve as communal healing spaces for the entire camp community. For residential school survivors, on-the-land camps offer a structure and space to celebrate their strength and pass on teachings to the younger generations. Community members honour their stories, address the impacts of intergenerational trauma, and demonstrate the strength of Indigenous Peoples.

As traditional practices and ceremonies were banned, outlawed, and criminalized through colonial-capitalist systems, it is critical for Indigenous Peoples' cultural identity tied to the Land to continue their traditional practices and ceremonies on-the-land. Cultural activities and traditional food practices at on-the-land camps contribute to Indigenous resurgence and self-determination, and healing the reciprocal, cultural, and spiritual relationships between Indigenous Peoples and the Land.

Cultural activities such as drumming, hand games, arts and crafts, and sharing circles allow all camp members to reconnect with traditions that honour the Land. Camp staff, mentors, Elders, and Knowledge Holders reconnect with their practices and pass on the teachings to the youth, ensuring longevity of their Knowledges and stories. Moreover, Indigenous food sovereignty is strengthened through hunting, fishing, gathering, and preparing and sharing food from the Land. At every camp, the youth emphasized their love for eating food from the Land. From my experiences, it was evident that the practices of gathering, harvesting, and sharing food from the Land brought all members of the camp community immeasurable joy and gratitude, especially the Elders. Overall, we observed in this research that on-the-land camps help to support and strengthen intergenerational relationships between all generations within community, from children and youth to Elders.

Northern Regions

Since time immemorial, Indigenous Peoples have lived reciprocally with the Land and in community in the North (Edge & Komarnisky, 2022). Land-based programs, such as on-the-land camps, teach reciprocal and respectful ways of living, being, and doing on-the-land. There are intrinsic connections among Indigenous resurgence and self-determination, Indigenous Guardianship, Land Stewardship, food sovereignty, and land-based education, and on-the-land camps are embedded in these connections.

By gathering Indigenous youth with non-Indigenous youth from across the North, on-the-lands create spaces for cross-cultural knowledge exchange. The camp structure and activities create spaces for youth to share dialogue, increasing their knowledge and awareness of socio-

environmental changes and impacts across northern regions. Through their shared learning and time spent on-the-land, youth receive opportunities to learn from each other and problem-solve to address challenges on various scales. Also, given the high cost of travel in the North, youth from the three territories rarely have an opportunity to meet in-person. On-the-land camps for youth across the North are important and needed spaces for northern youth to come together in dialogue, relationship building, problem-solving, and action planning.

Limitations and Considerations

Practical Challenges

There are practical challenges of “on-the-land” camps, such as financial costs, risk, and safety concerns (e.g., remote travel, inclement weather), and youth engagement. On-the-land camps require significant funds for implementation and is a major barrier for sustained long-term programming. On-the-land camps, as well as other land-based programs, are often funded on a project/yearly-basis. It takes a lot of time, capacity, and collaboration to repeatedly apply for funds to host land-based programs. Hence, it is critical that land-based programs, such as on-the-land camps, receive consistent, ongoing, reliable funding for implementation.

Travelling to remote places and living on-the-land in a communal camp has numerous risk and safety concerns, such as inclement weather, wildlife, open water, uneven terrain, getting lost in the woods, lack of access to healthcare, as well as many others. Camp instructors and participants must be prepared to calmly respond to any emergency that appears. Camp instructors should receive cultural-safety training, mental health first aid, and wilderness first aid beforehand.

I had difficulty engaging the youth at the beginning of each camp, such as with the photovoice reflections in the evening. Engagement is a slow process that is fostered through respect, relational accountability, humility, patience, active listening, clear communication, adaptability, flexibility, and kindness. As the relationships develop throughout the week, the youth expressed that they felt more comfortable sharing stories and engaging in the activities. The youth also expressed their desire for longer camps, and more camps throughout the year. Therefore, I argue that camps should be longer (at least 2 weeks) to improve youth engagement, with seasonal camps offered year-round. I also had difficulty engaging the youth in the research process after the on-the-land camps, specifically for the co-analysis and co-authorship stages. There were several structural and logistical challenges that prevented full participation in these aspects of the research, such as personal, work, and school obligations, geographical distance, and sufficient time and financial resources. It is important to consider these limitations when conducting research with youth at on-the-land camps.

There are broader challenges in facilitating long-term involvement in research for youth participants after the on-the-land camps end and the research process continues, as they are balancing their personal, educational, and employment obligations. For the first research study, I actively sought to have a youth participant from the 2019 camps (ages 12-17) join me and my research partner in co-analyzing the data and co-writing the paper while I was in the NWT. We established a contract to compensate the youth as a research assistant to ensure their contributions were recognized and valued. However, after finalizing this arrangement, the youth was no longer able to commit to the project due to competing responsibilities with school and work.

During the second research study, the geographical distance living in southern Canada while the youth (ages 18-30) were spread across many communities in the North made it difficult to facilitate virtual spaces for co-analysis and co-writing, especially during ongoing COVID-19 breakouts. The older youth were committed to their own personal, educational, and employment obligations. The limited timeframe of the doctoral program and our collective distance was difficult to facilitate the later stages of the research process. For both camps, the youth approved their story transcripts and final photograph selections prior to the creation of photobooks and photo exhibits, as well as the data analysis, but did not have the interest or availability in participating in the analysis and writing. Receiving approval from all the youth for the first and second research studies took a long time, partially because I did not want to add external pressure or stress for meeting strict deadlines. I valued the youth's agency and participation in the research, it was critical that they were never pressured to do any stages of the research process they were not interested in.

Not having the youth as co-authors or as part of the analysis was due to the practical limitations of integrating youth into long-term research processes beyond the on-the-land camps. Ideally, we could have created dedicated space for this work immediately following the camp—spending additional time together to collectively analyze the stories, begin writing, and facilitate a more sustained co-creation process. However, this would have required substantial time, effort, and financial resources that were not available to us within the scope of this research or their own personal commitments in their various home communities. While they did not participate in the final stages of the research, I continued to maintain and strengthen my friendships with the youth by communicating together on social media and messaging apps. Our relationships deepened exponentially when I moved from Ontario to the NWT.

Additionally, researchers attending on-the-land camps must have a clear understanding of local protocols for being on the Land and working respectfully with youth and Elders before their participation begins. These protocols encompass not only practical guidelines, such as respecting cultural practices and traditions, but also deeper relational responsibilities that honour the Land as a living entity and the community's values. This lack of understanding led to missed opportunities for meaningful connection with the community, as well as actions that unintentionally disrupted the flow of the camp and disrespected local ways of being. Through my experience working alongside scientists and researchers at on-the-land camps during my degree, it became evident that many arrived without adequate preparation or awareness of local protocols. Learning local protocols prior to camps would ensure that researchers engage with humility and respect for mutual learning and collaboration. By prioritizing this preparation, researchers can approach on-the-land camps as partners in co-creating knowledge rather than outsiders imposing their own frameworks.

Frequent Job-Turnovers

Working in the North, frequent job-turnovers are common and part of navigating community-based research in small communities in the NWT (Ljubicic et al., 2021). These transitions can disrupt the continuity of relationships and research processes, which are often built on trust and long-term engagement. Job turnovers can affect the stability of partnerships, as new staff members may bring different priorities or levels of familiarity with the research. In small communities, where relationships are deeply personal and trust is central, these disruptions can be particularly impactful.

Job-turnovers with research partners requires researchers to continuously rebuild relationships, renegotiate agreements, and re-establish shared goals, which can slow progress and create uncertainty. To illustrate, Kristen Tanche, Beth Hudson, and Britney Nadli acted as research partners in DFN's Regional On-the-Land Coordinator position throughout the six years this dissertation took to complete. The turnover of DFN's Regional On-the-Land Coordinators made it difficult to progress through the research as planned, as each person had to be caught up on the project to-date and I had to adapt to new relationships and communication styles.

As the research partners changed and time progressed, I modified the research studies to ensure the research remained collaborative and reflective of DFN's goals and capacity for collaboration. My approach emphasized flexibility, patience, and a commitment to relational accountability. While job turnovers are an inherent challenge, they also highlight the importance of embedding research within community priorities and ensuring it remains adaptable to the evolving dynamics of northern contexts. This limitation underscores the need for long-term investment in community-driven research models that prioritize consistency and empower local voices, even amidst the realities of frequent staffing changes.

Living in the South, Researching in the North

As a researcher from Ontario studying in the NWT, I constantly struggled with my positionality. Each time I returned to Ottawa after being in the North for on-the-land camps, I felt an overwhelming sense of disconnection. The shift was harsh and stark going from the Land, where everything felt interconnected and alive, to the structured and detached environment of the Canadian colonial capital city left me feeling lost. I felt like an imposter, someone trying to

engage with the Land and its peoples from a distance that seemed insurmountable. In Ottawa, I was far away physically, mentally, emotionally, and spiritually from the communities, the Land, and the stories that shaped my research. This distance created a tension within me that I did not know how to resolve. The more time I spent in the NWT, the harder it became to leave. I felt as though each departure severed the relationships I was trying to build, relationships that were so essential to the work I wanted to do, and my own identity as a researcher became fractured and irreparable.

Moving to the NWT fundamentally shifted my perspective on northern research. Living here allows me to experience the rhythms of the Land and community in a way that was not possible during brief visits. It gives me the time and space to deepen my relationships. Living here taught me what it means to be in true reciprocity with the Land. The move helped me see that research is not just about the knowledge we gather, but about the relationships we nurture and the responsibility we hold to those relationships. It was through this process that I began to reconcile the tensions of my positionality and understand what it truly means to do land-based research. Through my experiences living in Kakisa, I learned that I was part of the Land. As Tarek said, “it’s not being on-the-land, it’s like we are part of the Land.” Living in Kakisa allowed me to experience the deep, reciprocal connection that comes from being in relationship with the Land, rather than observing it from a distance. I began to feel the rhythms of the seasons, the changes in the landscape, and the stories carried by the Land in a way that anchored me. I started to understand what it truly means to belong, as someone in relationship with the Land.

Researchers will never fully understand the context of the North if they continue the modernized practice of “parachute research”, traveling from the South to the North solely to do

research. While some researchers may spend extended periods in northern communities, as I did at the beginning of my research, the time spent in communities is often limited to the parameters of the research. This approach to research inherently lacks the depth required to build meaningful, reciprocal relationships. Relationships must extend beyond the research itself (de Leeuw et al., 2012). Land-based research is not just about collecting data or observing; it requires researchers to immerse themselves in the daily lives, rhythms, and realities of the community. This means spending significant time together outside of research activities, such as participating in shared experiences, listening to stories, learning through doing, and engaging in community life. Relationships are strengthened through these lived experiences, which foster trust, mutual respect, and a deeper connection to the Land and the Peoples who are part of it.

Without this relational foundation, research risks perpetuating extractive practices, where knowledge is taken without meaningful reciprocity or understanding of the broader context (Christina et al., 2022). To truly engage in land-based research, researchers must commit to long-term relationships that prioritize the needs, values, and perspectives of northern Indigenous Peoples. This process requires humility, patience, and a willingness to step outside the confines of academic timelines and frameworks to honour the relationships that form the heart of land-based research.

Future Recommendations

Northern Research: By the North, For the North

To ensure meaningful and transformative research in the North, there must be a shift towards research by the North and for the North. It is imperative that research prioritizes the

needs, values, and perspectives of northern Indigenous Peoples, rooted in their stories and relationships with the Land (McGregor et al., 2010). Non-Indigenous researchers must reflect on the stories they are contributing to and consider whether these stories align with Indigenous Knowledges and values or perpetuate colonial-capitalist frameworks (E. Cameron, 2015; Iseke, 2013). Southern and non-Indigenous researchers doing northern research need to critically examine their positionality and motivations behind their work. Researchers must ask themselves: “Why am I studying the North? For whom, and for what purpose? Do I recognize the Land as teacher, as a living entity with relationships, identity, and agency? Do I approach the ‘land’ as an object to be studied for external purposes such as conservation, resource management, or sustainable development? What frameworks do I use and what knowledge systems are they rooted in?”

In short, research needs to be by the North, for the North. First, Indigenous communities must guide and lead northern research, ensuring that it aligns with their priorities and respects their sovereignty. Second, northern research must be rooted in meaningful, reciprocal relationships that extend beyond the research project itself. Third, researchers must challenge extractive research paradigms and embrace relational, land-based approaches that honour the Land as a living being and teacher. Furthermore, research must contribute to re-storying the Land in ways that are grounded in Indigenous Knowledges and dismantle colonial-capitalist narratives.

Researchers need to prioritize engagement and accountability beyond the research project. Building relationships is reciprocal process that prioritizes people over academic outputs. Researchers should spend extended time living in community and engaging with land-based practices—not just for fieldwork and data collection, but through deep, ongoing commitment. This means working outside of the research context—volunteering, supporting

youth programs, engaging in community-led initiatives—so that relationships are not defined solely by the research and extend beyond publication deadlines and funding cycles. Too often, researchers disappear after publishing their findings. Researchers must stay in touch with community partners, members, and participants, not just for professional reasons but to uphold the relationships built during the research.

Additionally, there is an urgent need for more funding to be allocated directly to northern communities for community-driven research projects. Southern academic institutions continue to control much of the funding, infrastructure, and decision-making authority when it comes to research in the North (Robertson & Ljubicic, 2019). These institutions hold the resources necessary to initiate and sustain research projects, creating a dependency that often limits the agency of northern communities to conduct research on their own terms (Irlbacher-fox, 2018). Collaboration between northern communities and southern institutions is undoubtedly important to facilitate research in the North. However, for such partnerships to be meaningful, there must be a shift in how power and resources are distributed. More researchers need to be based in the North, living and working in communities, building long-term relationships, and engaging with the Land in ways that are relational and respectful.

By decentralizing southern institutional control and empowering northern communities to conduct research rooted in their own experiences and sovereignty, we can foster research practices that are equitable, culturally relevant, and transformative. REBs operate within a colonial framework that does not fully recognize or support Indigenous governance over research. Indigenous communities have their own ethical review processes, which should be recognized as equally legitimate as university-based REBs. Rather than eliminating REBs, they must undergo structural reform to meaningfully incorporate Indigenous governance, relational

accountability, and Land-based ethical frameworks. This means REBs should defer to Indigenous communities' own ethical review processes rather than imposing Western ethics as the default, and ethics approval should reflect the realities of community-led research, where protocols emerge through ongoing engagement rather than rigid pre-approval processes.

REBs must be reformed to better support Indigenous research governance. REBs, while preventing research harm, remain embedded in Western frameworks that often conflict with Indigenous knowledge systems and governance. Indigenous Nations already have their own research ethics protocols, but these are often not recognized as holding equal authority to university REBs. Land-based research faces specific barriers under REB structures, including rigid timelines, consent practices, and ethical assumptions that do not align with relational accountability. A decolonized approach to research ethics would require that REBs defer to Indigenous governance, recognize relational consent, and support Indigenous-led research timelines and methods. Decentralizing southern institutional control over northern research addresses systemic inequities and ensures that research serves the needs and aspirations of the North and its peoples. By adopting these recommendations, northern research can shift towards a more relational, respectful, and transformative practice that serves the communities, the Land, and the stories that sustain them.

More Land-Based Opportunities for Youth

Youth participants indicated a desire for further opportunities to be on-the-land, learning from Elders. The youth acknowledged that Indigenous Knowledges are passed down from generation to generation, and that place matters: being in the places where that knowledge comes

from is essential to effective knowledge transfer. When prompted to imagine their ideal on-the-land camp, the youth emphasized the importance of including cultural activities and language lessons that reinforce how they are connected to their homelands, ancestors, history, and traditions, as well as provide opportunities to practice the hands-on skills they have learned.

Youth understand the importance of land-based education opportunities, such as on-the-land camps, because they recognize the ways this learning space is created and nurtured for them to support connections with their community and family. It is important for northern youth to receive on-the-land opportunities to build skills and knowledge of land-based leadership and stewardship practices. There should be continued land-based education programming available for the youth who are not in school, including older youth groups (ages 18-30). Through my learning and experiences in my research, I argue that on-the-land camps should include stronger aftercare components to continue to support youth when the program ends. After the youth leave the safety of the camp, it can be challenging to integrate back into their daily life.

By creating strong programs of care for after the programs end, youth can be better supported for their mental health and well-being, relationships with the Land, access to resources and mentors, and strengthen their leadership capacity. Supporting Wellbeing is a charitable organization in the NWT that train land-based programmers for trauma-informed practices, which includes an aftercare module. I participated in their training in May 2024 and have since implemented this module in all Northern Youth Leadership's on-the-land camps.

Embedding Land-Based Programs into School Curriculum

Increased financial support is needed to reduce the burdens on communities and organizations that host, coordinate, implement, and lead land-based programs. However, the solution goes beyond simply increasing funding. To create lasting impact, the systemic flaws within the education system itself must be addressed, with the recognition that land-based learning must be integrated into the curriculum. There remains a core disconnect between mainstream education in Canada and Indigenous ways of knowing and relating to the Land. By embedding land-based education within the Canadian education system, schools can help foster transformative and sustainable change for both Indigenous and non-Indigenous students.

Land-based learning is a holistic approach to education that goes beyond the traditional classroom, and nurtures emotional, physical, intellectual, and spiritual development by reconnecting students with the Land by promoting relationality, relational accountability, and reciprocity. Indigenous students benefit from the revitalization of their cultural identities and Knowledge systems, which have been disrupted by colonial education practices. Meanwhile, non-Indigenous students develop a deeper respect for Indigenous cultures and their reciprocal relationships with the Land. Systemically embedding land-based learning into the curriculum will enable students of all backgrounds to learn about Land Stewardship.

Land-based education also directly addresses climate change by offering students firsthand experiences of environmental changes and teaching them the importance of sustainability and Land Stewardship. As global environmental concerns escalate, land-based education supports youth to become climate leaders and advocates. If land-based learning is a core part of school curriculum, students learn can learn about the environment and their

responsibilities to connect with and protect the Land, creating a generation of climate-conscious leaders.

Furthermore, while partnerships between universities and Indigenous nations are valuable, they must be based on equitable and reciprocal relationships. Researchers should not view Indigenous communities merely as hosts for research but as equal partners in the co-creation of knowledge. This requires a fundamental shift in how research is conducted by honouring Indigenous Knowledge and ensuring that Indigenous communities retain control over their Land, data, and cultural teachings. Such partnerships, when based on respect and reciprocity, can support land-based learning programs in meaningful ways while also fostering mutual learning between communities and researchers.

Therefore, the key to creating lasting change is systemic educational reform. By embedding land-based learning in the formal NWT education system, there will be a reduction of financial and logistical burdens on Indigenous communities to constantly lead programs without adequate institutional support. This systemic shift would allow for long-term, community-led initiatives to thrive without relying on short-term grants or external funding. Indigenous communities would have the autonomy to design and lead land-based programs that reflect their cultural values and teachings while having the stable support needed to ensure the sustainability of these programs.

Lastly, while financial resources are important, the focus must be on transforming the education system itself. By integrating land-based learning into the curriculum and fostering equitable partnerships with Indigenous communities, education systems will become more inclusive, sustainable, and prepared to tackle the rapid changes happening in the North and

around the world. This systemic change will not only benefit Indigenous students but will enrich the education of all students, equipping them to become thoughtful stewards of the Land and advocates for environmental and cultural justice.

However, given the historical and current political context in the NWT, the relationships between Indigenous Peoples and the territorial and federal governments are complex, dynamic, constantly evolving, and contextual depending on region, nation, and community. Education curriculum in the NWT is layered and bound to colonial-capitalist systems that continue to dominate governance in the North. It is difficult to recommend a simple, arbitrary, and illusory change in policy to include land-based education in schools across the NWT. For example, the NWT does not have a territorial-specific/-designed curriculum to support its students. Schools in the NWT have used the Alberta curriculum for the past 40 years, and now the curriculum is currently transitioning to British Columbia (CBC News, 2021). Currently, NWT teachers can select which curriculum (Alberta vs. British Columbia) to use for each subject to their own discretion, so there will be a discrepancy in the curriculum taught across the territory until the full transition commences in 2027-28 (CBC News, 2021). Hence, in the short-term, I recommend that land-based programs, such as on-the-land camps, should be embedded in NWT schools (elementary, middle, and high school), as extracurricular, accredited programs that are not reliant on curriculum.

Additionally, land-based programmers should find ways to work with schools to offer course credits for their on-the-land camps. In my job with Northern Youth Leadership, I am working with community partners from this research (i.e., KTFN, Ecology North) to ensure that high school students can receive course credits for their participation in on-the-land camps. Together, we are developing a roadmap that outlines the process for course accreditation for

land-based programs, creating a model that other organizations can also follow. Since accreditation depends on the specific schools that youth attend, we work directly with school principals to demonstrate how the learning outcomes of the camp align with existing course requirements and curriculum. This approach helps to formally recognize the value of land-based learning within the education system, while supporting youth in achieving both academic and personal growth through their engagement on the Land.

Mentorship Opportunities with Indigenous Guardians

Land-based education strengthens Indigenous governance and cultural continuity in the face of ongoing colonial policies. As more Indigenous Guardians programs are emerging across regions in Canada, more research should be conducted to document and analyze the rise in Indigenous Guardians programs and the implications of such work (McDonald, 2023).

Specifically, research should explore the linkages of land-based programs like on-the-land camps and Indigenous Guardians programs. For example, mobile interviews (Pludwinski & Grimwood, 2021) with Indigenous Guardians while on-the-land, asking about their previous experiences leading up to the work.

Furthermore, I argue there should be opportunities for youth to partner with and be mentored by Indigenous Guardians. The youth can learn about the work of Indigenous Guardianship, how the Guardians got involved in the programs, the training needed to become a Guardian, the demands of daily duties, the values their work is rooted in, the places they travel to, and what being an Indigenous Guardian means for those who undertake this work. The youth working with Indigenous Guardians while on the job and on-the-land can provide important

insights and bridges between the youth and land-based leadership roles. Furthermore, this type of mentorship can also act as a land-based training program for the youth to become Indigenous Guardians.

Research projects and community-based programs should work together, complimenting and supplementing one another. In this research, I observed how research projects and community-based programs can be mutually supportive and beneficial, built through relationality and relational accountability. For future research projects with Indigenous Peoples, I recommend finding ways to build projects into existing community-led/-based programs. Research must be developed and aligned with community interests, questions, concerns, and priorities, and by structuring research projects around community goals, the projects and programs can be enhanced and strengthened.

Land-Based Research

There is a clear need for land-based research that explicitly connects land-based education with the development of Land Stewardship values among youth. By bridging this gap, future studies can contribute to more effective educational programs that foster Land Stewardship, respect Indigenous Knowledge systems, and promote sustainable practices essential for the well-being of communities and the Land. Researchers must critically examine how colonial governance, land policies, and economic structures shape northern research and land-based education, ensuring that research remains accountable to the communities it serves. Working with Indigenous communities, Elders and youth in remote locations, researchers must

be aware and sensitive. Trust should never be assumed, nor taken-for-granted, and must be continually strengthened through mutual respect and accountability.

Land-based research should be led by northern Indigenous and non-Indigenous researchers, rather than by southern institutions that maintain colonial control over research funding and decision-making. In advocating for more land-based research, this framework is not meant to be applied as a one-size-fits-all, blanket-approach to conducting northern research. Every research context will be different depending on the researcher, their positionality and relationships, and the communities the research takes place, and hence requires a unique relational research approach and framework designed within that context.

Concluding Remarks

In conclusion, this research demonstrates that land-based programs, particularly on-the-land camps, play a pivotal role in fostering Land Stewardship among northern youth. The integration of Land Stewardship as a theoretical framework enhances our understanding of the impact of land-based education and underscores the importance of supporting such initiatives to achieve community-relevant objectives related to the protection of the Land. Land-based research must prioritize relational, reciprocal, and community-driven approaches. The shift from environmental stewardship to Land Stewardship is critical to re-storying how we think about relationships with the Land. Through this collaborative, reciprocal research, I found that by spending time together at on-the-land camps, the youth and researchers develop a profound connection to the Land and are motivated to act as stewards of the Land.

References

- Abma, T. A., & Schrijver, J. (2020). 'Are we famous or something?' Participatory Health Research with children using photovoice. *Educational Action Research*, 28(3), 405–426. <https://doi.org/10.1080/09650792.2019.1627229>
- Absolon, K. E. (2011). *Kaandossiwin: How we come to know*. Fernwood Publishing.
- Ahmed, F., Liberda, E., Solomon, A., Davey, R., Sutherland, B., & Tsuji, L. (2022). Indigenous land-based approaches to well-being: The amisk (beaver) harvesting program in subarctic Ontario, Canada. *International Journal of Environmental Research and Public Health*, 19(12), 1–39. <https://doi.org/10.3390/ijerph19127335>
- Aitken, S., & Valentine, G. (2006). *Approaches to human geography* (S. Aitken & G. Valentine (eds.)). SAGE Publications Ltd.
- Aldred, T. L., Alderfer-Mumma, C., de Leeuw, S., Farrales, M., Greenwood, M., Hooegeveen, D., O'Toole, R., Parkes, M. W., & Sloan Morgan, V. (2021). Mining sick: Creatively unsettling normative narratives about industry, environment, extraction, and the health geographies of rural, remote, northern, and Indigenous communities in British Columbia. *Canadian Geographer*, 65(1), 82–96. <https://doi.org/10.1111/cag.12660>
- Alfred, T. (2014). The Akwesasne cultural restoration program: A Mohawk approach to land-based education. *Decolonization: Indigeneity, Education & Society*, 3(3), 134–144.
- Allen, R. S. (1983). A Witness to Murder: The Cypress Hills Massacre and the Conflict of Attitudes towards the Native People of the Canadian and American West during the 1870s.

In As long as the sun shines and water flows: A reader in Canadian native studies.

University of British Columbia Press Vancouver.

Arellano, A., Friis, J., & Stuart, S. A. (2019). Pathways to reconciliation: The Kitcisakik land-based education initiative. *Leisure/Loisir*, 43(3), 389–417.

<https://doi.org/10.1080/14927713.2019.1629832>

Asfeldt, M., Purc-Stephenson, R., & Zimmerman, T. (2022). Outdoor education in Canadian public schools: Connecting children and youth to people, place, and environment.

Environmental Education Research, 28(10), 1510–1526.

<https://doi.org/10.1080/13504622.2022.2061919>

Ballantyne, E. F. (2014). Dechinta Bush University: Mobilizing a knowledge economy of reciprocity, resurgence and decolonization. *Decolonization: Indigeneity, Education & Society*, 3(3), 67–85.

Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich, E. S., & Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, 20(1), 37–55. <https://doi.org/10.1080/13504622.2013.865113>

Barajas-López, F., & Bang, M. (2018). Indigenous making and sharing: Claywork in an Indigenous STEAM Program. *Equity and Excellence in Education*, 51(1), 7–20.

<https://doi.org/10.1080/10665684.2018.1437847>

Barnett, C. (2006). Postcolonialism: Space, textuality, and power. In *Approaches to human geography* (pp. 147–159). SAGE Publications Ltd.

- Bartmes, N., & Shukla, S. (2020). Re-envisioning land-based pedagogies as a transformative third space: perspectives from university academics, students, and Indigenous knowledge holders from Manitoba, Canada. *Diaspora, Indigenous, and Minority Education*, 14(3), 146–161. <https://doi.org/10.1080/15595692.2020.1719062>
- Battiste, M. (2002). Indigenous knowledge and pedagogy in First Nations education. *Plenary Address*, 69.
- Bédard, R. (2008). Keepers of the water: Nishnaabe-kwewag speaking for the water. In L. B. Simpson (Ed.), *Lighting the Eighth Fire: The Liberation, Resurgence, and Protection of Indigenous Nations* (pp. 89–109). Arbeiter Ring Publishing.
- Bennett, T. D., & Lantz, T. C. (2014). Participatory photomapping: A method for documenting, contextualizing, and sharing indigenous observations of environmental conditions. *Polar Geography*, 37(1), 28–47. <https://doi.org/10.1080/1088937X.2013.873089>
- Benton, D. (2017). *Land-Based pedagogies: A path to decolonizing environmental education in British Columbia* [Master's thesis]. <http://knowledgecommons.lakeheadu.ca/handle/2453/4266>
- Bonnett, A. (2003). Geography as the world discipline: Connecting popular and academic geographical imaginations. *Area*, 35(1), 55–63. <https://doi.org/10.1111/1475-4762.00110>
- Bowie, R. (2013). Indigenous self-governance and the deployment of knowledge in collaborative environmental management in Canada. *Journal of Canadian Studies*, 47(1), 91–121. <https://doi.org/10.3138/jcs.47.1.91>

- Bowra, A., Mashford-Pringle, A., & Poland, B. (2021). Indigenous learning on Turtle Island: A review of the literature on land-based learning. *Canadian Geographer*, 65(2), 132–140.
<https://doi.org/10.1111/cag.12659>
- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE.
- Brayboy, B. M. K. J., & Castagno, A. E. (2008). How might Native science inform “informal science learning”? *Cultural Studies of Science Education*, 3(3), 731–750.
<https://doi.org/10.1007/s11422-008-9125-x>
- Brenner, N. (2001). The limits to scale? Methodological reflections on scalar structuration. *Progress in Human Geography*, 25(4), 591–614.
<https://doi.org/10.1191/030913201682688959>
- Brooks, L. (2017). “Every swamp is a castle”: Navigating native spaces in the Connecticut River Valley, winter 1675–1677 and 2005–2015. *Northeastern Naturalist*, 24(7), H45–H80.
<https://doi.org/10.1656/045.024.s701>
- Brundtland, G. H. (1985). World commission on environment and development. *Environmental Policy and Law*, 14(1), 26–30.
- Brusser, D., & Poisson, J. (2016). *Signs of mercury poisoning in Grassy Narrows youth, say Japanese experts*. Toronto Star. <https://www.thestar.com/news/canada/2016/09/20/signs-of-mercury-poisoning-in-grassy-narrows-youth-say-japanese-experts.html>
- Bryant, J., Bolt, R., Botfield, J. R., Martin, K., Doyle, M., Murphy, D., Graham, S., Newman, C. E., Bell, S., Treloar, C., Browne, A. J., & Aggleton, P. (2021). Beyond deficit: “Strengths-

- based approaches” in Indigenous health research. *Sociology of Health and Illness*, 43(6), 1405–1421. <https://doi.org/10.1111/1467-9566.13311>
- Bullard, R. D. (2002). Confronting environmental racism in the twenty-first century. *Global Dialogue*, 4(1), 34–48.
- Burrage, R. L., Momper, S. L., & Gone, J. P. (2022). Beyond trauma: Decolonizing understandings of loss and healing in the Indian Residential School system of Canada. *Journal of Social Issues*, 78(1), 27–52. <https://doi.org/10.1111/josi.12455>
- Cajete, G. (1994). Look to the mountain: An ecology of Indigenous education. In *American Indian Culture and Research Journal*. Kivaki Press.
<https://doi.org/10.1017/CBO9781107415324.004>
- Cameron, E. (2015). *Far off Metal River : Inuit lands, settler stories, and the making of the contemporary Arctic* . UBC Press.
- Cameron, E. S. (2012). Securing Indigenous politics: A critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic. *Global Environmental Change*, 22(1), 103–114.
<https://doi.org/10.1016/j.gloenvcha.2011.11.004>
- Cameron, J., Nairn, K., & Higgins, J. (2009). Demystifying academic writing: Reflections on emotions, know-how and academic identity. *Journal of Geography in Higher Education*, 33(2), 269–284. <https://doi.org/10.1080/03098260902734943>
- Cannon, S. E., Moore, J. W., Adams, M. S., Degai, T., Griggs, E., Griggs, J., Marsden, T., Reid,

- A. J., Sainsbury, N., Stirling, K. M., Barnes, A. A. Y. S., Benson, R., Burrows, D., Chamberlin, G. R., Charley, B., Dick, D., Duncan, A. T., Liddle, K. K. M., Paul, M., ... Wilson, K. B. (2024). Taking care of knowledge, taking care of salmon: towards Indigenous data sovereignty in an era of climate change and cumulative effects. *Facets*, 9, 1–21.
<https://doi.org/10.1139/facets-2023-0135>
- Carothers, C., Black, J., Langdon, S. J., Donkersloot, R., Ringer, D., Coleman, J., & Gavenus, E. R. (2021). Indigenous peoples and salmon stewardship: A critical relationship. *Ecology and Society*, 26(1), 1–22. <https://doi.org/10.5751/ES-11972-260116>
- Castleden, H., Morgan, V. S., & Lamb, C. (2012). “I spent the first year drinking tea”: Exploring Canadian university researchers’ perspectives on community-based participatory research involving Indigenous peoples. *Canadian Geographer*, 56(2), 160–179.
<https://doi.org/10.1111/j.1541-0064.2012.00432.x>
- Castleden, H., Morgan, V. S., & Neimanis, A. (2010). Researchers’ perspectives on collective/community co-authorship in community-based participatory Indigenous research. *Journal of Empirical Research on Human Research Ethics*, 5(4), 23–32.
<https://doi.org/10.1525/jer.2010.5.4.23>
- Cater, T. C., Hopson, C., & Streever, B. (2015). The use of the Iñupiaq technique of tundra sodding to rehabilitate wetlands in Northern Alaska. *Arctic*, 68(4), 435–444.
<https://doi.org/10.14430/arctic4518>
- Cavino, H. M. (2013). Across the colonial divide: Conversations about evaluation in Indigenous contexts. *American Journal of Evaluation*, 34(3), 339–355.

<https://doi.org/10.1177/1098214013489338>

CBC News. (2018). *Building unity a top priority, says new grand chief of the Dehcho First Nations*. <https://www.cbc.ca/news/canada/north/gladys-norwegian-post-election-1.4770223>

CBC News. (2021). *Northwest Territories drops Alberta K-12 curriculum after at least 40 years of use*. <https://www.cbc.ca/news/canada/edmonton/nwt-alberta-kindergarten-grade-12-school-curriculum-1.6289214>

Chabot, M. (2003). Economic changes, household strategies, and social relations of contemporary Nunavik Inuit. *Polar Record*, 39(1), 19–34.
<https://doi.org/10.1017/s0032247402002711>

Chan, H. M., Hu, X. F., Cheung, J. S., Parajuli, R. P., Rosol, R., Yumvihoze, E., Williams, L., & Mohapatra, A. (2020). Cohort profile: Health effects monitoring programme in Ndilo, Dettah and Yellowknife (YKHEMP). *BMJ Open*, 10(9), 1–9.
<https://doi.org/10.1136/bmjopen-2020-038507>

Chatwood, S., Paulette, F., Baker, G. R., Eriksen, A. M. A., Hansen, K. L., Eriksen, H., Hiratsuka, V., Lavoie, J., Lou, W. D., Mauro, I., Orbinski, J., Pambrun, N., Retallack, H., & Brown, A. (2017). Indigenous values and health systems stewardship in circumpolar countries. *International Journal of Environmental Research and Public Health*, 14(12).
<https://doi.org/10.3390/ijerph14121462>

Chief, D., & Smyth, B. (2017). The present and future of land-based education in Treaty# 3. *WINHEC: International Journal of Indigenous Education Scholarship*, 1, 14–23.
<https://journals.uvic.ca/index.php/winhec/article/view/18565>

- Christensen, J. (2013). Putting it into context: Teaching the Canadian North to learn about Canada. *Canadian Issues/Thèmes Canadiens, Winter*.
- Christina, G., Arielle, F., Aimée, P., Danielle, B., Kathleen, H., Veronica, M., Gillian, M., & Christensen, J. (2022). Critical Northern Geography: A Theoretical Framework, Research Praxis and Call to Action in our (Post)Pandemic Worlds. *Acme, 21*(3), 270–283.
- Clarke, M. (2015). *Indigenizing environmental education: How can land-based practices become an educational journey of reconciliation?* [Master's thesis].
<http://knowledgecommons.lakeheadu.ca/handle/2453/726>
- Cluderay, R., Mainville, R., Simpson, L. B., & Wrightson, K. (2022). “Learning like before”: Continuous resistance in land-based education. *Xàgots 'eèhk'ò Journal, 1*(1), 50–66.
- Cohen, A., Matthew, M., Neville, K. J., & Wrightson, K. (2021). Colonialism in community-based monitoring: Knowledge systems, finance, and power in Canada. *Annals of the American Association of Geographers, 111*(7), 1988–2004.
<https://doi.org/10.1080/24694452.2021.1874865>
- Collings, P. (2014). Becoming inummarik: Men's lives in an inuit community. In *Becoming Inummarik: Men's Lives in an Inuit Community*.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84942806876&partnerID=40&md5=246673f2fdd2a803b4b6d34d89b08c3a>
- Condon, R. G., Collings, P., & Wenzel, G. (1995). The best part of life: Subsistence hunting, ethnicity and economic adaptation among young adult Inuit males. *Arctic, 48*(1), 31–46.
<https://doi.org/10.14430/arctic1222>

- Corntassel, J. (2012). Re-envisioning resurgence: Indigenous pathways to decolonization and sustainable self-determination. *Decolonization: Indigeneity, Education & Society*, 1(1), 86–101. <https://doi.org/10.1353/wic.0.0040>
- Corntassel, J., Chaw-win-is, & T'lakwadzi. (2009). Indigenous storytelling, truth-telling, and community approaches to reconciliation. *English Studies in Canada*, 35(1), 137–159. <https://doi.org/10.1353/esc.0.0163>
- Corntassel, J., & Hardbarger, T. (2019). Educate to perpetuate: Land-based pedagogies and community resurgence. *International Review of Education*, 65, 87–116. <https://doi.org/10.1007/s11159-018-9759-1>
- Coulthard, G. S. (2014). For the Land: The Dene Nation's struggle for self-determination. In *Red Skin, White Masks* (pp. 51–78). University of Minnesota Press. <https://doi.org/10.5749/minnesota/9780816679645.001.0001>
- Coulthard, G. S., & Alfred, T. (2014). *Red skin, white masks: Rejecting the colonial politics of recognition*. University of Minnesota Press.
- Croft, D. B., & Witte, I. (2021). The perils of being populous: Control and conservation of abundant kangaroo species. *Animals*, 11(6), 1753. <https://doi.org/https://doi.org/10.3390/ani11061753>
- Cuerrier, A., Downing, A., Johnstone, J., Hermanutz, L., Siegwart Collier, L., & Elders and Youth Participants of Nain and Old Crow. (2012). Our plants, our land: Bridging Aboriginal generations through cross-cultural plant workshops. *Polar Geography*, 35(3–4), 195–210. <https://doi.org/10.1080/1088937X.2012.684156>

- Cunsolo, A., Shiwak, I., Wood, M., Cunsolo, A., Shiwak, I., & Wood, M. (2017). “You need to be a well-rounded cultural person”: Youth mentorship programs for cultural preservation, promotion, and sustainability in the Nunatsiavut Region of Labrador. In *Northern Sustainabilities: Understanding and Addressing Change in the Circumpolar World* (pp. 285–303). Springer. https://doi.org/10.1007/978-3-319-46150-2_21
- Daigle, M. (2016). Awawanenitakik: The spatial politics of recognition and relational geographies of Indigenous self-determination. *Canadian Geographer*, 60(2), 259–269. <https://doi.org/10.1111/cag.12260>
- Daigle, M., & Sundberg, J. (2017). From where we stand: Unsettling geographical knowledges in the classroom. *Transactions of the Institute of British Geographers*, 42(3), 338–341. <https://doi.org/10.1111/tran.12201>
- Daschuk, J. W., Hackett, P., & MacNeil, S. (2006). Treaties and tuberculosis: First Nations people in late 19th-century western Canada, a political and economic transformation. *Canadian Bulletin of Medical History/Bulletin Canadien d’histoire de La Médecine*, 23(2), 307–330. <https://doi.org/10.3138/cbmh.23.2.307>
- Datta, R. (2019). Clarifying the process of land-based research, and the role of researcher(s) and participants. *Ethics in Science and Environmental Politics*, 19, 1–11. <https://doi.org/10.3354/ESEP00187>
- Datta, R. K. (2018). Rethinking environmental science education from Indigenous knowledge perspectives: An experience with a Dene First Nation community. *Environmental Education Research*, 24(1), 50–66. <https://doi.org/10.1080/13504622.2016.1219980>

Davies, J., & Holcombe, S. (2009). Desert knowledge: Integrating knowledge and development in arid and semi-arid drylands. *GeoJournal*, 74(5), 363–375.

<https://doi.org/10.1007/s10708-009-9279-4>

Davison, C. M., & Hawe, P. (2012). All that glitters: Diamond mining and Tâîchô youth in Behchokö, Northwest Territories. *Arctic*, 65(2), 214–228.

<http://www.jstor.org/stable/41638593>

de France, M. del C. R., Whitinui, P., McIvor, O., & del Carmen Rodriguez de France, M. (2018). *Promising Practices in Indigenous Teacher Education*. Springer Nature.

de Leeuw, S. (2009). ‘If anything is to be done with the Indian, we must catch him very young’: Colonial constructions of Aboriginal children and the geographies of Indian residential schooling in British Columbia, Canada. *Children’s Geographies*, 7(2), 123–140.

<https://doi.org/10.1080/14733280902798837>

de Leeuw, S., Cameron, E. S., & Greenwood, M. L. (2012). Participatory and community-based research, Indigenous geographies, and the spaces of friendship: A critical engagement. *Canadian Geographer*, 56(2), 180–194. <https://doi.org/10.5246/jcps.2014.11.101>

de Leeuw, S., & Hunt, S. (2018). Unsettling decolonizing geographies. *Geography Compass*, 12(7), 1–14. <https://doi.org/10.1111/gec3.12376>

Dehcho First Nations. (2019). *Dene Laws: Mek’ée Dene Ts’i ı́ Nahe*.

Dehcho First Nations, & Environment and Climate Change Canada. (2018). *Edehzhie Establishment Agreement* (pp. 1–20).

- DeLancey, D. (2020). Indigenous evaluation in the Northwest Territories: Opportunities and challenges. *Canadian Journal of Program Evaluation*, 34(3), 492–512.
<https://doi.org/10.3138/cjpe.68837>
- Denize, S., & Giles, A. R. (2022). Employment with the Northwest Territories Aquatics Program: A significant life event? *International Journal of Aquatic Research & Education*, 13(4), 1–15. <https://doi.org/10.25035/ijare.13.04.09>
- Derksen, C., Smith, S. L., Sharp, M., Brown, L., Howell, S., Copland, L., Mueller, D. R., Gauthier, Y., Fletcher, C. G., Tivy, A., Bernier, M., Bourgeois, J., Brown, R., Burn, C. R., Duguay, C., Kushner, P., Langlois, A., Lewkowicz, A. G., Royer, A., & Walker, A. (2012). Variability and change in the Canadian cryosphere. *Climatic Change*, 115(1), 59–88.
<https://doi.org/10.1007/s10584-012-0470-0>
- Devine, H. (2015). Organizational politics, land claims, and the Métis of the Northwest Territories. In *From New Peoples to New Nations: Aspects of Métis History and Identity from the Eighteenth to the Twenty-First Centuries* (pp. 453–489). University of Toronto Press.
- Dixon, D. P., & Jones III, J. P. (2006). Feminist geographies of difference, relation, and construction. In *Approaches to human geography* (pp. 42–56). SAGE Publications Ltd.
- Dodd, W., Scott, P., Howard, C., Scott, C., Rose, C., Cunsolo, A., & Orbinski, J. (2018). Lived experience of a record wildfire season in the Northwest Territories, Canada. *Canadian Journal of Public Health*, 109(3), 327–337. <https://doi.org/10.17269/s41997-018-0070-5>
- Dombrowski, K., Khan, B., Channell, E., Moses, J., McLean, K., & Misshula, E. (2013).

- Kinship, family, and exchange in a Labrador Inuit community. *Arctic Anthropology*, 50(1), 89–104. <https://doi.org/10.3368/aa.50.1.89>
- Dragon-Smith, C., & Lahey, W. (2022). Bushkids. *Xàgots 'eèhk'ò Journal*, 1(1).
- Dubnewick, M., Hopper, T., Spence, J. C., & McHugh, T.-L. F. L. F. (2018). “There’s a cultural pride through our games”: Enhancing the sport experiences of Indigenous youth in Canada through participation in traditional games. *Journal of Sport and Social Issues*, 42(4), 207–226. <https://doi.org/10.1177/0193723518758456>
- Dufty-Jones, R., & Gibson, C. (2022). Making space to write ‘care-fully’: Engaged responses to the institutional politics of research writing. *Progress in Human Geography*, 46(2), 339–358. <https://doi.org/10.1177/03091325211020807>
- Dylan, A., & Smallboy, B. (2016a). Land-based spirituality among the Cree of the Mushkegowuk territory. *Journal of Religion and Spirituality in Social Work*, 35(1–2), 108–119. <https://doi.org/10.1080/15426432.2015.1067589>
- Dylan, A., & Smallboy, B. (2016b). Land-based spirituality among the Cree of the Mushkegowuk territory. *Journal of Religion & Spirituality in Social Work: Social Thought*, 35(1–2), 108–119. <https://doi.org/10.1080/15426432.2015.1067589>
- Eaton, S. E., & Hughes, J. C. (2022). *Academic Integrity in Canada. An Enduring and Essential Challenge*. Springer.
- Edge, L., & Komarnisky, S. (2022). Introduction: We are our stories. *Xàgots 'eèhk'ò Journal*, 1(1), 1–16.

- Egan, B., & Place, J. (2013). Minding the gaps: Property, geography, and Indigenous peoples in Canada. *Geoforum*, 44, 129–138. <https://doi.org/10.1016/j.geoforum.2012.10.003>
- Elden, S. (2010). Land, terrain, territory. *Progress in Human Geography*, 34(6), 799–817. <https://doi.org/10.1177/0309132510362603>
- Elmes, M. C., Wiklund, J. A., Van Opstal, S. R., Wolfe, B. B., & Hall, R. I. (2016). Characterizing baseline concentrations, proportions, and processes controlling deposition of river-transported bitumen-associated polycyclic aromatic compounds at a Floodplain Lake (Slave River Delta, Northwest Territories, Canada). *Environmental Monitoring And Assessment*, 188(5). <https://doi.org/10.1007/s10661-016-5277-4>
- Etter, M., Goose, A., Nossal, M., Chishom-Nelson, J., Heck, C., Joobar, R., Boksa, P., Lal, S., Shah, J. L., Andersson, N., Iyer, S. N., & Malla, A. (2019). Improving youth mental wellness services in an Indigenous context in Ulukhaktok, Northwest Territories: ACCESS Open Minds Project. *Early Intervention in Psychiatry*, 13(S1), 35–41. <https://doi.org/10.1111/eip.12816>
- Evans-Agnew, R. A., & Rosenberg, M. A. S. (2016). Questioning photovoice research: Whose voice? *Qualitative Health Research*, 26(8), 1019–1030. <https://doi.org/10.1177/1049732315624223>
- Everard, M., Gupta, N., Scott, C. A., Tiwari, P. C., Joshi, B., Kataria, G., & Kumar, S. (2018, January 6). Assessing livelihood-ecosystem interdependencies and natural resource governance in Indian villages in the Middle Himalayas. *Regional Environmental Change*, 19(1), 165–177. <https://doi.org/10.1007/s10113-018-1391-x>

- Evering, B. (2012). Relationships between knowledge(s): Implications for “knowledge integration.” *Journal of Environmental Studies and Sciences*, 2(4), 357–368.
<https://doi.org/10.1007/s13412-012-0093-9>
- Evering, B. (2019). Know*ledge constellations and re*constellating: Narratives to inform Indigenous-and-environmental education. *Environmental Education Research*, 25(1), 151–152. <https://doi.org/10.1080/13504622.2018.1446512>
- Fellner, K. D. (2018). Embodying Decoloniality: Indigenizing Curriculum and Pedagogy. *American Journal of Community Psychology*, 62(3–4), 283–293.
<https://doi.org/10.1002/ajcp.12286>
- Fischer, M., Maxwell, K., Nuunoq, Pedersen, H., Greeno, D., Jingwas, N., Graham Blair, J., Hugu, S., Mustonen, T., Murtomäki, E., & Mustonen, K. (2022). Empowering her guardians to nurture our Ocean’s future. *Reviews in Fish Biology and Fisheries*, 32(1), 271–296.
<https://doi.org/10.1007/s11160-021-09679-3>
- Fox, L. (2022). Pollution is colonialism. *Social & Cultural Geography*, 23(3), 483–484.
<https://doi.org/10.1080/14649365.2021.1976909>
- Fraser, C. G. (2024). *By strength, we are still tere: Indigenous Peoples and Indian Residential Schooling in Inuvik, Northwest Territories*. University of Manitoba Press.
- Gabrielsson, H., Cronqvist, A., & Asaba, E. (2022). Photovoice revisited: Dialogue and action as pivotal. *Qualitative Health Research*, 32(5), 814–822.
<https://doi.org/10.1177/10497323221077300>

Gaudet, J. C. (2016). *An Indigenous methodology for coming to know milo pimatisiwin as land-based initiatives for Indigenous youth* [Doctoral dissertation].

<http://hdl.handle.net/10393/35560%0A>

Gaudet, J. C. (2019). Keeoukaywin: The visiting way - fostering an Indigenous research methodology. *Aboriginal Policy Studies*, 7(2), 47–64.

<https://doi.org/10.5663/aps.v7i2.29336>

Gaudet, J. C., & Caron-Bourbonnais, D. (2015). It's in our blood. *AlterNative: An International Journal of Indigenous Peoples*, 11(2), 164–176.

Gaudet, J. C., & Chilton, C. (2018). Milo Pimatisiwin Project: Healthy living for Mushkegowuk youth. *International Journal of Indigenous Health*, 13(1), 20–40.

<https://doi.org/10.32799/ijih.v13i1.30264%0A>

Gill, H. K. (2013). *Environmental changes in the lower Peel River watershed, Northwest Territories, Canada: Scientific and Gwich'in perspectives* [Master's thesis].

<http://hdl.handle.net/1828/5105>

Gill, H., & Lantz, T. (2014). A community-based approach to mapping Gwich'in observations of environmental changes in the lower peel river watershed. *Journal of Ethnobiology*, 34(3),

294–314. <https://doi.org/10.2993/0278-0771-34.3.29>

Gittings, L., Malama, K., Logie, C. H., Lys, C. L., Taylor, S. B., Mackay, K. I., Kanbari, A., Parker, S., & McNamee, C. (2022). “Every day I grew stronger and stronger being there”.: empowerment through land-and art-based Peer Leader retreats with Indigenous and Northern young people. *International Journal of Circumpolar Health*, 81(1), 2125489.

<https://doi.org/10.1080/22423982.2022.2125489>

Goeman, M. (2008). From place to territories and back again: Centering storied land in the discussion of Indigenous Nation-building. *International Journal of Critical Indigenous Studies*, 1(1), 23–34. <https://doi.org/10.5204/ijcis.v1i1.20>

Gordon, S. M. (2014). Cultural vitality as social strength in decline, Northwest Territories, Canada [Indiana University PP - United States -- Indiana]. In *Dissertation Abstracts International, A: The Humanities and Social Sciences* (Issue July).
<https://login.proxy.bib.uottawa.ca/login?url=https://www.proquest.com/dissertations-theses/cultural-vitality-as-social-strength-decline/docview/1684424609/se-2?accountid=14701>

Gorlewski, J., & Porfilio, B. J. (2012). Revolutionizing environmental education through Indigenous hip hop culture. *Canadian Journal of Environmental Education*, 17, 46–61.

Government of Northwest Territories Executive and Indigenous Affairs. (2022). *Concluding and implementing land claim and self-government agreements: Dehcho First Nations*.
<https://www.eia.gov.nt.ca/en/priorities/concluding-and-implementing-land-claim-and-self-government-agreements/dehcho-first>

Grande, S. (2015). *Red pedagogy: Native American social and political thought*. Rowman & Littlefield Publishers.

Gray, T., & Pigott, F. (2018). Lasting lessons in outdoor learning: A facilitation model emerging from 30 years of reflective practice. *Ecopsychology*, 10(4), 195–204.
<https://doi.org/10.1089/eco.2018.0036>

- Green, K. M., Fletcher, S. S., Beaudreau, A. H., & Whiting, S. M. (2020). Iñupiaq values in subsistence harvesting: Applying the community voice method in Northwest Alaska. *Society and Natural Resources*, 33(1), 122–137.
<https://doi.org/10.1080/08941920.2019.1660935>
- Grey, S., & Patel, R. (2015). Food sovereignty as decolonization: Some contributions from Indigenous movements to food system and development politics. *Agriculture and Human Values*, 32(3), 431–444. <https://doi.org/10.1007/s10460-014-9548-9>
- Guyot, M., Dickson, C., Paci, C., Furgal, C., & Chan, H. M. (2006). Local observations of climate change and impacts on traditional food security in two northern Aboriginal communities. *International Journal of Circumpolar Health*, 65(5), 403–415.
<https://doi.org/10.3402/ijch.v65i5.18135>
- Hall, L. (2014). Developing an ethics of relational responsibility – locating the researcher within the research and allowing connection, encounter and collective concern to shape the intercultural research space. *Ethics and Education*, 9(3), 329–339.
<https://doi.org/10.1080/17449642.2014.946378>
- Hall, R. (2013). Diamond mining in Canada’s Northwest Territories: A colonial continuity. *Antipode*, 45(2), 376–393. <https://doi.org/10.1111/j.1467-8330.2012.01012.x>
- Halliday, W. D., Le Baron, N., Citta, J. J., Dawson, J., Doniol-Valcroze, T., Ferguson, M., Ferguson, S. H., Fortune, S., Harwood, L. A., Heide-Jorgensen, M. P., Lea, E. V., Quakenbush, L., Young, B. G., Yurkowski, D., & Insley, S. J. (2022). Overlap between bowhead whales (*Balaena mysticetus*) and vessel traffic in the North American Arctic and

implications for conservation and management. *Biological Conservation*, 276.

<https://doi.org/10.1016/j.biocon.2022.109820>

Hansen, J. (2018). Cree elders' perspectives on land-based education: A case study. *Brock Education: A Journal of Educational Research and Practice*, 28(1), 74–91.

<https://doi.org/10.26522/brocked.v28i1.783>

Hansen, J. G., & Antsanen, R. (2016). Elders' teachings about resilience and its implications for education in Dene and Cree communities. *The International Indigenous Policy Journal*, 7(1), 1–17. <https://doi.org/10.18584/iipj.2016.7.1.2>

Harmin, M., Barrett, M. J., & Hoessler, C. (2017). Stretching the boundaries of transformative sustainability learning: On the importance of decolonizing ways of knowing and relations with the more-than-human. *Environmental Education Research*, 23(10), 1489–1500.

<https://doi.org/10.1080/13504622.2016.1263279>

Harris, C. (2004). How did colonialism dispossess? Comments from an edge of empire. *Annals of the Association of American Geographers*, 94(1), 165–182.

<https://doi.org/10.1111/j.1467-8306.2004.09401009.x>

Hatala, A. R., Morton, D., Njeze, C., Bird-Naytowhow, K., & Pearl, T. (2019). Re-imagining miyo-wicehtowin: Human-nature relations, land-making, and wellness among Indigenous youth in a Canadian urban context. *Social Science and Medicine*, 230(January), 122–130.

<https://doi.org/10.1016/j.socscimed.2019.04.012>

Hatala, A. R., Njeze, C., Morton, D., Pearl, T., & Bird-Naytowhow, K. (2020). Land and nature as sources of health and resilience among Indigenous youth in an urban Canadian context:

- A photovoice exploration. *BMC Public Health*, 20(1), 1–15. <https://doi.org/10.1186/s12889-020-08647-z>
- Hecht, M., & Nelson, T. (2021). Youth, place, and educator practices: Designing program elements to support relational processes and naturalist identity development. *Environmental Education Research*, 27(9), 1401–1420. <https://doi.org/10.1080/13504622.2021.1928608>
- Henri, D. A., Martinez-Levasseur, L. M., Provencher, J. F., Debets, C. D., Appaqaq, M., & Houde, M. (2022). Engaging Inuit youth in environmental research: Braiding Western science and Indigenous knowledge through school workshops. *Journal of Environmental Education*, 53(5), 261–279. <https://doi.org/10.1080/00958964.2022.2125926>
- Hickey, J., Powling, H., McKinney, P., Robbins, T., Carrier, N., & Nash, A. (2020). “It’s a change your life kind of program”: A healing-focused camping weekend for urban Indigenous families living in Fredericton, New Brunswick. *First Peoples Child & Family Review*, 15(2), 23–44. <https://doi.org/https://doi.org/10.7202/1080808ar>
- Consolidation of Indian legislation. Volume II: Indian Acts and Amendments, 1868-1975. https://publications.gc.ca/collections/collection_2017/aanc-inac/R5-158-2-1978-eng.pdf
- Hooks, B. (1994). *Teaching to transgress*. Routledge.
- Hovel, R. A., Brammer, J. R., Hodgson, E. E., Amos, A., Lantz, T. C., Turner, C., Proverbs, T. A., & Lord, S. (2020). The importance of continuous dialogue in community-based wildlife monitoring: Case studies of Dzan and luk Dagaii in the Gwich’in settlement area. *Arctic Science*, 6(3), 154–172. <https://doi.org/10.1139/as-2019-0012>

- Howitt, R., Muller, S., & Suchet-Pearson, S. (2009). Indigenous geographies. *International Encyclopaedia of Human Geography*, 358–364. <http://dx.doi.org/10.1016/B978-008044910-4.00705-7>
- Hrynshyn, J. (2003). Poisoned ground: Years of turning a blind eye to a growing environmental nightmare in Canada's Arctic have left taxpayers on the hook for hundreds of millions of dollars in cleanup. Industry and government say it can't happen again. But the signs that we'. *This Magazine*, 37(3), 20–23.
link.gale.com/apps/doc/A110807823/AONE?u=anon~1422135e&sid=sitemap&xid=9af0a471
- Hudson, B. E. W. (2017). *An exploration of the physical activity experiences of northern Aboriginal youth: A community-based participatory research project* [Master's thesis].
<https://doi.org/10.1017/CBO9781107415324.004>
- Hudson, B. W., Spence, J. C., & McHugh, T. L. F. (2020a). An exploration of the physical activity experiences of Northern Aboriginal youth: a community-based participatory research project. *QUALITATIVE RESEARCH IN SPORT EXERCISE AND HEALTH*, 12(1), 108–124. <https://doi.org/10.1080/2159676X.2019.1584123>
- Hudson, B. W., Spence, J. C., & McHugh, T. L. F. (2020b). An exploration of the physical activity experiences of Northern Aboriginal youth: A community-based participatory research project. *Qualitative Research in Sport, Exercise and Health*, 12(1), 108–124. <https://doi.org/10.1080/2159676X.2019.1584123>
- Hunt, S. (2014). Ontologies of Indigeneity: The politics of embodying a concept. *Cultural*

- Geographies*, 21(1), 27–32. <https://doi.org/10.1177/1474474013500226>
- Hunt, S., & Holmes, C. (2015). Everyday decolonization: Living a decolonizing queer politics. *Journal of Lesbian Studies*, 19(2), 154–172. <https://doi.org/10.1080/10894160.2015.970975>
- Ioana Radu, L., House, M., Pashagumskum, E., & Pashagumskum, E. (2014). Land, life, and knowledge in Chisasibi: Intergenerational healing in the bush. *Decolonization: Indigeneity, Education & Society*, 3(3), 86–105.
- Irlbacher-fox, S. (2018). *Developing a sustainable knowledge economy in the Northwest Territories* (Vol. 18, Issue November 2018). https://nwtspor.ca/sites/default/files/page-file-attachments/developing_a_sustainable_knowledge_economy_in_the_nwt_.pdf
- Iseke, J. (2013). Indigenous storytelling as research. *International Review of Qualitative Research*, 6(4), 559–577. <https://doi.org/10.1525/irqr.2013.6.4.559>
- Islam, D., & Berkes, F. (2016). Indigenous peoples' fisheries and food security: A case from northern Canada. *Food Security*, 8(4), 815–826. <https://doi.org/10.1007/s12571-016-0594-6>
- Jacobs, C., Donaldson, C., Ives, J. T., Keeshig, K., Day, T., & Febria, C. (2021). Weaving indigenous and western science knowledges through a land-based field course at Bkejwanong Territory (Laurentian Great Lakes). *Case Studies in the Environment*, 5(1), 1–11. <https://doi.org/10.1525/cse.2021.1422042>
- Jayarathne, N. (2021). *Enhancing harvester safety and traditional food access through participatory mapping with the Ka'a'gee Tu First Nation of Kakisa, Northwest Territories* [Master's thesis]. <https://scholars.wlu.ca/etd/2345/>

- Jazeel, T. (2017). Mainstreaming geography's decolonial imperative. *Transactions of the Institute of British Geographers*, 42(3), 334–337. <https://doi.org/10.1111/tran.12200>
- Jessen, T. D., Ban, N. C., Claxton, N. X., & Darimont, C. T. (2022). Contributions of Indigenous Knowledge to ecological and evolutionary understanding. *Frontiers in Ecology and the Environment*, 20(2), 93–101. <https://doi.org/10.1002/fee.2435>
- Johnson-Jennings, M., Billiot, S., & Walters, K. (2020). Returning to our roots: Tribal health and wellness through land-based healing. *Genealogy*, 4(3), 91. <https://doi.org/10.3390/genealogy4030091>
- Johnston, F. H., Jacups, S. P., Vickery, A. J., & Bowman, D. M. J. S. (2007). Ecohealth and Aboriginal testimony of the nexus between human health and place. *EcoHealth*, 4(4), 489–499. <https://doi.org/10.1007/s10393-007-0142-0>
- JT, M., Trenholm, R., McDonald, J. T., & Trenholm, R. (2010). Cancer-related health behaviours and health service use among Inuit and other residents of Canada's north. *Social Science & Medicine*, 70(9), 1396–1403. <https://doi.org/10.1016/j.socscimed.2010.01.008>
- Judge, C., Spring, A., & Skinner, K. (2022). A Comparative Policy Analysis of Wild Food Policies Across Ontario, Northwest Territories, and Yukon Territory, Canada. *Frontiers in Communication*, 7(March), 1–14. <https://doi.org/10.3389/fcomm.2022.780391>
- Justice, D. H. (2018). *Why Indigenous literatures matter*. Wilfrid Laurier University Press.
- Kenny, T.-A., MacLean, J., Gale, P., Keats, S., Chan, H. M., & Wesche, S. D. (2018). Linking health and the environment through education—A Traditional Food Program in Inuvik,

- Western Canadian Arctic. *Journal of Hunger & Environmental Nutrition*, 13(3), 429–432.
<https://doi.org/10.1080/19320248.2017.1420330>
- Kenny, T.-A., Wesche, S. D., Fillion, M., MacLean, J., & Chan, H. M. (2018). Supporting Inuit food security: A synthesis of initiatives in the Inuvialuit Settlement Region, Northwest Territories. *Canadian Food Studies / La Revue Canadienne Des Études Sur l'alimentation*, 5(2), 73–110. <https://doi.org/10.15353/cfs-rcea.v5i2.213>
- Kenny, T. A., Fillion, M., MacLean, J., Wesche, S. D., & Chan, H. M. (2018). Calories are cheap, nutrients are expensive – The challenge of healthy living in Arctic communities. *Food Policy*, 80(August), 39–54. <https://doi.org/10.1016/j.foodpol.2018.08.006>
- Kieth, J. D. (2016). *Dò nàke làni nàts 'etso: A critical review of self-government implementation in Canada's North* [University of Manitoba]. <http://hdl.handle.net/1993/37162>
- Kile, M. (2021). Uncovering social issues through photovoice: A comprehensive methodology. *HERD: Health Environments Research & Design Journal*, 15(1), 29–35.
<https://doi.org/10.1177/19375867211055101>
- Kimmerer, R. W. (2012). Searching for synergy: Integrating traditional and scientific ecological knowledge in environmental science education. *Journal of Environmental Studies and Sciences*, 2(4), 317–323. <https://doi.org/10.1007/s13412-012-0091-y>
- Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.
- King, L. J., Fortin, K. E., Belanger, B., Grimwood, B. S. R., & K'e Dene First Nation, L. (2022).

Land-based methodologies and disrupting settler colonial legacies in parks and protected areas: Lessons from Tracking Change. *Leisure/Loisir*, 47(1), 121–144.

<https://doi.org/10.1080/14927713.2022.2141831>

Kitson, J. C., Cain, A. M., Johnstone, M. N. T. H., Anglem, R., Davis, J., Grey, M., Kaio, A., Blair, S. R., & Whaanga, D. (2018). Murihiku Cultural Water Classification System: Enduring partnerships between people, disciplines and knowledge systems. *New Zealand Journal of Marine and Freshwater Research*, 52(4), 511–525.

<https://doi.org/10.1080/00288330.2018.1506485>

Knudsen, H., Keeling, A., & Sandlos, J. (2023). Mining and colonialism in the Circumpolar North. In *The Cambridge history of the polar regions* (pp. 430–461). Cambridge University Press.

Korteweg, L., Gonzalez, I., & Guillet, J. (2010). The stories are the people and the land: Three educators respond to environmental teachings in Indigenous children's literature.

Environmental Education Research, 16(3–4), 331–350.

<https://doi.org/10.1080/13504620903549755>

Korteweg, L., & Root, E. (2016). Witnessing Kitchenuhmaykoosib Inninuwig's strength and struggle: The affective education of reconciliation in environmental education. *Canadian Journal of Environmental Education*, 21(1), 178–197.

<https://cjee.lakeheadu.ca/article/view/1402/866>

Kurtz, D. L. M. (2013). Indigenous Methodologies: Traversing Indigenous and Western worldviews in research. *AlterNative: An International Journal of Indigenous Peoples*, 9(3),

217–229. <https://doi.org/10.1177/117718011300900303>

Lafferty, A. (2022). A poetic inquiry into (re) connecting with the language of the land: Walking with dji ndéh. *Journal of the Canadian Association for Curriculum Studies*, 19(2), 50–63. <https://doi.org/10.25071/1916-4467.40711>

Lapensée, E., Day, S. M., & Jaakola, L. (2018). Honour water: Gameplay as a pathway to Anishinaabeg water teachings. *Decolonization: Indigeneity, Education & Society*, 7(1), 115–130.

Lavallée, L. F. (2009). Practical application of an indigenous research framework and two qualitative indigenous research methods: Sharing circles and Anishnaabe symbol-based reflection. *International Journal of Qualitative Methods*, 8(1), 21–40. <https://doi.org/10.1177/160940690900800103>

LaVallie, C., & Sasakamoose, J. (2021). Reflexive Reflection co-created with Kehte-ayak (Old Ones) as an Indigenous qualitative methodological data contemplation tool. *International Journal of Indigenous Health*, 16(2), 208–224. <https://doi.org/10.32799/ijih.v16i2.33906>

Leddy, L. C. (2017). Intersections of indigenous and environmental history in Canada. *Canadian Historical Review*, 98(1), 83–95. <https://doi.org/10.3138/chr.98.1.Leddy>

Lees, A., Tropp Laman, T., & Calderón, D. (2021). “Why didn’t I know this?”: Land education as an antidote to settler colonialism in early childhood teacher education. *Theory into Practice*, 60(3), 279–290. <https://doi.org/10.1080/00405841.2021.1911482>

Liebenberg, L., Wall, D., Wood, M., & Hutt-MacLeod, D. (2019). Spaces & places:

- Understanding sense of belonging and cultural engagement among Indigenous youth. *International Journal of Qualitative Methods*, 18(1), 1–10.
<https://doi.org/10.1177/1609406919840547>
- Lines, L.-A., & Jardine, C. G. (2019). Connection to the land as a youth-identified social determinant of Indigenous Peoples' health. *BMC Public Health*, 19(1), 176.
<https://doi.org/10.1186/s12889-018-6383-8>
- Ljubicic, G. J., Mearns, R., Okpakok, S., & Robertson, S. (2021). Learning from the land (Nunami iliharniq): Reflecting on relational accountability in land-based learning and cross-cultural research in Uqšutuuq (Gjoa Haven, Nunavut). *Arctic Science*, 8(1), 252–291.
<https://doi.org/10.1139/as-2020-0059>
- Ljubicic, G. J., Okpakok, S., Robertson, S., & Mearns, R. (2018). Uqsuqtuurmiut inuita tuktimi qaujimaningit (Inuit knowledge of caribou from Gjoa Haven, Nunavut): Collaborative research contributions to co-management efforts. *Polar Record*, 54(03), 213–233.
<https://doi.org/10.1017/S0032247418000372>
- Lomawaima, K. T. (2016). Mind, heart, hands: Thinking, feeling, and doing in Indigenous history methodology. In *Sources and methods in Indigenous studies* (pp. 60–68). Routledge.
- Loppie, C. (2007). Learning from the grandmothers: Incorporating indigenous principles into qualitative research. *Qualitative Health Research*, 17(2), 276–284.
<https://doi.org/10.1177/1049732306297905>
- Lowan, G. (2009). Exploring place from an Aboriginal perspective: Considerations for outdoor and environmental education. *Canadian Journal of Environmental Education*, 14(1), 42–58.

- Luig, T., Ballantyne, E. F., & Scott, K. K. (2011). Promoting well-being through land-based pedagogy. *The International Journal of Health, Wellness and Society*, 1(3), 13–26.
<https://doi.org/https://doi.org/10.18848/2156-8960/CGP/v01i03/41181>
- Lys, C., Logie, C. H., Mackay, K. I., MacNeill, N., Loppie, C., Gittings, L., & Yasseen, A. (2022). Exploring uptake of HIV/STI knowledge and safer sex-efficacy in an arts-based sexual health workshop among Northern and Indigenous adolescents in the Northwest Territories, Canada. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*.
<https://doi.org/10.1080/09540121.2022.2089617>
- Lys, C., Logie, C. H., MacNeill, N., Loppie, C., Dias, L. V, Masching, R., & Gesink, D. (2016). Arts-based HIV and STI prevention intervention with Northern and Indigenous youth in the Northwest Territories: study protocol for a non-randomised cohort pilot study. *BMJ Open*, 6(10), e012399. <https://doi.org/10.1136/bmjopen-2016-012399>
- MacDonald, L. A., Wiklund, J. A., Elmes, M. C., Wolfe, B. B., & Hall, R. I. (2016). Paleolimnological assessment of riverine and atmospheric pathways and sources of metal deposition at a floodplain lake (Slave River Delta, Northwest Territories, Canada). *Science Of The Total Environment*, 544, 811–823. <https://doi.org/10.1016/j.scitotenv.2015.11.173>
- MacKey, E. (2014). Unsettling expectations: (un)certainly, settler states of feeling, law, and decolonization. *Canadian Journal of Law and Society*, 29(2), 235–252.
<https://doi.org/10.1017/cls.2014.10>
- Madden, B. (2019). A de/colonizing theory of truth and reconciliation education. *Curriculum Inquiry*, 49(3), 284–312. <https://doi.org/10.1080/03626784.2019.1624478>

- Madden, B., & McGregor, H. E. (2013). Ex(er)cising student voice in pedagogy for decolonizing: Exploring complexities through duoethnography. *Review of Education, Pedagogy, and Cultural Studies*, 35, 371–391.
<https://doi.org/10.1080/10714413.2013.842866>
- Maddrell, A. (2009). Geography, History of What Is the History of Geography and Why. *International Encyclopedia of Human Geography*, 415–428. <https://doi.org/10.1016/B978-008044910-4.00699-4>
- Maor, D., & McConney, A. (2015). Wisdom of the Elders: Mentors’ perspectives on mentoring learning environments for beginning science and mathematics teachers. *Learning Environments Research*, 18(3), 335–347. <https://doi.org/10.1007/s10984-015-9187-0>
- Marin, A. M. (2020). Ambulatory sequences: Ecologies of learning by attending and observing on the move. *Cognition and Instruction*, 38(3), 281–317.
<https://doi.org/10.1080/07370008.2020.1767104>
- Marom, L., & Rattray, C. (2022). On the land gathering: Education for reconciliation. *Critical Studies in Education*, 63(1), 114–130. <https://doi.org/10.1080/17508487.2019.1611613>
- Marshall, M., May, K., Lee, J., O’Loughlin, G., & O’Loughlin, G. (2022). Looking after the rock art of Kakadu National Park, Australia. *Studies in Conservation*, 67(S1), 156–165.
<https://doi.org/10.1080/00393630.2022.2066321>
- Martin, H. (2021). *Listening to land as teacher in early childhood education listening to land as teacher in early childhood education* [Doctoral dissertation].
<http://hdl.handle.net/1807/109290>

- Martin, K., & Mirraboopa, B. (2003). Ways of knowing, being and doing: A theoretical framework and methods for indigenous and indigenist re-search. *Journal of Australian Studies*, 27(76), 203–214. <https://doi.org/10.1080/14443050309387838>
- Mashford-Pringle, A., & Shawanda, A. (2023). Using the Medicine Wheel as theory, conceptual framework, analysis, and evaluation tool in health research. *SSM - Qualitative Research in Health*, 3. <https://doi.org/10.1016/j.ssmqr.2023.100251>
- Mashford-Pringle, A., & Stewart, S. L. (2019). Akiikaa (it is the land): Exploring land-based experiences with university students in Ontario. *Global Health Promotion*, 26(3), 64–72. <https://doi.org/10.1177/1757975919828722>
- Masinde, M. (2013). Survivability to sustainability of biodiversity: What do ICTs and indigenous knowledge have to do with it? *ACM International Conference Proceeding Series*, 2 NOTES, 80–83. <https://doi.org/10.1145/2517899.2517900>
- Mason, L., White, G., Morishima, G., Alvarado, E., Andrew, L., Clark, F., Durglo, M., Durglo, J., Eneas, J., Erickson, J., Friedlander, M., Hamel, K., Hardy, C., Harwood, T., Haven, F., Isaac, E., James, L., Kenning, R., Leighton, A., ... Wilder, S. (2012). Listening and learning from traditional knowledge and western science: A dialogue on contemporary challenges of forest health and wildfire. *Journal of Forestry*, 110(4), 187–193. <https://doi.org/10.5849/jof.11-006>
- Mathias, J., Ayles, B., Blakney, S., Charles, T., Fast, H., & Irniq, P. (2008). Arctic change and coastal communities: Overview of the coastal zone Canada Conference, Tuktoyaktuk, August 2006. *Arctic*, 61(1), iii–xi. <https://doi.org/10.14430/arctic95>

- Matson, L., Ng, G. H. C., Dockry, M., Nyblade, M., King, H. J., Bellcourt, M., Bloomquist, J., Bunting, P., Chapman, E., Dalbotten, D., Davenport, M. A., Diver, K., Duquain, M., Graveen, W. (Joe), Hagsten, K., Hedin, K., Howard, S., Howes, T., Johnson, J., ... Waheed, A. (2021). Transforming research and relationships through collaborative tribal-university partnerships on Manoomin (wild rice). *Environmental Science and Policy*, 115(May 2020), 108–115. <https://doi.org/10.1016/j.envsci.2020.10.010>
- MayoralBaños, A. (2018). Decolonizing technology: Presence, caring, sharing, and orality within the Indigenous Friends mobile app. In S. Driver & N. Coulter (Eds.), *Youth Mediations and Affective Relations* (pp. 33–51). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-98971-6_3
- McAuley, A. (2004). *Illiniqatigiit: Implementing a knowledge-building environment in the eastern Arctic* [Doctoral dissertation]. <http://hdl.handle.net/1807/118871>
- McDonald, M. (2023). Indigenous land-based education in theory and practice. In *A Yellowhead Institute Special Report*. <https://yellowheadinstitute.org/land-based-education/>
- McGregor, D. (2013). Indigenous women, water justice and zaagidowin (love). *Canadian Woman Studies*, 30(2–3), 71–78. <https://cws.journals.yorku.ca/index.php/cws/article/view/37455>
- McGregor, D., Bayha, W., & Simmons, D. (2010). “Our responsibility to keep the land alive”: Voices of northern Indigenous researchers. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health*, 8(1), 101–124.
- Mcgregor, H. E., Madden, B., Higgins, M., & Ostertag, J. (2018). Braiding designs for

- decolonizing research methodologies: Theory, practice, ethics. *Reconceptualizing Educational Research Methodology*, 9(2), 1–21. <https://doi.org/10.7577/term.2781>
- McGuire-Adams, T. (2021). "This is what I heard at Naicatchewenin": Disrupting embodied settler colonialism. *Journal of Indigenous Wellbeing Te Mauri-Pimatisiwin*, 6(1), 65–77.
- McGuire-Adams, T. (2021). Settler allies are made, not self-proclaimed: Unsettling conversations for non-Indigenous researchers and educators involved in Indigenous health. *Health Education Journal*, 80(7), 761–772. <https://doi.org/10.1177/00178969211009269>
- McGuire-Adams, T., Joseph, J., Peers, D., Eales, L., Bridel, W., Chen, C., Hamdon, E., & Kingsley, B. (2022). Awakening to elsewhere: Collectively restorying embodied experiences of (be)longing. *Sociology of Sport Journal*, 39(4), 313–322. <https://doi.org/10.1123/ssj.2021-0124>
- McGuire-Kishebakabaykwe, P. D. (2010). Exploring resilience and Indigenous ways of knowing. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health*, 8(2), 117–132.
- McIntyre, A. (2003). Through the eyes of women: Photovoice and participatory research as tools for reimagining place. *Gender, Place and Culture: A Journal of Feminist Geography*, 10(1), 47–66.
- Medeiros, A. S., Wood, P., Wesche, S. D., Bakaic, M., & Peters, J. F. (2017). Water security for northern peoples: review of threats to Arctic freshwater systems in Nunavut, Canada. *Regional Environmental Change*, 17(3), 635–647. <https://doi.org/10.1007/s10113-016-1084-2>

- Millar, W. P. J. (2015). “An Exceedingly complex institution”: The making of Sir John Franklin High School, Yellowknife, Northwest Territories, 1958 – 1967. *Historical Studies in Education*, 27(1), 40–56.
- Million, D. (2009). Felt theory: An indigenous feminist approach to affect and history. *Wicazo Sa Review*, 24(2), 53–76. <https://doi.org/10.1353/wic.0.0043>
- Moreton-Robinson, A. M. (2016). Relationality: A key presupposition of an Indigenous social research paradigm. In C. Andersen & J. M. O’Brien (Eds.), *Sources and Methods in Indigenous Studies* (pp. 69–77). <https://doi.org/10.4324/9781315528854>
- Morgensen, S. L. (2012). Destabilizing the settler academy: The decolonial effects of indigenous methodologies. *American Quarterly*, 64(4), 805–808. <https://doi.org/10.1353/aq.2012.0050>
- Mowatt, M., De Finney, S., Wright Cardinal, S., Tenning, J., Haiyupis, P., Gilpin, E., Harris, D., MacLeod, A., & XEMFOLTW Claxton, N. (2020). *ƆENTOL TFE TENEW* (together with the land): Part 1: Indigenous land- and water-based pedagogies. *International Journal of Child, Youth and Family Studies*, 11(3), 12–33. <https://doi.org/10.18357/ijcyfs113202019696>
- Mucina, D. D. (2011). Story as research methodology. *AlterNative: An International Journal of Indigenous Peoples*, 7(1), 1–14. <https://doi.org/10.1177/117718011100700101>
- National Centre for Truth and Reconciliation. (2023). *Sacred Heart (Providence Mission)*. <https://nctr.ca/residential-schools/northern/sacred-heart-providence-mission/>
- Nature United. (2023). *Indigenous Guardians Toolkit*. <https://doi.org/10.1145/3173225.3173315>

- Neeganagwedgin, E. (2015). Rooted in the Land: Taíno identity, oral history and stories of reclamation in contemporary contexts. *AlterNative: An International Journal of Indigenous Peoples*, 11(4), 376–388. <https://doi.org/10.1177/117718011501100405>
- Nelson, N., Coon, E., & Chadwick, A. (2015). Engaging with the messiness of place in Early Childhood Education and Art Therapy: Exploring animal relations, traditional hide, and drum. *Canadian Children*, 40(2), 42–55. <https://doi.org/10.18357/jcs.v40i2.15178>
- Nichols, R. (2013). Indigeneity and the Settler Contract today. *Philosophy and Social Criticism*, 39(2), 165–186. <https://doi.org/10.1177/0191453712470359>
- Ninomiya, M. E. M., Pollock, N. J., Morton Ninomiya, M. E., & Pollock, N. J. (2017). Reconciling community-based Indigenous research and academic practices: Knowing principles is not always enough. *Social Science and Medicine*, 172(1), 28–36. <https://doi.org/10.1016/j.socscimed.2016.11.007>
- Northwest Territory Métis Nation. (2023). *About: Northwest Territory Métis Nation Declaration*. <https://nwtmetisnation.ca/about/>
- Noxolo, P. (2017). Introduction: Decolonising geographical knowledge in a colonised and re-colonising postcolonial world. *Area*, 49(3), 317–319. <https://doi.org/10.1111/area.12370>
- O’Hare-Gordon, M. A. (2016). *School-based food programming in the Northwest Territories: Working towards more than just food security* [Master’s thesis]. <https://doi.org/10.1017/CBO9781107415324.004>
- Obed, D. (2017). *Illiniavugut Nunami: Learning from the land: Envisioning an Inuit-centered*

- educational future* [Master's thesis]. <https://portal.usask.ca/record/105820>
- Ollier, M. (2019). *On-the-land with Project Jewel: A community-based research project in the Inuvialuit Settlement Region* [Master's thesis]. <http://hdl.handle.net/10393/39566%0A>
- Page, J., Scull, J., Cock, M. L., Gapany, D., Stewart, S., Murukun, M., Lawrence, R., Dhurrkay, J., Hayes, F., Burarrwanga, V., Goveas, J., Chynoweth, L., Callahan, M., Scannell, N., Murray, L., Lee, W. Y., Eadie, P., & Sparling, J. (2022). Exploring collaborative research partnerships in remote Indigenous communities. In *Decisions and Dilemmas of Research Methods in Early Childhood Education* (pp. 47–62). Routledge.
<https://doi.org/10.4324/9781003126577-6>
- Palma, A. C., Goosem, M., Fensham, R. J., Goosem, S., Preece, N. D., Stevenson, P. R., & Laurance, S. G. W. (2021). Dispersal and recruitment limitations in secondary forests. *Journal of Vegetation Science*, 32(1). <https://doi.org/10.1111/jvs.12975>
- Pearce, T., Smit, B., Duerden, F., Ford, J. D., Goose, A., & Kataoyak, F. (2010). Inuit vulnerability and adaptive capacity to climate change in Ulukhaktok, Northwest Territories, Canada. *Polar Record*, 46(2), 157–177. <https://doi.org/10.1017/S0032247409008602>
- Phillips, R. (2001). Politics of reading: Decolonizing children's geographies. *Ecumene*, 8(2), 125–150. <https://doi.org/10.1191/096746001701556959>
- Piper, L. (2019). Freeze-up, break-up, and colonial circulation. *Journal of Northern Studies*, 13(2), 17–42.
- Piper, L., & Sandlos, J. (2007). A broken frontier ecological imperialism in the in the Canadian

- North. *Environmental History*, 12(4), 759–795.
- Pludwinski, B. J., & Grimwood, B. S. R. (2021). (Re)producing wilderness tourism discourses in Algonquin Provincial Park. *Tourist Studies*, 21(3), 424–443.
<https://doi.org/10.1177/1468797621989207>
- Polfus, J. L., Simmons, D., Neyelle, M., Bayha, W., Andrew, F., Andrew, L., Merkle, B. G., Rice, K., & Manseau, M. (2017). Creative convergence: Exploring biocultural diversity through art. *Ecology and Society*, 22(2), art4. <https://doi.org/10.5751/ES-08711-220204>
- Popp, J. N., Priadka, P., Young, M., Koch, K., & Morgan, J. (2020). Indigenous Guardianship and moose monitoring: Weaving Indigenous and Western ways of knowing. *Human-Wildlife Interactions*, 14(2), 296–308.
- Price, J. (2007). *Tukisivallialiqtakka: The things I have now begun to understand: Inuit Governance, Nunavut and the Kitchen Consultation Model* [Master's thesis].
<http://hdl.handle.net/1828/987>
- Price, M. J., Latta, A., Spring, A., Temmer, J., Johnston, C., Chicot, L., Jumbo, J., & Leishman, M. (2022). Agroecology in the North: Centering Indigenous food sovereignty and land stewardship in agriculture “frontiers.” *Agriculture and Human Values*, 39(4), 1191–1206.
<https://doi.org/10.1007/s10460-022-10312-7>
- Puig, C. J., Greiner, R., Huchery, C., Perkins, I., Bowen, L., Collier, N., & Garnett, S. T. (2011). Beyond cattle: potential futures of the pastoral industry in the Northern Territory. *Rangeland Journal*, 33(2), 181–194. <https://doi.org/10.1071/RJ10043>

- Radcliffe, S. A. (2017a). Decolonising geographical knowledges. *Transactions of the Institute of British Geographers*, 42(3), 329–333. <https://doi.org/10.1111/tran.12195>
- Radcliffe, S. A. (2017b). Geography and indigeneity I: Indigeneity, coloniality and knowledge. *Progress in Human Geography*, 41(2), 220–229. <https://doi.org/10.1177/0309132515612952>
- Radcliffe, S. A. (2018). Geography and indigeneity II: Critical geographies of indigenous bodily politics. *Progress in Human Geography*, 42(3), 436–445. <https://doi.org/10.1177/0309132517691631>
- Rasmus, S. M., Allen, J., & Ford, T. (2014). “Where I have to learn the ways how to live:” Youth resilience in a Yup’ik village in Alaska. *Transcultural Psychiatry*. <https://doi.org/10.1177/1363461514532512>
- Redvers, J. (2016). *Land-based practice for Indigenous health and wellness in Yukon, Nunavut, and the Northwest Territories* [Master’s thesis]. <http://hdl.handle.net/11023/2996>
- Redvers, J. (2020). “The land is a healer”: Perspectives on land-based healing from Indigenous practitioners in northern Canada. *International Journal of Indigenous Health*, 15(1), 90–107. <https://doi.org/10.32799/ijih.v15i1.34046>
- Redvers, J. M. (2020). “The land is a healer”: Perspectives on land-based healing from Indigenous practitioners in northern Canada. *International Journal of Indigenous Health*, 15(1), 90–107. <https://doi.org/10.32799/ijih.v15i1.34046>
- Reid, A. J., Lane, J., Woodworth, S., Spring, A., Garner, R., & Tanche, K. (2021). Leading on-

- the-land science camps with Indigenous youth: Towards reciprocity in research. *Solutions: For a Sustainable & Desirable Future*, 1(2020), 39–47.
- Riddell, J. K., Salamanca, A., Pepler, D. J., Cardinal, S., & McIvor, O. (2017). Laying the groundwork: A practical guide for ethical research with indigenous communities. *International Indigenous Policy Journal*, 8(2). <https://doi.org/10.18584/iipj.2017.8.2.6>
- Robertson, S., & Ljubicic, G. (2019). Nunamii'luni quvianaqtuq (It is a happy moment to be on the land): Feelings, freedom and the spatial political ontology of well-being in Gjoa Haven and Tikiranjuk, Nunavut. *Environment and Planning D: Society and Space*, 37(3), 542–560. <https://doi.org/10.1177/0263775818821129>
- Ross, P., & Mason, C. W. (2020). “We hardly have any moose around here anymore”: Climate change and the barriers to food security in the Dehcho Region, Northwest Territories. *Arctic*, 73(3), 368–385. <https://doi.org/10.14430/arctic71082>
- Russell, G., Champ, J. G., Flores, D., Martinez, M., Hatch, A. M., Morgan, E., & Clarke, P. (2021). Doing work on the land of our ancestors: Reserved treaty rights lands collaborations in the American southwest. *Fire*, 4(1), 1–9. <https://doi.org/10.3390/fire4010007>
- Saxinger, G. (2018). Community Based Participatory Research as a Long-Term Process: Reflections on Becoming Partners in Understanding Social Dimensions of Mining in the Yukon. *The Northern Review*, 47, 187–206. <https://doi.org/10.22584/nr47.2018.009>
- Sepulveda, C. (2018). Our sacred waters: Theorizing Kuuyam as a decolonial possibility. *Decolonization: Indigeneity, Education & Society*, 7(1), 40–58.

- Sharma, S. (2010). Assessing diet and lifestyle in the Canadian Arctic Inuit and Inuvialuit to inform a nutrition and physical activity intervention programme. *Journal of Human Nutrition and Dietetics : The Official Journal of the British Dietetic Association*, 23 Suppl 1, 5–17. <https://doi.org/10.1111/j.1365-277X.2010.01093.x>
- Shaw, W. S., Herman, R. D. K., & Dobbs, G. R. (2006). Encountering indigeneity: Re-imagining and decolonizing geography. *Geografiska Annaler, Series B: Human Geography*, 88(3), 267–276. <https://doi.org/10.1111/j.1468-0459.2006.00220.x>
- Shawanda, A. (2023). Nda-nwendaaganag (All My Relations): A relational approach to citation practices. *Turtle Island Journal of Indigenous Health*, 1(3). <https://doi.org/10.33137/tijih.v1i3.38567>
- Simpson, A. (2017). The ruse of consent and the anatomy of ‘refusal’: Cases from indigenous North America and Australia. *Postcolonial Studies*, 20(1), 18–33. <https://doi.org/10.1080/13688790.2017.1334283>
- Simpson, L. B. (2002). Indigenous environmental education for cultural survival. *Canadian Journal of Environmental Education*, 7(1), 13–25. <https://cjee.lakeheadu.ca/article/view/271/160>
- Simpson, L. B. (2014). Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society*, 3(3), 1–25. <https://doi.org/10.1055/s-0035-1567078>
- Simpson, L. B. (2016a). Indigenous resurgence and co-resistance. *Critical Ethnic Studies*, 2(2), 19–34.

- Simpson, L. B. (2016b). Land and reconciliation: Having the right conversations. *Electric City Magazine*, 8.
- Sium, A., Desai, C., & Ritskes, E. (2012). Towards the “tangible unknown”: Decolonization and the Indigenous future. *Decolonization: Indigeneity, Education & Society*, 1(1), I–XIII.
<https://doi.org/10.1007/s10964-013-0081-8>
- Sium, A., & Ritskes, E. (2013). Speaking truth to power: Indigenous storytelling as an act of living resistance. *Decolonization. Indigeneity, Education & Society*, 22(1), I–X.
- Sloan Morgan, V. (2020). “Why would they care?”: Youth, resource extraction, and climate change in northern British Columbia, Canada. *Canadian Geographer*, 64(3), 445–460.
<https://doi.org/10.1111/cag.12605>
- Smith, D. (1998). A long way home: torn from their traditional land and shuffled from one isolated, ill-equipped community to the next, the Sayisi Dene eventually landed south of Churchill, Manitoba [Ila Bussidor’s Night Spirits: the Story of Relocation of the Sayisi Dene]. *This*, 31(4), 37.
<https://login.proxy.bib.uottawa.ca/login?url=https://www.proquest.com/magazines/long-way-home-torn-their-traditional-land/docview/203546776/se-2?accountid=14701>
- Smith, L. T. (1999). *Decolonizing methodologies: Research and Indigenous peoples* (1st ed.). Zed Books Ltd. <https://doi.org/10.1353/cla.2013.0001>
- Smith, L. T., Tuck, E., & Yang, K. W. (2018). *Indigenous and Decolonizing Studies in Education: Mapping the Long View*. Routledge.

- Snelgrove, C., Dhamoon, R. K., & Corntassel, J. (2014). Unsettling settler colonialism: The discourse and politics of settlers, and solidarity with Indigenous nations. *Decolonization: Indigeneity, Education & Society*, 3(2), 1–32.
- Spring, A. (2018). *Capitals, climate change and food security: Building sustainable food systems in northern Canadian Indigenous communities* [Doctoral dissertation].
<https://scholars.wlu.ca/cgi/viewcontent.cgi?article=3149&context=etd>
- Spring, A., Skinner, K., Simba, M., Nelson, E., Baltzer, J., Swanson, H., & Turetsky, M. (2019). Taking care of the land: An interdisciplinary approach to community-based food systems assessment in Kakisa, Northwest Territories, Canada. *Sustainable Food Systems Assessment*, 42–65.
- Statistics Canada. (2023). Census profile. 2021 census of population. In *Canada Catalogue*.
<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&GENDERlist=1&STATISTIClist=1&HEADERlist=0&DGUIDlist=2021A00056106023&SearchText=yellowknife>
- Stevenson, K. T., Peterson, M. N., & Bondell, H. D. (2019). The influence of personal beliefs, friends, and family in building climate change concern among adolescents. *Environmental Education Research*, 25(6), 832–845.
- Stevenson, M. G. (1996). Indigenous knowledge in environmental assessment. *Arctic*, 49(3), 278–291.
- Stoller, M. (2019). *What the border divides: settler geographies and the making of the Northwest Territories* [Doctoral dissertation]. <https://dx.doi.org/10.14288/1.0383402>

- Styres, S., Haig-Brown, C., & Blimkie, M. (2013). Towards a pedagogy of land: The urban context. *Canadian Journal of Education*, 36(2), 34–67.
<https://doi.org/10.2307/canajeducrevucan.36.2.34>
- Swerdfager, T., & Olive, A. (2023). Laws matter: A foundational approach to biodiversity conservation in Canada. *Facets*, 8, 1–13. <https://doi.org/10.1139/facets-2022-0095>
- Sylvestre, P., Castleden, H., Martin, D., & McNally, M. (2018). “Thank you very much... you can leave our community now”: Geographies of responsibility, relational ethics, acts of refusal, and the conflicting requirements of academic localities in indigenous research. *ACME: An International Journal for Critical Geographies*, 17(3), 750–779.
- Tahsin, T. (2021). *Land-based learning: Building bridges between Indigenous Knowledge and Western science* [Master’s thesis]. <http://hdl.handle.net/1993/35964>
- Takano, T., Higgins, P., & McLaughlin, P. (2009). Connecting with place: implications of integrating cultural values into the school curriculum in Alaska. *Environmental Education Research*, 15(3), 343–370. <https://doi.org/10.1080/13504620902863298>
- Teran, M. Y. (2016). The Nagoya Protocol and Indigenous Peoples. *International Indigenous Policy Journal*, 7(2). <https://doi.org/10.18584/iipj.2016.7.2.6>
- The First Nations Information Governance Centre. (2019). First Nations data sovereignty in Canada. *Statistical Journal of the IAOS*, 35(1), 47–69. <https://doi.org/10.3233/SJI-180478>
- Tippeconnic III, J. (2015). Critical theory, red pedagogy, and Indigenous Knowledge: The missing links to improving education. In S. Grande (Ed.), *Red pedagogy: Native American*

social and political thought (10th Anniv, pp. 35–42). Rowman & Littlefield Publishers.

Tobias, J. K., Richmond, C. A. M. M., & Luginaah, I. (2013). Community-based participatory research (CBPR) with indigenous communities: Producing respectful and reciprocal research. *Journal of Empirical Research on Human Research Ethics*, 8(2), 129–140.
<https://doi.org/10.1525/jer.2013.8.2.129>

Tomaselli, M., Kutz, S., Gerlach, C., & Checkley, S. (2018). Local knowledge to enhance wildlife population health surveillance: Conserving muskoxen and caribou in the Canadian Arctic. *Biological Conservation*, 217, 337–348.
<https://doi.org/10.1016/j.biocon.2017.11.010>

Tomiak, J. (2016). Unsettling Ottawa: Settler colonialism, indigenous resistance, and the politics of scale. *Canadian Journal of Urban Research*, 25(1), 8–21. <https://doi.org/doi:10.1111/anti.12308>

Tomiak, J. (2017). Contesting the settler city: Indigenous self-determination, new urban reserves, and the neoliberalization of colonialism. *Antipode*, 49(4), 928–945.
<https://doi.org/10.1111/anti.12308>

Tondu, J. M. E., Balasubramaniam, A. M., Chavarie, L., Gantner, N., Knopp, J. A., Provencher, J. F., Wong, P. B. Y., Simmons, D., Simmons, D., & Tondu. (2014). Working with northern communities to build collaborative research partnerships: Perspectives from early career researchers. *Arctic*, 67(3), 419–429. <https://doi.org/10.14430/arctic4416>

Trout, L., Wexler, L., & Moses, J. (2018). Beyond two worlds: Identity narratives and the aspirational futures of Alaska Native youth. *Transcultural Psychiatry*, 55(6), 800–820.

<https://doi.org/10.1177/1363461518786991>

Tuck, E., Guess, A., & Sultan, H. (2014). Not nowhere: Collaborating on selfsame land.

Decolonization: Indigeneity, Education & Society, June 26, 1–11.

Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity,*

Education & Society, 1(1), 1–40. <https://doi.org/10.1016/j.jpainsymman.2015.03.009>

Tuck, E., & Yang, K. W. (2014). Unbecoming claims: Pedagogies of refusal in qualitative

research. *Qualitative Inquiry*, 20(6), 811–818. <https://doi.org/10.1177/1077800414530265>

Tulloch, S., Metuq, L., Hainnu, J., Pitsiulak, S., Flaherty, E., Lee, C., & Walton, F. (2016). Inuit principals and the changing context of bilingual education in Nunavut.

ÉTudes/Inuit/Studies, 40(1), 189–209. <https://doi.org/10.7202/1040151ar>

Twance, M. (2020). *It was your ancestors that put them there and they put them there for you”:*

Exploring indigenous connections to Mazinaabikiniganan as land-based education

[Master’s thesis]. <https://knowledgecommons.lakeheadu.ca/handle/2453/4125>

van Luijk, N., Carter, N. A., Dawson, J., Parker, C., Grey, K., Provencher, J., & Cook, A. (2022).

Community-identified risks to hunting, fishing, and gathering (harvesting) activities from

increased marine shipping activity in Inuit Nunangat, Canada. *Regional Environmental*

Change, 22(1). <https://doi.org/10.1007/s10113-022-01894-3>

van Luijk, N., Giles, A., Millington, R., & Hayhurst, L. (2021). The extractives industry:

(Un)likely and (un)welcome partners in regenerating Indigenous cultures in Canada? *Annals*

of Leisure Research, 24(1), 72–91. <https://doi.org/10.1080/11745398.2020.1768877>

- Vasquez, I. A. (2021). Restoring reciprocal relationships for social and ecological health. *Ecology Law Quarterly*, 46(4), 1049–1068. <https://doi.org/10.15779/Z38DV1CP36>
- Verderber, S., Wolf, J. P., & Skouris, E. (2020). Indigenous ecohumanist architecture for health in Canada's far north. *Herd-Health Environments Research & Design Journal*, 13(4), 210–224. <https://doi.org/10.1177/1937586720933176>
- Virtanen, P. K. (2022). Relational epistemology and Amazonian land-based education: Learning the ideas of intra-dependency in the Central Purus River. *Anthropology and Education Quarterly*, 53(4), 341–356. <https://doi.org/10.1111/aeq.12421>
- Wabie, J.-L., London, T., & Pegahmagabow, J. (2021). Land-based learning journey. *Journal of Indigenous Social Development*, 10(1), 50–80.
<https://ucalgary.ca/journals/jisdhttp://www.hawaii.edu/sswork/jisdhttp://scholarspace.manoa.hawaii.edu/handle/10125/37602>
- Walsey, V., & Brewer, J. (2018). Managed out of existence: Over-regulation of Indigenous subsistence fishing of the Yukon River. *GeoJournal*, 83(5), 1169–1180.
<https://doi.org/10.1007/s10708-018-9879-y>
- Ward, J., Gaudet, J. C., & McGuire-Adams, T. (2021). The privilege of not walking away: Indigenous women's perspectives of reconciliation in the academy. *Aboriginal Policy Studies*, 9(2), 2–24. <https://doi.org/10.5663/aps.v9i2.29374>
- Watchman, R. (2024). *Restoring relations through stories: From Dinétah to Denendeh*. University of Arizona Press.

- Watkins, M. (1997). Out of commission: When Ottawa decided to ignore the recommendations of the Royal Commission on Aboriginal Peoples, it set itself up for disaster. Remember Oka anyone? *This Magazine*, 31(1), 11.
- Watson, I. (2018). Aboriginal relationships to the natural world: Colonial ‘protection’ of human rights and the environment. *Journal of Human Rights and the Environment*, 9(2), 119–140. <https://doi.org/10.4337/jhre.2018.02.01>
- Weatherdon, M. S. (2017). Indigenous knowledge and contested spirituality in Canadian nuclear waste management. *Journal for the Study of Religion, Nature and Culture*, 11(1), 86–108. <https://doi.org/10.1558/jsrnc.27263>
- Wesche, S. D., & Armitage, D. R. (2014). Using qualitative scenarios to understand regional environmental change in the Canadian North. *Regional Environmental Change*, 14(3), 1095–1108. <https://doi.org/10.1007/s10113-013-0537-0>
- Wesche, S. D., O’Hare-Gordon, M. A. F., Robidoux, M. A., & Mason, C. W. (2016). Land-based programs in the Northwest Territories: Building Indigenous food security and well-being from the ground up. *Canadian Food Studies / La Revue Canadienne Des Études Sur l’alimentation*, 3(2), 23. <https://doi.org/10.15353/cfs-rcea.v3i2.161>
- Wexler, L., Jernigan, K., Mazzotti, J., Baldwin, E., Griffin, M., Joule, L., & Garoutte, J. (2014). Lived challenges and getting through them: Alaska Native youth narratives as a way to understand resilience. *Health Promotion Practice*, 15(1), 10–17. <https://doi.org/10.1177/1524839913475801>
- Whetung, M., & Wakefield, S. (2018). Colonial Conventions. *Indigenous and Decolonizing*

Studies in Education, 146–158. <https://doi.org/10.4324/9780429505010-10>

Wildcat, M., McDonald, M., Irlbacher-Fox, S., & Coulthard, G. (2014). Learning from the land: Indigenous land based pedagogy and decolonization. *Decolonization: Indigeneity, Education & Society*, 3(3), I–XV.

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood Publishing.

Woodgate, R. L., Tennent, P., & Barriag, S. (2020). Creating space for youth voice: Implications of youth disclosure experiences for youth-centered research. *International Journal of Qualitative Methods*, 19, 1–13. <https://doi.org/10.1177/1609406920958974>

Woodward, E., & Marrfurra McTaggart, P. (2016). Transforming cross-cultural water research through trust, participation and place. *Geographical Research*, 54(2), 129–142. <https://doi.org/10.1111/1745-5871.12136>

Woodworth, S. M. (2018). *Decolonizing autoethnography: Where's the water in kinesiology?* [Master's thesis]. <http://hdl.handle.net/1807/91700>

Woodworth, S., Hudson, B., Pludwinski, B., Wesche, S. D., & Spring, A. (2025). *Empowering northern youth as Land Stewards through land-based programs in the Northwest Territories*. [Manuscript submitted for publication].

Woodworth, S., Tanche, K., Nadli, B., Wesche, S. D., & Spring, A. (2024). “It’s not being ‘on-the-land,’ it’s like we are a part of the Land”: Indigenous youth share visual stories at “on-the-land” camps in the Dehcho. *Canadian Geographies / Géographies Canadiennes*, 69(1), 1–13. <https://doi.org/10.1111/cag.12968>

- Woolford, A., Benvenuto, J., & Hinton, A. L. (2014). Buffalo genocide in nineteenth-century North America. In *Colonial genocide in Indigenous North America* (pp. 303–316). Durham: Duke University Press. <https://doi.org/10.1215/9780822376149>
- Worrell, R., & Appleby, M. C. (2000). Stewardship of natural resources: Definition, ethical and practical aspects. *Journal of Agricultural and Environmental Ethics*, 12, 263–277.
- Wray, K., Soukhaphon, A., Parlee, B., D’Souza, A., Freitas, C., Heredia, I., Martin, C., Oloriz, C., Proverbs, T., & Spicer, N. (2020). Aligning intentions with community: Graduate students reflect on collaborative methodologies with indigenous research partners. *Sustainability (Switzerland)*, 12(18). <https://doi.org/10.3390/su12187534>
- Yellowhead Institute. (2019). *Land Back Red Paper*.
<https://redpaper.yellowheadinstitute.org/wp-content/uploads/2019/10/red-paper-report-final.pdf>



*I am struggling with 'expert syndrome', where one is seen as an expert of their dissertation research topic. I refuse to be perceived as an expert in Indigenous Research methodologies, Indigenous Knowledges, or Indigenous land-based practices because I am not an expert. I am a person who had transformative experiences on-the-land and built deep, long-lasting friendships and relationships with youth, Elders, Knowledge Holders, community members, Indigenous Guardians, local leaders, scientists, and researchers. I am a mentor and learner. I am a teacher and student. I am a researcher and participant. I am a colleague, partner, and collaborator. I am a facilitator, coordinator, and director. I am a friend and community member. I am an artist and storyteller. I am a steward of safe spaces for others to share their stories while also sharing my own. **And I am part of the Land.** But... I am not an expert, and I refuse to be acknowledged as one.*

Chapter 7: Epilogue: A Love Letter

The epilogue, titled “A Love Letter”, is a heartfelt reflection dedicated to the Land. It is a poetic expression of deep gratitude, honouring the interconnectedness and love that have guided every aspect of this work, and emphasizing the enduring impact of my relationship with the Land on personal growth, knowledge production, and academic breakthroughs.

For the Land

It's me again.

I haven't written like *this* in awhile – free of references, cross-checking, validating, analyzing – just writing by **feeling**.

What a journey it's been. To get *~here~*

In these final moments of writing my dissertation, I am **feeling** all the grief, pain, and trauma resurface heavily, like a tsunami of suffering risen from the depths of my spirit, heart, body, and mind. Doing “this” has been so hard...entangled with tragedies and transitions, I am not the same person I was when I started this journey.

And yet, somehow, in all my growth and progress,
who I was,
who I am,
and who I am becoming
has never felt *enough*,

while simultaneously ***too much***...

The experience of being trans nonbinary in a world of binaries and constraints is exhausting, and I am truly exhausted, depleted, and shattered. Coming out to the world and coming into myself is laborious, work that I must do every day, in every place, in every space, at all times. To constantly justify my reality, my lived experiences, and my identity is arduous. I am fighting every day.

Grappling with this duality of *not enough* and ***too much*** in academia has only worsened these feelings. To get your doctorate, the **academy** – academic gatekeepers and colonial processes – break you down more and more until only the ones who can endure that pain the most are left. It is not an uplifting process to empower you, rather a demoralizing, dehumanizing, discouraging, disheartening, process of academic hazing and judgment. And when your work is filled with love, relationships, and personal growth, it can feel like every judgment is an attack on who you are rather than what you have done.

But **you** have always loved me
in all that I was,
all that I am,
and all that I am becoming.

You are the reason I survived. You are the reason I am here. You are the reason I keep going.

You have stitched me back together, time and time again. You trace my scars with gentleness, softness, and tenderness. You see me. You knew me before I knew myself. And you know what I will become before I have reached there. And I know that you will love me through it all.

Within the restraints and domination of power systems in academia and beyond, I found a way to

b r e a k t h r o u g h

I did everything I could to ||| b r e a k t h r o u g h > > > and make this impactful –
to teach others the importance of loving you
to teach others the importance of caring for you
to teach others the importance of protecting you,
because you love us, you care for us, and you protect us.

No matter who we are, no matter where we come from, no matter what we do, you do this for everyone. And I will keep doing this for you too.

This is a love letter to you –

all my (un-/re-)learning,
work,
writing,
fighting,
resisting,
growing,
long days,
late nights,
early mornings,
years of struggle,
years of recovery,
and years of healing.

All of this is for you.

When I am lost, I come back to you. Sometimes I don't even know what I'm looking for, but you show me what I need to see.

You are my counsellor. You are my teacher. You are my mentor. You are my friend. You are my family. You are everything and more.

You make me feel safe. You make me whole. You heal me. You carry me. You hold me. You guide me to find the answers, to find love, to find protection, to find compassion, to find respect, to find joy, to find others, to find myself.

You are alive and you are my life.

You are love and you are my love.

You are spirit and you are my spirit.

I am part of you. You are part of me.

It's a beautiful thing, to feel our connection, one that transcends space-time, one that transcends constructed boundaries – geographic, social, descriptive, prescriptive, historic, political – it's an energy that cannot be contained. It's a love that cannot be bound. It's a depth that cannot be measured. It's a height that cannot be seen. It's a distance that cannot be determined. Our relationship flows through, with, and beyond all that is understood.

I love you –
in all that I was,
in that I am,
and in all that I am becoming.

Mahsi cho for your gifts. Mahsi cho for leading the way. Mahsi cho for your unconditional love and care. Mahsi cho for everything that you are and for everything that you do.

For the four directions – Mahsi cho. Mahsi cho. Mahsi cho. Mahsi cho.

You show me that **I am enough** because I am part of you, and you are part of me.

In our interconnectedness, I recognize that **this** is also a love letter
to myself,
to all my relations,
to all living beings and spiritual entities.

To the ones who are gone,
to the ones who are here,
to the ones who have not yet arrived.

To the all the creatures and critters,
the winged ones and the gilled ones,
the leafy ones and the spikey ones,
the petals and blossoms,
the seasons and directions,
the soils, grasses, rocks, minerals, crystals, and sands,
the clouds, winds, sun, moon, and stars.

To the waters –
frozen, salty, fresh,
moving, flowing, falling from the sky,
held in the earth,
held in the trees,
held in our bodies,
polluted, buried, trapped.

This is a love letter for all of us.

Together, we will

b r e a k t h r o u g h

Appendices

Appendix 1: Scientific Research License

Appendix 2: Certificates of Ethics Approval

Appendix 3: Materials for Community-Based Research

Appendix 4: Photovoice Interview Materials

Appendix 5: Supplementary Materials

Appendix 1: Scientific Research License

NWT Scientific Research Licence # 16594 Issued

Please be advised that the NWT Scientific Research Licence has been issued to Dr. Andrew Spring for the project entitled: On-the-Land monitoring, youth engagement, and knowledge sharing of environmental change. The Notification of Research summarizing the researcher's activities and locations is attached.

Thank you,
Manager, Scientific Services
Aurora Research Institute
Tel: (867) 777-3298
licence@nwtresearch.com
polar.nwtresearch.com

Appendix 2: Certificates of Ethics Approval

05/03/2020

Université d'Ottawa

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number

S-01-20-4778

Titre du projet / Project Title

Evaluating on-the-land camps
with Indigenous youth, Elders
and scientists in the Dehcho
Thèse de doctorat / Doctoral
thesis

Type de projet / Project Type

Statut du projet / Project Status

Approuvé / Approved

Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)

05/03/2020

Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)

31/12/2021

Équipe de recherche / Research Team

**Chercheur /
Researcher**

Affiliation

Role

Stephanie
WOODWORTH

Département de géographie / Department of
Geography

Chercheur Principal / Principal Investigator

Sonia WESCHE

Département de géographie / Department of
Geography

Superviseur / Supervisor

Andrew SPRING

Wilfrid Laurier University

Coordonnateur de recherche / Research
Coordinator

Conditions spéciales ou commentaires / Special conditions or comments

The uOttawa ethics certificate expiry date was set to match as much as possible the one from Wilfrid Laurier University. Note however, that our approvals are only valid for one year.

550, rue Cumberland, pièce 154 550 Cumberland Street, Room 154
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada

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www.recherche.uottawa.ca/deontologie | www.recherche.uottawa.ca/ethics

Steph Woodworth

From: do-not-reply-laurier@researchservicesoffice.com
Sent: July 2, 2019 2:25 PM
To: Spring Andrew(Principal Investigator)
Cc: Baltzer Jennifer(Co-Investigator); reb@wlu.ca; do-not-reply-laurier@researchservicesoffice.com
Subject: REB #6171 Clearance Notification with note



July 02, 2019

Dear Andrew Spring

REB # 6171
Project, "On-the-Land programming and research in the NWT"
REB Clearance Issued: July 02, 2019
REB Expiry / End Date: December 31, 2022

The Research Ethics Board of Wilfrid Laurier University has reviewed the above proposal and determined that the proposal is ethically sound. As a part of this approval, please ensure the Informed Consent document is revised to indicate where video recordings may be used (you mentioned outreach activities in your revised application form). This should be outlined to participants in the informed Consent, particularly if video recordings of them will be used for outreach or other purposes.

If the research plan and methods should change in a way that may bring into question the project's adherence to acceptable ethical norms, please submit a "Request for Ethics Clearance of a Revision or Modification" form for approval before the changes are put into place. This form can also be used to extend protocols past their expiry date, except in cases where the project is more than four years old. Those projects require a new REB application.

Please note that you are responsible for obtaining any further approvals that might be required to complete your project.

Laurier REB approval will automatically expire when one's employment ends at Laurier.

If any participants in your research project have a negative experience (either physical, psychological or emotional) you are required to submit an "Adverse Events Form" within 24 hours of the event.

You must complete the online "Annual/Final Progress Report on Human Research Projects" form annually and upon completion of the project. ROMEO will automatically keep track of these annual reports for you. When you have a report due within 30 days (and/or an overdue report) it will be listed under the 'My Reminders' quick link on your ROMEO home screen; the number in brackets next to 'My Reminders' will tell you how many reports need to be submitted. Protocols with overdue annual reports will be marked as expired. Further the REB has been requested to notify Research Finance when an REB protocol, tied to a funding account has been marked as expired. In such cases Research Finance will immediately freeze funding tied to this account.

All the best for the successful completion of your project.

(Useful links: [ROMEO Login Screen](#) ; [REB Students Webpage](#); [REB Connect Webpage](#))

Yours sincerely,



Jayne Kalmar, PhD
Chair, University Research Ethics Board
Wilfrid Laurier University

Please do not reply directly to this e-mail. Please direct all replies to reb@wlu.ca

Appendix 3: Materials for Community-Based Research



Ka'a'gee Tu First Nation

Kakisa Lake c/o P.O. Box 4428

Hay River, NT X0E 1G3

Tel: (867) 825-2000

Fax: (867) 825-2002

E-mail: kaageetu_manager@northwestel.net

May 5, 2021

Wilfrid Laurier University
75 University Avenue West
Waterloo, ON
N2L 3C5

RE: Summer 2021 Research Resumption in Kakisa, NT

To whom it may concern,

On behalf of the Ka'a'gee Tu First Nation, I am pleased to invite student researchers affiliated with Wilfrid Laurier University to resume research and community supported activities in the community of Kakisa, NT.

During the summer of 2020, the ongoing research activities in Kakisa were necessarily transformed in response to the unknown and rapidly evolving nature of the COVID-19 pandemic and in recognition of the vulnerable status of our community. Since then, circumstances have changed dramatically. Currently, the risk of COVID-19 transmission in the Northwest Territories is very low. At the time of writing, there are only 6 active cases in the entire Territory. Furthermore, the vaccination rate within the community is very high, further reducing the risk to our community members.

To minimize the risks associated with COVID-19, collaboratively developing a COVID-19-specific risk management plan with researchers and community leaders, which will center the health of everyone involved. This is in addition to the regular risk management planning that occurs annually. This plan will include measure such as: a mandatory two-week quarantine period following the researchers' arrival to the Northwest Territories, maintaining a two-metre distance during all activities (including workshops, interviews, focus groups and field work), having PPE readily available for those who wish to use it (PPE use is not currently required in the NWT), limiting gathering numbers as outlined by the Public Health Authority, sanitizing shared work surfaces and shared items before and after use, and conducting research and engagement outdoors when possible. This plan will also have the flexibility to respond to new developments and changes, should they occur. In all of our activities, we will ensure that the NWT Public Health Authority guidelines and best practices are adhered to.

We are looking forward to welcoming researchers back to the community and continue building

on our longstanding collaborative research partnership with Laurier on projects related to health, food and environmental monitoring. This partnership has been immensely helpful in building capacity in the community, engaging our youth in projects that are important to them, and helping our community work towards our food system vision. With the proper planning and guidelines in place, we believe that the benefits of inviting researchers into our community far outweigh the risks.

Sincerely,



Ruby Simba
Council Manager

cc. Chief Lloyd Chicot

On-the-Land Programming and Research in the NWT

Principal Investigator: Dr. Andrew Spring, Wilfrid Laurier University

Graduate Student: Stephanie Woodworth (PhD Candidate), University of Ottawa

We are seeking your voluntary participation in a research project exploring land-based education, specifically on-the-land camps, for Indigenous communities in the NWT. This study seeks to understand how researchers and communities in the NWT can collaborate for land-based education in a rapidly changing North. This research will be conducted as part of a shared on-the-land experiences with researchers and community members to support local capacity to collaborate in, coordinate and lead on-the-land camps and other land-based education programming.

For this study, we are hoping to conduct focus groups and a photovoice activity during the Ka'a'gee Tu Canoe Camp held this summer on Kakisa Lake. This research will be conducted with community members that are participating in the camps, including youth (16+), knowledge holders and Elders. You have been identified by others in the community as one of these people. These activities will include questions about your concerns about changes to the land and waters, your experiences of on-the-land camps, and your vision for the future of your region. Also, you will have access to cameras and video equipment to help capture and share your experience. These focus groups will occur at the end of the day, during each day of the camp and will take approximately 1 hour each (5 hours total). Results of this study will be summarized in a report and distributed to the community in early 2020.

It is possible that as a participant, by answering the questions in the photovoice focus groups, you could make statements that could be awkward for you when made public (e.g., through academic publications, presentations, plain language reports to the community or other materials created from this research). We consider these risks to be very low, and in line with the risks encountered in the participants' everyday lives; however, we will mitigate these risks by preserving your anonymity in reports, and only use your name after your consent is given, and by meeting with you individually to allow you to review and edit relevant field notes and transcribed interview texts prior to their being made public.

The researchers will keep the collected data in locked facilities or password-protected on computers. The only people that will have access to the files will be the supervisor and researchers. All data collected from this research will be destroyed by December 31, 2024 or when the reports and publications are completed, whichever comes first. Your participation is voluntary, and you are free to withdraw at any time. If you decide to withdraw from the research at any time, all data collected will be destroyed or returned to you. You are not obliged to answer any questions that you find objectionable or which make you feel uncomfortable.

This project has been reviewed and approved by the Wilfrid Laurier University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your

rights as a participant in research have been violated during the course of this project, you may contact Dr. Andrew Spring, adjunct Professor, Department of Geography and Environmental Studies, Wilfrid Laurier University, [redacted], aspring@wlu.ca or Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131, REBChair@wlu.ca.

I understand the information described on the previous page and consent to participate in this research:

Name: _____ Date: _____

Signature: _____

Signature (Parent / Guardian): _____

By initialing the statements below:

_____ I agree to **participate** in these research activities.

_____ I grant permission for the researcher to use an **audio recorder**.

_____ I grant permission for the researcher to use **direct quotations** from our interview and identify me as the source of the information.

_____ I grant permission for the researcher to use **direct quotations** from our interview but **NOT** identify me as their source.

Researcher:

Name: _____ Date: _____

Signature: _____

On-the-Land Programming and Research in the NWT

Principal Investigator: Drs. Andrew Spring, Wilfrid Laurier University

Graduate Student: Stephanie Woodworth (PhD Candidate), University of Ottawa

We are seeking your voluntary participation in a research project exploring land-based education, specifically on-the-land camps, for Indigenous communities in the NWT. This study seeks to understand how researchers and communities in the NWT can collaborate for land-based education in a rapidly changing North. This research will be conducted as part of a shared on-the-land camp program funded by NSERC PromoScience with researchers and community members, such as Dehcho First Nations and Łı́ı́dlıı Kúé First Nation, to support local capacity to collaborate in, coordinate and lead on-the-land camps and other land-based education programming.

For this study, we are hoping to conduct focus groups and a photovoice activity during the Dehcho Youth Ecology and Traditional Knowledge Camp held September 4th to 10th in the Dehcho. This research will be conducted with the youth (16+) that are participating in the camps. These activities will include questions about your concerns about changes to the land and waters, your experiences of on-the-land camps, and your vision for the future of your region. Also, you will have access to cameras and video equipment to help capture and share your experience. These focus groups will occur at the end of the day, during each day of the camp and will take approximately 1 hour each (5 hours total). Results of this study will be summarized in a report and distributed to the community in early 2020.

It is possible that as a participant, by answering the questions in the photovoice focus groups, you could make statements that could be awkward for you when made public (e.g., through academic publications, presentations, plain language reports to the community or other materials created from this research). We consider these risks to be very low, and in line with the risks encountered in the participants' everyday lives; however, we will mitigate these risks by preserving your anonymity in reports, and only use your name after your consent is given, and by meeting with you individually to allow you to review and edit relevant field notes and transcribed interview texts prior to their being made public.

The researchers will keep the collected data in locked facilities or password-protected on computers. The only people that will have access to the files will be the supervisor and researcher. All data collected from this research will be destroyed by December 31, 2024 or when the reports and publications are completed, whichever comes first. Your participation is voluntary, and you are free to withdraw at any time. If you decide to withdraw from the research at any time, all data collected will be destroyed or returned to you. You are not obliged to answer any questions that you find objectionable or which make you feel uncomfortable.

This project has been reviewed and approved by the Wilfrid Laurier University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may

contact Dr. Andrew Spring, adjunct Professor, Department of Geography and Environmental Studies, Wilfrid Laurier University, [redacted], aspring@wlu.ca or Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131, REBChair@wlu.ca.

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_____ I grant permission for the researcher to use **direct quotations** from our interview but **NOT** identify me as their source.

Researcher:

Name: _____ Date: _____

Signature: _____

Assent Form

Why are we doing this study?

We are doing a research study about how the Dehcho Youth Ecology & Traditional Knowledge Camps bring Elders and scientists together to teach youth about changes in their communities, and how these camps create a space to connect youth to the land. A research study is a way to learn more about people, and we hope to learn more about what is important to you, as a youth in the Dehcho.

Why am I being asked to be in the study?

We are inviting you to be in the study because we want to understand what you enjoy learning at these camps, and what is important to you regarding environmental changes in your communities. Your ideas are important to help make these camps as best as they can be for future generations to come.

What if I have questions?

You can ask questions if you do not understand any part of the study. If you have questions later that you don't think of now, you can talk to me again any time during the camp or afterwards at [redacted].

If I am in the study what will happen to me?

If you decide that you want to be part of this study, you will be asked to take photographs during the camp activities and then reflect in the evenings about what your favourite part of camp was, what photographs you took, and what you would caption those photographs on Instagram. You can write your answers or share them with me however you would like, like in a small group or by yourself.

Will I be hurt if I am in the study?

No, you will not be hurt if you are in the study. You might feel uncomfortable answering the questions, but we will do our best to allow you to share at whatever way you are most comfortable. You will also have the opportunity to change what you said at a later time after the camp is over.

Will the study help me?

Yes, the study will teach you basic photography skills, you will receive a photobook that was created by you and your peers at camp, and your ideas can help shape future camps in the Dehcho.

Do I have to be in this study?

You do not have to be in this study, if you do not want to be. If you do not want to be in this study, you will not be penalized in any way and you will still be able to participate in all the camp activities.

If you decide that you don't want to be in the study after we begin, that's OK too. Nobody will be angry or upset. We are discussing the study with your parents, and you should talk to them about it too.

What happens after the study?

When we are finished this study, we will write a report about what was learned. This report will not include your name or that you were in the study.

We will also create a photobook and display of the photographs and stories you shared so that you can share that with your families and communities. You will receive the photobook for free at the end of the project.

Script for Requesting Consent from Youth Participants (age<18 years old):

Steph: “Hi my name is Steph. I am a graduate student from Ottawa working with Wilfrid Laurier University. I am helping with the Dehcho Camp to lead different activities. I was wondering if you would want to participate in a photovoice project?”

This project is part of my PhD research and a bigger project at Wilfrid Laurier that explores on-the-land camps in the Northwest Territories and how the camps engage youth like yourself! The bigger project looks at how researchers and communities can work together for land-based education in the NWT. I am most interested in your concerns about changes to the land and waters, your experiences of on-the-land camps, and your vision for the future of your community, and then how we can capture your experiences through images and stories.

For this project, I will give you a waterproof camera to take pictures during the day, and then every night we will do group reflections about your photos, your favourite part of the day, and what you learned. I will charge the camera at night and then give it back to you the next morning. We will also do one closing circle at the end of camp to wrap everything up! After the camp is over, I will write up a report and create the photovoice book for you and your community by early next year.

You might give answers to the questions that you think are awkward. So, to make sure you do not feel awkward about anything that you said, you will have an opportunity to go over all the notes before anything is public. We will only use your name with consent, or we will not share your name, and your identity will be kept private.

All the data will be kept in locked storage in locked offices and on password-protected on computers. The only people that will have access to the files will be my supervisor and me. The data collected from this research will be destroyed by December 31, 2024, or when the reports and publications are completed.

Your participation is your choice, and you can drop out any time. If you decide that you do not want to participate anymore, I will return your data to you and destroy it from our systems. You do not have to answer any questions you do not want to or that make you feel uncomfortable.

Are you interested in participating in this project?”

On-the-Land Programming and Research in the NWT

Principal Investigator: Dr. Andrew Spring, Wilfrid Laurier University

Graduate Student: Stephanie Woodworth (PhD Candidate), University of Ottawa

We are seeking your voluntary participation in a research project exploring land-based education, specifically on-the-land camps, for communities in the NWT. This study seeks to understand how researchers and communities in the NWT can collaborate for land-based education in a rapidly changing North. This research will be conducted as part of a shared on-the-land camp program funded by NSERC PromoScience with researchers and community members to support local capacity to collaborate in, coordinate and lead on-the-land camps and other land-based education programming.

For this study, we are hoping to conduct focus groups and a photovoice activity during the Water Stewardship Gathering held in Kakisa from August 13-17, 2021. This research will be conducted with the youth (16+) that are participating in the camps. These activities will include questions about your concerns about changes to the land and waters, your experiences of on-the-land camps, and your vision for the future of your region. Also, you will have access to cameras and video equipment to help capture and share your experience. These focus groups will occur at the end of the day, during each day of the camp and will take approximately 30 minutes each (2.5 hours total). Results of this study will be summarized in a report and distributed to you by early 2022.

It is possible that as a participant, by answering the questions in the photovoice focus groups, you could make statements that could be awkward for you when made public (e.g., through academic publications, presentations, plain language reports to the community or other materials created from this research). We consider these risks to be very low, and in line with the risks encountered in the participants' everyday lives; however, we will mitigate these risks by preserving your anonymity in reports, and only use your name after your consent is given, and by meeting with you individually to allow you to review and edit relevant field notes and transcribed interview texts prior to their being made public.

The researchers will keep the collected data in locked facilities or password-protected on computers. The only people that will have access to the files will be the supervisor and researcher. All data collected from this research will be destroyed by December 31, 2024 or when the reports and publications are completed, whichever comes first. Your participation is voluntary, and you are free to withdraw at any time. If you decide to withdraw from the research at any time, all data collected will be destroyed or returned to you. You are not obliged to answer any questions that you find objectionable or which make you feel uncomfortable.

This project has been reviewed and approved by the Wilfrid Laurier University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Andrew Spring, adjunct Professor, Department of Geography and Environmental

Studies, Wilfrid Laurier University, [redacted], aspring@wlu.ca or Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131, REBChair@wlu.ca.

I understand the information described on the previous page and consent to participate in this research:

Name: _____ Date: _____

Signature: _____

By initialing the statements below:

_____ I agree to **participate** in these research activities.

_____ I grant permission for the researcher to use an **audio recorder**.

_____ I grant permission for the researcher to use **direct quotations** from our interview and identify me as the source of the information.

_____ I grant permission for the researcher to use **direct quotations** from our interview but **NOT** identify me as their source.

Researcher:

Name: _____ Date: _____

Signature: _____

uOttawa Consent Information Addendum - COVID-19 Risks

Principal Investigator: Stephanie Marianne Woodworth

Please read the following statements carefully and feel free to ask questions if anything seems unclear.

We are putting in place safety precautions to reduce exposure to COVID-19, but the risk of exposure can still exist. COVID-19 can result in severe illness, medical expenses, and loss of income and in some cases, death.

If you are considered vulnerable to the effects of COVID-19 (e.g., an older adult; underlying medical conditions or a compromised immune system), please discuss your participation with the research team before consenting to participate.

If you are feeling unwell or experiencing any potential COVID-19 symptoms leading up to the research session, please stay home and notify the research team that you cannot attend. Should you experience symptoms in days following the session, please also notify the research team.

Potential COVID-19 symptoms include: new or worsening cough, shortness of breath or difficulty breathing, temperature equal to or over 38C (100.4F), feeling feverish, chills, fatigue or weakness, muscle or body aches, new loss of smell or taste, headache, gastrointestinal symptoms (abdominal pain, diarrhea, vomiting), or feeling very unwell.

Please advise a researcher if you believe a safety measure is not being taken, or that your safety is at risk.

Considerations for the Participant:

We ask that you:

- Wear a mask or face covering. Masks will be provided by the researcher if you do not have one. If you feel that you are unable to wear a mask, discuss your participation with the research team.
- Complete a [screening assessment](#) before each research session.
- Wash or sanitize your hands upon arrival. Hand sanitizer will be provided or a washing station will be available.
- Maintain physical distancing to the extent possible during the in-person research activities.

We ask that you follow the health-related directives above for your safety and the safety of the researchers.

Information for Contact Tracing

We are collecting personal contact information for contact-tracing purposes, in the event that you may have been exposed to COVID-19 at the research site. Your name and contact information:

- Will not be stored with the research data
- Will always be securely stored
- Will only be used if requested by Public Health authorities for COVID-19 contact tracing purposes
- Will be held only for the time required by Public Health authorities

Right to Withdraw

You are under no obligation to participate. You can stop participating or withdraw from the study at any time by notifying the researcher using the contact information above.

Thank you for your interest and participation.

Information for Contact Tracing

This information:

- will not be stored with the study data;
- will always be securely stored;
- will be used only if requested by public health to provide this information for COVID-19 contact tracing purposes; and
- will be held only for the time required by public health authorities

Name (please print): _____ (required)

Phone: _____ (required)

Email: _____ (optional)

Climate Change Action in the North

Principal Investigator: Drs. Andrew Spring, Wilfrid Laurier University

|Graduate Student: Stephanie Woodworth (PhD Candidate), University of Ottawa

We are seeking your voluntary participation in a research project exploring climate change in the North. This study seeks to understand how researchers and northern communities can collaborate for land-based education in a rapidly changing North. This research will be conducted as part of a shared on-the-land camp program funded by NSERC PromoScience with researchers and community members to support local capacity to collaborate in, coordinate and lead on-the-land camps and other land-based education programming.

For this study, we are hoping to conduct focus groups and a photovoice activity during Young Leaders' Summit on Northern Climate Change 2021 held in Yellowknife from August 17-21. This research will be conducted with the youth (18+) that are participating in the Summit. These activities will include questions about your concerns about changes to the land and waters, your experiences being on the land, and your vision for the future of your region. Also, you will have access to cameras and video equipment to help capture and share your experience. These focus groups will occur at the end of the day, during each day of the camp and will take approximately 30 minutes each (2.5 hours total). Results of this study will be summarized in a report and distributed to the community in early 2020.

It is possible that as a participant, by answering the questions in the photovoice focus groups, you could make statements that could be awkward for you when made public (e.g., through academic publications, presentations, plain language reports to the community or other materials created from this research). We consider these risks to be very low, and in line with the risks encountered in the participants' everyday lives; however, we will mitigate these risks by preserving your anonymity in reports, and only use your name after your consent is given, and by meeting with you individually to allow you to review and edit relevant field notes and transcribed interview texts prior to their being made public.

The researchers will keep the collected data in locked facilities or password-protected on computers. The only people that will have access to the files will be the supervisor and researcher. All data collected from this research will be destroyed by December 31, 2024 or when the reports and publications are completed, whichever comes first. Your participation is voluntary, and you are free to withdraw at any time. If you decide to withdraw from the research at any time, all data collected will be destroyed or returned to you. You are not obliged to answer any questions that you find objectionable or which make you feel uncomfortable.

This project has been reviewed and approved by the Wilfrid Laurier University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Andrew Spring, adjunct Professor, Department of Geography and Environmental

Studies, Wilfrid Laurier University, [redacted], aspring@wlu.ca or Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131, REBChair@wlu.ca.

I understand the information described on the previous page and consent to participate in this research:

Name: _____ Date: _____

Signature: _____

Signature (Parent/Guardian): _____

By initialing the statements below:

_____ I agree to **participate** in these research activities.

_____ I grant permission for the researcher to use an **audio recorder**.

_____ I grant permission for the researcher to use **direct quotations** from our interview and identify me as the source of the information.

_____ I grant permission for the researcher to use **direct quotations** from our interview but **NOT** identify me as their source.

Researcher:

Name: _____ Date: _____

Signature: _____

uOttawa Consent Information Addendum - COVID-19 Risks

Principal Investigator: Stephanie Marianne Woodworth

Please read the following statements carefully and feel free to ask questions if anything seems unclear.

We are putting in place safety precautions to reduce exposure to COVID-19, but the risk of exposure can still exist. COVID-19 can result in severe illness, medical expenses, and loss of income and in some cases, death.

If you are considered vulnerable to the effects of COVID-19 (e.g., an older adult; underlying medical conditions or a compromised immune system), please discuss your participation with the research team before consenting to participate.

If you are feeling unwell or experiencing any potential COVID-19 symptoms leading up to the research session, please stay home and notify the research team that you cannot attend. Should you experience symptoms in days following the session, please also notify the research team.

Potential COVID-19 symptoms include: new or worsening cough, shortness of breath or difficulty breathing, temperature equal to or over 38C (100.4F), feeling feverish, chills, fatigue or weakness, muscle or body aches, new loss of smell or taste, headache, gastrointestinal symptoms (abdominal pain, diarrhea, vomiting), or feeling very unwell.

Please advise a researcher if you believe a safety measure is not being taken, or that your safety is at risk.

Considerations for the Participant:

We ask that you:

- Wear a mask or face covering. Masks will be provided by the researcher if you do not have one. If you feel that you are unable to wear a mask, discuss your participation with the research team.
- Complete a [screening assessment](#) before each research session.
- Wash or sanitize your hands upon arrival. Hand sanitizer will be provided or a washing station will be available.
- Maintain physical distancing to the extent possible during the in-person research activities.

We ask that you follow the health-related directives above for your safety and the safety of the researchers.

Information for Contact Tracing

We are collecting personal contact information for contact-tracing purposes, in the event that you may have been exposed to COVID-19 at the research site. Your name and contact information:

- Will not be stored with the research data
- Will always be securely stored
- Will only be used if requested by Public Health authorities for COVID-19 contact tracing purposes
- Will be held only for the time required by Public Health authorities

Right to Withdraw

You are under no obligation to participate. You can stop participating or withdraw from the study at any time by notifying the researcher using the contact information above.

Thank you for your interest and participation.

Appendix 4: Photovoice Interview Materials

Participant Name:

Photovoice Questions:

What was your favourite part of the camp today? Why?	
What was the most important teaching you learned today? Why?	
What picture would you like to share?	
What does your picture show or tell others? How it can it teach others about what you learned and/or enjoyed today?	

PHOTO Technique:

P: Describe your photo ?	
H: What is happening in your picture?	
O: Why did you take a picture of this?	
T: What does this picture tell us about your life?	
O: How can this picture provide opportunities for us to improve life?	

Sharing Circles (Focus Groups) Interview Guide

Opening (Sharing Circle 1) – Introduction to Photovoice

1. Who am I? What am I doing here?
2. Who are you? (Group introductions/icebreaker).
 - a. Describe your relationship and connection to the land and water.
3. Introduction to photovoice
4. Review group rules and guidelines and safe spaces
5. Group dialogue:
 - a. What interested you in participating in this on-the-land camp?
 - b. How did you find out about this on-the-land camp?
 - c. Have you attended an on-the-land camp before? Describe your experiences of any previous on-the-land camps that you have attended.
 - d. Are you concerned about environmental changes or other changes in your homelands? What are your concerns about environmental and other changes in your community?
 - e. What are your priorities to address the changes that you described previously?
 - f. Do you have any final thoughts, ideas, comments, or concerns that you wish to address or bring forward?
6. Review basic photography
7. Send participants to take photographs

Closing (Sharing Circle 2)

1. Does this camp, or camps like this, support your relationship with the land and water? Why or why not?
2. What were your favourite activities or “likes” from the camp?
3. What were your least favourite activities or “dislikes” from the camp?
4. Would you like to see more camps like this and/or more opportunities to be on the land?
 - a. If no, what would inspire or encourage you to participate in more on-the-land camps?
5. What would an ideal on-the-land camp look like to you? (Probing questions: What kinds of activities should be included? What do you think is important to learn?)
6. Now that you have participated in the camp activities, do you have any new concerns about changes in your homelands? What are your priorities to address these changes?
7. Do you have any final thoughts, ideas, comments, or concerns that you wish to address or bring forward?

Appendix 5: Supplementary Materials

- 2023**
- **Photo Exhibit:** Coordinated, organized, and facilitated a photo exhibit in Łíídlıı Kúę (Fort Simpson), NWT to showcase youth photographs and stories from an on-the-land camp in the Dehcho region of the NWT.
- 2022**
- **Photo Exhibit:** Coordinated, organized, and facilitated a photo exhibit in Fort Providence, NWT to showcase youth photographs and stories from an on-the-land camp in the Dehcho region of the NWT.
 - **Dehcho Youth Ecology & Traditional Knowledge Camp:** Supporting and instructing DFN’ 7-day on-the-land camp for youth (12-16) at Telemia Camp, Fort Providence, NWT, October 3-9, 2022. Filmed and editing a video to showcase the camp and engage youth for future programs.
 - [Water Stewardship Gathering](#): Planned, coordinated, and facilitated a 4-day on-the-land camp for youth (18-30) in partnership with Ecology North and KTFN at First River, Kakisa, NWT, August 26-29, 2022. Filmed and editing a video to showcase the camp and engage youth for future programs.
- 2021**
- [YLS](#): Participated and led a research project at a 5-day on-the-land camp for youth (18-30) in partnership with Ecology North and Dene Yellowknives First Nation in Dettah, NWT. Filmed and editing a video to showcase the camp and engage youth for future programs.
 - [WSG](#): Coordinated, facilitated, and led a research project at a 5-day on-the-land camp for youth (18-30) in partnership with Ecology North and KTFN

at First River, Kakisa, NWT. Filmed and edited a video from the camp to showcase the camp and engage youth for future programs, which can be found at <https://www.facebook.com/ecologynorth>

- **Youth Photobooks:** Designed and shipped four unique photobooks for all the youth participants and community partners of four distinct on-the-land camps in the NWT.
- **Photo Exhibits:** Coordinated, organized, and facilitated two photo exhibits (one virtual, one in-person in Kakisa, NWT) to showcase youth photographs and stories from two on-the-land camps in the Dehcho region of the NWT
- **Knowledge Mobilization Scholarship Training** (2021): Developed knowledge mobilization skills and strategies through training workshops and co-created a knowledge mobilization plan with community research partner.

- 2019**
- **KTCC (2019):** Coordinated, facilitated, and led a research project at a 7-day on-the-land camp in partnership with KTFN and Wilfrid Laurier University at First River, Kakisa, NWT. Filmed and edited a video from the camp to showcase the camp and engage youth for future programs, which can be found on [Northern Water Futures' YouTube channel](#).
 - **DYETKC (2019):** Coordinated and facilitated and led a research project a 7-day on-the-land camp along the Deh Cho (Mackenzie River) in partnership with DFN. Filmed and edited a video from the camp to

showcase the camp and engage youth for future programs, which can be found on [Dehcho First Nation's website](#).

- 2018**
- **DYETKC (2018):** Participated in a 7-day on-the-land camp in the Edézhíe National Wildlife Area (NWA) at Willow Lake in partnership with DFN. Filmed and edited a video from the camp to showcase the camp and engage youth for future programs, which can be found on [Dehcho First Nation's website](#).