“The future is blurry”: The (Hydro)Power Relations of the Muskrat Falls Project

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Abstract

The Canadian Muskrat Falls hydroelectric project (MFP) has presented social, political, economic and wellbeing challenges to the province of Newfoundland and Labrador for over a decade. Despite significant public discussion on the economic issues associated with MFP, the lived experience of Inuit from the affected area has received less attention. This research aims to share Inuit perspectives in Rigolet, Nunatsiavut, the community anticipated to be most affected by the project, to inform health and social responses by government and grassroots organizations. Through a sociological approach guided by Indigenous research methodologies, this research employed culturally responsive and creative methods including semi-structured interviews, surveys, and participatory photography. The research found that participants positioned the MFP within the social and historical context of a previous (1960s-70s) hydroelectric project, the Upper Churchill Falls project, which shapes their contemporary questions and concerns. Participants also associate implementation of MFP with colonialism, as they feel they have not been adequately consulted or informed, a continuation of colonial hierarchies of knowledge. Rigolet residents also expressed uncertainty about the social, cultural, and health impacts of potential methylmercury contamination and wider environmental changes the project may cause. The power relations associated with the hydroelectric project has resulted in a 'silencing' of concerns over time, with some participants changing their diet because of contamination concerns for traditional foods critical to local diets, cultural practices, and connections to the land. Results of this study have important implications for public health and health risk communication strategies, as traditional foods and associated land-based activities are known to benefit Inuit physical, mental, and cultural health and wellbeing. Overall, the dissertation demonstrates how the MFP fits within a settler colonial structure within Canada, especially as Indigenous communities have been and continue to be sites for resource extraction. This system of exploitation contrasts with Inuit perspectives on the role and importance of the land and environment in social life and relationships. The research makes several recommendations for improving health risk communications, including the importance of: improved health risk communication; the delivery of clear scientific data; facilitating access to traditional foods; supporting safe ice and water travel; and improved consultation and environmental assessment processes.

Keywords: Inuit health; environmental contaminants; Indigenous methodologies; Muskrat Falls Project

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Acknowledgements

I don't think I even really knew what a PhD was when I started university almost a decade ago. Somehow, I kept following the academic path and ended up here. At times it's been a route with unexpected twists and turns, but my PhD experience has been full of growth, new friends, and life-long connections with people and places. The truth is that this thesis would not have existed without the support of countless people along the way. The process of this PhD is really one intertwined with relationships, both professional and personal, and people who have given their time and energy for a common purpose of believing that we can create happy, healthy Inuit societies through considerate, solutions-focused research.

Firstly, I would like to express my deepest gratitude to the participants and community members of Rigolet who trusted me and gave their time to share their perspectives and desires for the future. I am inspired by their dedication to creating a more equitable world, and passion for ensuring the health of the environment and animals. I promise to continue standing with you and to advocate for better decision-making processes from those in power.

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in my judgement, you have empowered me to lead my own work and become a well-rounded researcher. Your calm demeanour during trying times and advocacy when I was faced with bureaucratic challenges has not gone unnoticed. My favourite Toni Morrison quote says, “When you get these jobs that you have been so brilliantly trained for, just remember that your real job is that if you are free, you need to free somebody else. If you have some power, then your job is to empower somebody else.” I truly feel that you have done this, and I hope I can carry forward in my career as much kindness as you have shown me.

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often all-consuming. I am forever thankful that we undertook this ride together and look forward to our exciting new future adventures in Toronto.

Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Printed Name: Jessica Penney

Signature:

List of Abbreviations

Abbreviation	Definition
APS	Aboriginal Peoples' Survey
ATV	All-terrain vehicle
CBC	Canadian Broadcasting Corporation
COVID-19	Coronavirus Disease 2019
DMAE	Department of Municipal Affairs and Environment
EA	Environmental Assessment
GBP	Pound Sterling
GNL	Government of Newfoundland and Labrador
HBC	Hudson's Bay Company
HVGB	Happy Valley-Goose Bay
IBA	Impact and Benefits Agreement
IEAC	Independent Expert Advisory Committee
IGA	International Grenfell Associatoin
INFSS	Inuit Nunangat Food Security Strategy
IQ	Inuit Qaujimajatuqangit
IRM	Indigenous research methodologies
ITK	Inuit Tapiriit Kanatami
JRP	Joint Review Panel
LIA	Labrador Inuit Association
LILCA	Labrador Inuit Land Claims Agreement
LISA	Labrador Inuit Settlement Area
LLP	Labrador Land Protectors
MeHg	Methylmercury
MFP	Muskrat Falls Project
NATO	North Atlantic Treaty Organization
NCC	NunatuKavut Community Council
NFLD	Newfoundland (previous acronym often used before Labrador was added to the provincial name in 2001)
NG	Nunatsiavut Government
NGRAC	Nunatsiavut Government Research Advisory Committee
NISR	National Inuit Strategy on Research

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NL	Newfoundland and Labrador
PCB	Polychlorinated biphenyls
PWHCE	Prairie Women's Health Centre of Excellence
PWDU	Potable Water Dispensing Unit
RICG	Rigolet Inuit Community Government
RNFB	Revised Northern Food Basket
SAR	Search and Rescue
SDH	Social Determinants of Health
SDIH	Social Determinants of Inuit Health
TB	Tuberculosis
TRC	Truth and Reconciliation Commission
UCFP	Upper Churchill Falls Project
UK	United Kingdom
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
WHO	World Health Organization

Chapter 1: Introduction

Background: #MakeMuskratRight and Momentary Solidarity

In autumn of 2016, significant protests began in central Labrador, Canada. Labradorians (as people from Labrador are called) of all ages, ethnicities, and backgrounds came together to resist a hydroelectric project which they felt would harm their health, cultures, and livelihoods. There were protest events outside the Muskrat Falls hydroelectric project's (MFP) gates, and in the closest town of Happy Valley-Goose Bay (HVGB). Eventually, the protests picked up steam, and there were solidarity events all over Labrador, the wider province of Newfoundland and Labrador (NL), Canada, and even internationally. This culminated in the most intense resistance efforts in October 2016 which included a multi-day occupation of the hydroelectric project's site, a three-person hunger strike during which the strikers travelled to the national parliament buildings in Ottawa, and dozens of arrests which led to years of legal battles for the protesters/Land Protectors[1]. These resistance efforts were unprecedented both in their scale and in the fact that they brought together groups of people from different cultural groups with historical and contemporary tensions.

While these protests gained a significant amount of news coverage in the local, regional, and national news, they were only the most recent and public displays of a long-term effort by multiple parties to object to the construction and implementation of the MFP. Grassroots activists such as the Labrador Land Protectors and Grand Riverkeepers Labrador had been challenging the project for many years based on its potential environmental impacts on the land, rivers, and Labradorians' access to the environment. The Nunatsiavut Government (NG), the self-governing organization representing Inuit on the Northern coast of Labrador, had also been attempting to intervene for several years at the bureaucratic and political level. Their main concern was around how the environmental effects of the MFP might impact their beneficiaries living in the area around the hydroelectric project. Both groups had attempted to make changes in public processes but ultimately their concerns were ignored or dismissed. The protests functioned to increase public knowledge of the issues and put pressure on decisionmakers to make changes to the project's reservoir creation process.

[1] There are differing perspectives on the terminology for those who participate in resistance activities. In my prior research with the Labrador Land Protectors group, they preferred to be called Land Protectors. In this research in Rigolet, people referred to 'protests' and 'protesters'. In keeping with the language of the participants, I will primarily use the word 'protesters' unless referring specifically to the Labrador Land Protectors.

The news coverage and messaging from the protests centred on two issues: how the hydroelectric project might lead to methylmercury contamination of local food sources such as fish and seals; and concerns of people in HVGB about the stability of the natural dam portion of the project, called the North Spur. Local people from HVGB felt that the North Spur might not be stable enough to hold the water and could result in a landslide and flooding of the town. As I will discuss in more depth later, methylmercury (MeHg) is a common issue in the construction of reservoirs for hydroelectric projects. It is a neurotoxin which bioaccumulates in animals and humans and can have health effects such as heart issues, immune system issues, and can impact brain development (Schartup et al., 2015). This was extremely frightening for protesters, who held signs with messages such as "Truth and Reconciliation…and Poison" and "Don't Play Russian Roulette with My Health".

As a researcher whose maternal family is from Labrador and is specifically from the Inuit region involved in organizing the protests, I was intrigued by the commotion involved in the protests. I knew there were tensions between the various Indigenous groups in Labrador, and to see them come together for a single cause felt tremendously meaningful. In addition, I worried for my family, some of whom attended the protests. While I did not grow up in Labrador, my memories of visiting were based centrally around visiting my grandfather, aunts, uncles, and cousins, travelling by boat, and going fishing for salmon or char. The idea that marine life could now be dangerous to eat was unthinkable, as I knew how much people in Labrador rely on and enjoy wild food.

While the protests eventually reduced in frequency and size, there was a continuing conversation on social media about the environmental impacts on the river, the health impacts of methylmercury, and cultural impacts of potentially not being able to consume traditional foods[2] which hold important social meaning. When it came time for me to work on my master's dissertation in 2018, I worked with the Labrador Land Protectors in HVGB to document their health and wellbeing concerns (Penney, 2021a). After this research, participants encouraged me to continue researching this topic, as it affected people beyond the community of HVGB. Coincidentally, my family is from the community of Rigolet, which is anticipated to be most affected by the methylmercury contamination due to the community's higher reliance on wild foods than other nearby communities (e.g. HVGB, Mud Lake, North West River). Many Rigolet community members were also heavily

[2] For context, in Inuit communities, academic literature and relevant policy spaces, terms like 'country foods', 'traditional food', and 'wild food' are often used to refer to foods harvested and consumed by Inuit. I will use these terms interchangeably throughout this thesis.

involved in the protests in HVGB, travelling by plane and boat to participate. Therefore, I shifted the focus of my PhD project towards Rigolet, and that community's specific concerns.

Research Gap

There has been a moderate amount of research on the MFP, most significantly work commissioned by the NG, in partnership with researchers from Memorial University of Newfoundland, University of Manitoba, and Harvard University. This research project, called *Lake Melville: Avativut, Kanuittailinnivut (Our Environment, Our Health)* (Durkalec et al., 2016). focused on the physical impacts of the MFP on Lake Melville, which is not actually a lake but an estuary which leads to the Labrador Sea and North Atlantic Ocean. While the research program looked at many different issues and resulted in a considerable number of findings and data, one of the most well-publicised parts of the project was related to MeHg contamination. The research, conducted in partnership with the Harvard scientists, modelled how MeHg might increase in various locations in Lake Melville after the construction of the MFP reservoir. They found that it would increase above recommended levels in several key food sources such as trout, sea bird eggs, and seals. These results were mobilised by the NG, who created a campaign called 'Make Muskrat Right' to pressure Nalcor (the public body building the project which I will discuss in more detail in Chapter 2) to make changes to the MFP which could reduce methylmercury contamination.

Other relevant research is the field of study of contamination of Inuit food sources in Northern Canada and the Arctic. This has been a focus of scientific inquiry since the 1950s when long range environmental contaminants were noticed in the Arctic and were then found in food sources such as polar bears, seals, and whales (Herrmann, 2016). Research on the topic increased throughout the 1980s and 1990s (Van Oostdam and Donaldson, 2005). It is a subject which is now engrained in the Arctic research field, with programs such as the Northern Contaminants Program and Arctic Monitoring and Assessment Program undertaking continuous monitoring of contaminants in Northern and Arctic parts of Canada and the world. Like the *Avativut, Kanuittailinnivut*, much Arctic and Northern contamination research focuses on the quantifiable and biological impacts of contaminants, with community and social implications often being discussed peripherally.

There is some literature on Inuit and Indigenous perceptions of environmental contamination and risk. Research shows that contamination risk is a social experience and influenced by politics and access to economic capital (Egan, 1998). Key issues related to

the topic of effective health messaging includes social perceptions of trust in individuals and organizations who are sharing communications (Boyd et al., 2019). Further, the historical reputation of those responsible for contaminating projects and information sharing is of importance (Jardine et al., 2013). I will discuss this in more detail in the literature review (Chapter 3), but the literature stresses how relations between affected communities and governments influence the efficacy of environmental and health risk communications.

The gap in the literature that this research aims to fill is the comparative lack of contemporary qualitative academic inquiry about the health and social concerns of Inuit related to environmental contamination, particularly in Labrador and Nunatsiavut, and especially with the case of the MFP. In the case of the MFP, additional dynamics include the impact of social media and changing social determinants of Inuit health in present-day life and within the Nunatsiavut Inuit food security context. Until this work, I am not aware of any research on the social impact of the Muskrat Falls project on Nunatsiavut Inuit. Other research, including my own master's work, has been based in central Labrador, and not taken an Inuit-specific approach. Further, there is a lack of community-oriented social research which can inform policy and communication responses in a comprehensive manner. The current literature provides important information about the harms of environmental contamination and the biological impacts. However, it does not often include community perspectives on what to do with that important – but sometimes very worrying or intimidating – information. It is important to understand the impacts on people's day to day lives, and how communities wish to respond to contamination issues.

In addition, research by Calder et al. (2016) shows that all the hydroelectric projects slated for development in Canada are located within 100km of Indigenous communities. This raises important questions about how power dynamics and Indigenous relations are involved in the construction of hydro development. This, in combination with the concerns expressed by protesters and organizers involved in MFP resistance efforts also leads to questions about health risk communication. It is imperative to understand what people currently know about environmental health risks, what they want to know, and how best to communicate desired information with them.

Therefore, this research attempts to address the following aim and objectives.

Aim:

The aim of this study is to understand how Nunatsiavut Inuit perceive the Muskrat Falls Hydroelectric Project and its potential impacts. To meet this aim, I set the following objectives.

Objectives:

- To explore how the potential or perceived risks of the MFP are understood from the perspective of local Inuit conceptions of health and well-being.
- To understand desired health risk communication strategies for information about the Muskrat Falls project.
- To explore the relationship between the Muskrat Falls project and existing structures of colonialism in Canada.

Research Scope

Considering the various political and scientific dynamics of this project, it is important to clearly delineate the scope of this work. I aim to present research and discuss community responses and perspectives on the MFP, including the everyday experiences of living with and around the hydro project. I wish to highlight community concerns and desires, including those which may not have been the focus of previous protest activities. This research does not address the biological science of MeHg in depth, nor does it aim to analyse the real time increase or decreases of MeHg in Lake Melville and marine animals. Instead, I consider the power and social relations which impact peoples' lives in relation to the MFP issue.

This research takes an Indigenous Research Methodologies (IRM) approach. While I will discuss this in more depth in Chapter 4, IRM are concerned with relationality in research, including relational ways of knowing and being in the research process (Wilson, 2008). In practice, this means considering my own relation to the research and participants through a consistent analysis of my positionality and reciprocal responsibilities. IRM is also focused on accountability to participants and ensuring that the research reflects community values and desires for research. To achieve this, the methodology of this research was designed through thorough engagement with Inuit research approaches and discussion with associates in Rigolet and staff from NG, who monitor research in the region. The specific methods employed in this work include interviews, a short survey, and participatory photography.

Main Findings

Overall, this research found that there is a substantial sense of uncertainty and perceived lack of information about the MFP in the community of Rigolet, pointing to deep flaws in the health risk communication process. The result of this lack of appropriate communication is a process of existential questioning of Inuit health and knowledge, as people consider which of their food sources are suitable for consumption. These issues are reflective of the enduring effects of colonial structural relations in NL. Main sources of information about the MFP for community members include social media (especially Facebook) and TV and online mainstream media news sources, and Rigolet residents have practical suggestions on how to improve these sources. They also have recommendations for the types of content they would like to see, and more effective methods of communication they would prefer.

Another key finding of this research centres around community concerns for Inuit health and intertwined animal, human, and environmental wellness. Unsurprisingly, MeHg was a significant area of focus for participants, particularly people are concerned for their children and grandchildren who might have to deal with the consequences of contamination in the future. Significantly, concerns around contamination were seen to have an impact on harvesting and consumption patterns, as participants discussed making changes to their diet out of fear and uncertainty about the impacts of MeHg on their own and their families' health. Another area of concern for participants which was not highlighted as much in previous research, or the public protests is the impact of changing waterways on Inuit knowledge and physical wellbeing. Participants shared concerns about how changing water salinity might affect ice formation, change traditional travel routes, and lead to increased risk of people falling in the water. Ultimately, the impacts of the MFP can be analysed through a Social Determinants of Inuit Health framework (Inuit Tapiriit Kanatami, 2014) which considers how key concerns collated in this research are reflective of a holistic understanding of wellbeing in Inuit culture and society.

The final main finding of this research explores how the MFP is representative of power relations in Labrador and the wider province of NL. Participants positioned the MFP as another decision in a history of political decision-making which has surrendered Labrador to extractive industries for the benefit the rest of the province. Many people expressed fear that Rigolet might experience similar issues to those which occurred in the community in the 1970s when another hydroelectric project, the Upper Churchill Falls project (UCFP), was built on the same river. At that time, residents experienced a range of environmental

impacts and this historical memory influences fears about the MFP. Other issues include a lack of meaningful consultation about the MFP and flawed environmental and decision-making processes. Overall, the MFP can be seen as reflective of a settler colonial structure which sees Labrador as a location for resource extraction and corporate exploitation, silencing and disregarding the concerns of Inuit.

Thesis Layout

This thesis continues with Chapter 2, which describes the social and historical context of the MFP within NL. Chapter 3 is a literature review which focuses on relevant research related to environmental contamination, Inuit health, health risk communications, and power and colonial influences on these topics. Chapter 4 outlines the methodological approach and Chapter 5 the methods used in this research, weaving together the theory and praxis of Indigenous and Inuit research methodologies, power in research, anti-colonial considerations and the processes involved in this research project. Chapter 6 is the first results chapter, focusing on understanding the epistemological landscapes present in the community which influence knowledge and information related to the MFP. Chapter 7 focuses on community health and wellbeing concerns such as methylmercury, food sources, and changing water and ice conditions. The last results chapter, Chapter 8, considers the power relations which make the MFP possible and influence community perspectives and responses. Finally, Chapter 9 brings together the various findings and reflects on the limitations of this work and areas for future research. Further, an interstitial photo and description is included between each chapter. These interludes are from the participatory photography project and include reflections from myself and participants (further details on this project are detailed in Chapter 5).

Interlude 1

I posted the following message in the participatory photography group page as an introductory post to the project and my intentions:

> As most of you know, my mom is from Rigolet, but I was raised in Iqaluit, Nunavut. I've also lived in Scotland since 2013 for university. I have been working on Inuit research for a few years now, in Labrador and Nunavut. I have worked on projects focusing on improving education for Inuit youth, addictions treatment, and environmental issues.
>
> Why I wanted to work on this project: I've been working on this project as part of my doctorate on the impact of the Muskrat Falls project and potential health communication strategies for the future, since 2018. Before this project, I worked with some Land Protectors in Goose Bay on their perspectives on the Muskrat Falls project. They encouraged me to continue on, saying I should also talk to people on the coast, since the project is anticipated to impact Rigolet too. My original plan didn't have anything to do with photography, but when my travel got cancelled due to COVID-19, I tried to think of ways the project could continue. I came across photovoice as a way of creatively discussing health and social issues and thought it could be adapted to an online setting.
>
> This photo I took on a walk on the boardwalk with my cousin Damien in fall 2019. To me it represents a journey. A journey towards Rigolet for me personally, but also the long journey of this research project. There are many twists and turns and unexpected issues (like COVID-19), but I try to keep going and stay on the path.
>
> I'm very thankful to all of you for participating in this project with me!
>
> Jessica Penney

Chapter 2: Social and Historical Background

Introduction

This chapter outlines the social and historical background of the province of Newfoundland and Labrador, the Nunatsiavut Inuit region, the community of Rigolet, and the Muskrat Falls project (MFP). These details provide important context for understanding the construction and implementation of the MFP, as well as Rigolet community members' perspectives and references the various data sources which are included in the results sections (Chapters 6, 7, and 8).

Newfoundland and Labrador

Newfoundland and Labrador (NL) is the easternmost province in Canada, and includes the island of Newfoundland and the mainland portion of the Labrador peninsula (see Fig. 1). NL is the most recent province to join the Canadian confederation in 1949. The Dominion of Canada was established in 1867 with four provinces, with seven more joining between then and 1905. Newfoundland joined in 1949 and the only subsequent addition is the primarily Inuit territory of Nunavut, in 1999. Labrador also borders the province of Quebec to the south and west, historically an area of contention between the two provinces. At times, there have been hostile arguments over the "ownership" of Labrador by the two settler colonial provinces, with some maps in Quebec still not displaying the border (Aylward, 2021). In the most recently available Canadian Census data, NL had a population of 519,716 (Statistics Canada, 2017a), an average age of 43.7 years old, and median age of 46 years old. This has likely increased since 2016, with Statistics Canada estimating in 2021 that the median age is 47.8. This is higher than the Canadian average, where the median age is estimated to be 41.1 (Statistics Canada, 2022b). The Government of Newfoundland and Labrador (GNL) has identified its aging population as a significant social policy priority (Government of Newfoundland and Labrador, 2015) and it is a frequent topic of economic discussion related to the workforce and the cost of health and social care.

Economically, NL has historically and contemporarily relied on its natural resources, including fisheries and forestry, mining, oil and gas, and hydroelectricity. Further, military presence has driven economic development in Labrador (Stienstra, 2015), which I will discuss further in future chapters. This reliance on natural resource industries has historically led to 'boom and bust' cycles and a relatively weak economy reliant on transfer payments from the federal government (Atlin and Stoddart, 2021). According to Atlin and Stoddart (2021), researchers specializing in environmental assessments and

environmental sociology, “Boom and bust refers to periods of high economic productivity followed by low levels of economic productivity, often occurring in resource extraction dominant economies” (p. 8). In the context of the MFP, a ‘boom’ period for the province was in the late 1990s until the mid-2010s with the emergence of offshore oil fields in the province, which led to increased public service spending, even after oil prices declined. The MFP was approved in 2012, during this period of economic strength, and the province continued to justify it even when its economic situation became dire (Atlin and Stoddart, 2021). I will discuss the social and political reasons for this justification in more detail later in this chapter.

Approximately 27,746 people were estimated to live in Labrador in 2021 according to divisional census population data combining the populations of the ‘Labrador’ and ‘Labrador Nunatsiavut’ divisions (Statistics Canada, n.d. cited by NL Statistics Agency, 2022). The main town and administrative hub in Labrador is HVGB, which had a population of 8,040 in 2021 according to the most recently available census data (Statistics Canada, 2022a). Labrador can be divided broadly into the north coast, south coast, central and western regions. Areas mentioned in this thesis are primarily the central region, as it includes HVGB and the MFP, and the north coast which includes Rigolet and the rest of the Nunatsiavut land claims area.

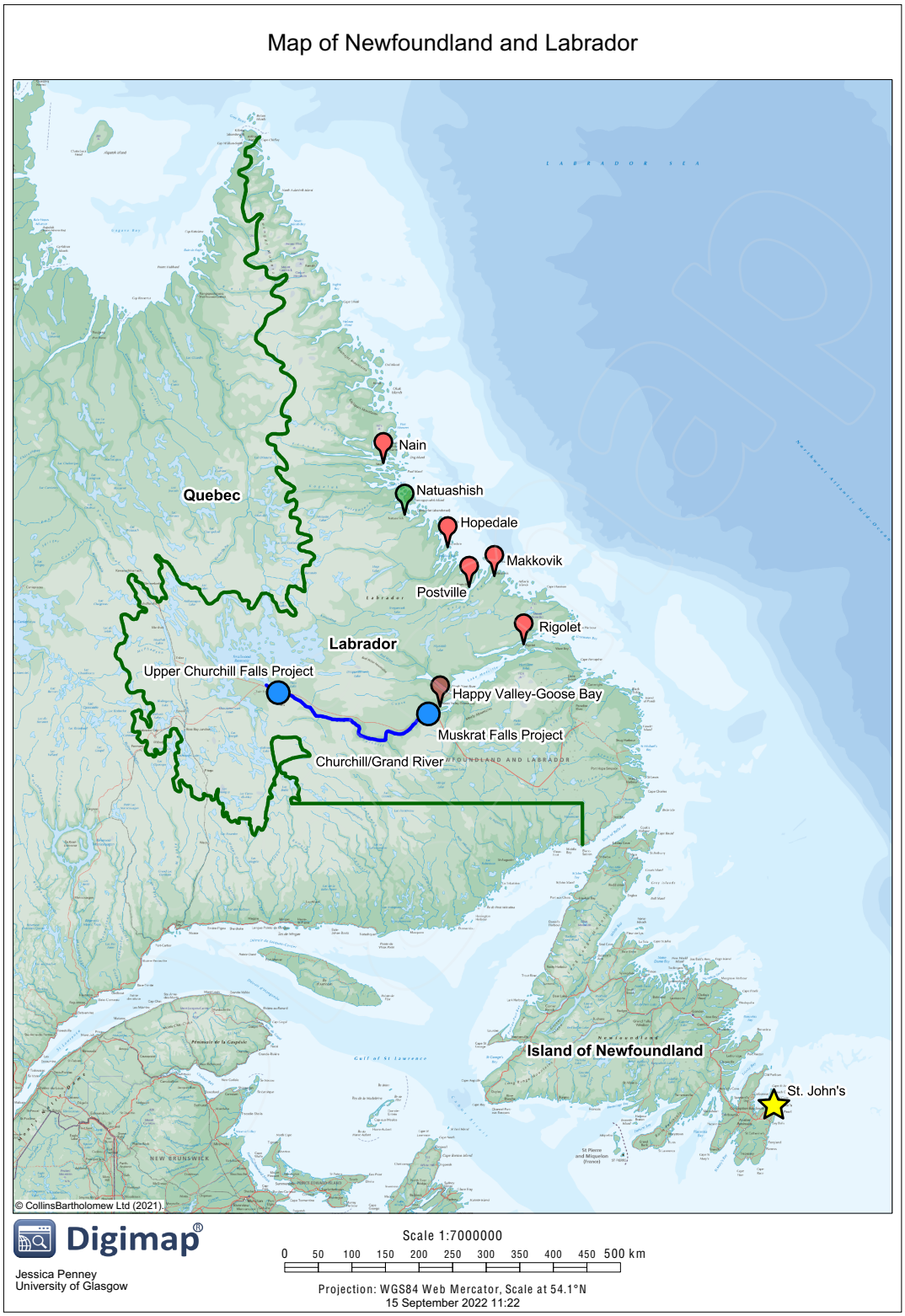


Figure 1. Map of province of Newfoundland and Labrador with main communities of interest designated. Digital Map Data © Collins Bartholomew (2022).

Indigeneity in Labrador

There are multiple Indigenous groups in Labrador. While for the purpose of this thesis I will focus on the Nunatsiavut Inuit population, I will describe all groups and claims for context which informs their relationships to one another and stances on the MFP. The

Nunatsiavut Inuit land claims area is on the northern coast of Labrador and consists of five communities. From south to north this includes: Rigolet, Makkovik, Postville, Hopedale (the legislative capital), and Nain (the administrative capital) (see Fig. 2). The Nunatsiavut Government (NG) was created in 2005 with the ratification of the Nunatsiavut Inuit Land Claims Agreement, making it the fourth Inuit region in Canada. As it is the region of focus in this thesis, I will discuss more about Nunatsiavut below.

The Innu First Nation includes the central Labrador community of Sheshatshiu, about an hour drive away from HVGB, and the community of Natuashish, which is on the north coast between Hopedale and Nain (see Fig. 1). The Innu Nation as a whole has a population 3200 people (Innu Nation, n.d.). The Nation has been in negotiation with the provincial and federal governments about establishing a land claims agreement and self-government since the 1970s. Significantly, the Tshash Petapen Agreement or 'New Dawn Agreement' was signed by the Innu Nation and GNL in 2008 (Office of Indigenous Affairs and Reconciliation, n.d.). This agreement resolved key matters related to the Innu Land Claims Agreement, as well as establishing a Lower Churchill Impact and Benefits Agreement (IBA) and compensation for the impacts of the Upper Churchill Falls hydroelectric project in the 1970s and 1980s (discussed further below). However, negotiations for the final land claims agreement are ongoing. Since there is an IBA in place for the Lower Churchill development (which includes MFP), the Innu Nation as an organization has generally been supportive of the MFP. However, institutional support through the Innu Nation is not necessarily representative of all their membership, as a significant number of Innu people participated in the 2016 protests against the MFP.

Another group in Labrador called the NunatuKavut Community Council (NCC) was created in 1985 and represents about 6,000 people in south and central Labrador (NunatuKavut, 2022b). NCC asserts itself as another Inuit region on the south coast of Labrador. The Nunatsiavut Government and Inuit Tapiriit Kanatami (ITK), the national Inuit organization, dispute this claim and they are not currently recognized by any other Inuit groups (Obed, 2021, CBC News, 2021c). The Innu Nation also vehemently opposes the NCC's efforts to establish a land claim, and their proposed land claim overlaps with both the NG's settled claim, and the Innu Nation's unsettled land claim (Barker, 2019). However, the NCC has received some recognition from the federal government, including the signing of a Memorandum of Understanding between NCC and the Government of Canada in 2019 (NunatuKavut, 2022a), which essentially outlines the intention to move forward with the Indigenous recognition and land claims process. In response, the Innu

Nation challenged this memorandum in court, claiming they were not adequately consulted by the federal government. In 2020 NG also joined the court challenge as an intervenor, with both NG and NCC claiming that NCC members are not Indigenous under Section 35 of the Constitution Act of Canada (CBC News, 2021c).

As is likely evident from the above context, there are historically complex and at times strained relationships between all the Indigenous groups in Labrador. In addition to the NCC-related conflict, the Innu Nation also has, at times, a tense relationship with the NG on some issues, such as the MFP. However, the MFP has been both a uniting and divisive topic amongst the Indigenous groups in Labrador. At the time of the large protests in 2016, all three groups were present at the protests and the leaders joined hands and claimed they would work together to pressure the provincial government to make changes to the MFP. This resulted in a 11-hour closed door meeting with GNL during which it was established that several key issues would be addressed through further independent assessment of the MFP and a committee focused on reducing methylmercury contamination (Barry, 2016).

After the meeting, many of the protest efforts subsided and the GNL and Indigenous leaders claimed there would be changes implemented. The Independent Expert Advisory Committee (IEAC) established after the discussions between Indigenous groups and GNL recommended removing vegetation from the MFP reservoir and capping the reservoir to reduce the amount of methylmercury released. The IEAC recommendations closely resembled those put forward by the Joint Federal-Provincial Review Panel (JRP) of experts almost a decade before which were never implemented (Calder et al., 2021). However, ultimately these recommended changes would not come to fruition, as the provincial government missed the deadline to respond to the IEAC recommendations – apparently an administrative error. In 2019, the MFP reservoir was fully flooded without implementing the IEAC recommendations. After this apparent oversight, the province offered each group ten million dollars of compensation. The Innu Nation and NCC accepted this money, and the NG declined it, saying “compensation is not a form of mitigation” (McKenzie-Sutter, 2019). Ultimately, each group has their own motivations and relationships with the MFP, but the NG’s is arguably the most contentious and litigious.

Nunatsiavut

The focus of this research is the Nunatsiavut Inuit region in northern coastal Labrador (see Fig. 2). It is the youngest of four Inuit regions in Canada (collectively called Inuit Nunangat), created in 2005 after almost 30 years of advocacy and negotiations (Procter et al., 2012). The Labrador Inuit Settlement Area (LISA) encompasses 72,520 square

kilometres of land and a three-kilometre coastal extension which adds 48,690 square kilometres. In addition to the five communities in the region, it also includes the Torngat Mountains National Park in the northern part of the land claims area, and part of the Mealey Mountains National Park Reserve in the south. The word Nunatsiavut translates as 'Our Beautiful Land', with 'nunak' meaning 'land' or 'community' in the Nunatsiavut dialect (Andersen et al., 2007).

Despite the slow process of the land claims agreement, the negotiations between the Labrador Inuit Association (LIA) (precursor to NG), GNL and Government of Canada were sped up in the 1990s when the Voisey's Bay nickel mine was proposed in the land claim area. As Procter et al. (2012) write, "The final version of the Labrador Inuit Land Claims Agreement was therefore hammered out in the shadow of the multi-billion-dollar mining project, but it solidified the rights of Labrador Inuit to govern their own homeland" (p. 4). The Voisey's Bay area (between Natuashish and Nain) where the mine is located was negotiated out of the land claims agreement by the provincial government when they recognised its lucrative potential (Procter et al., 2012), thus it is not in the Labrador Inuit Land Claims Area (LILCA). Today, Voisey's Bay, owned and operated by Brazilian mining company Vale, is a major employer of Nunatsiavut Inuit, and an Impact and Benefits Agreement (IBA) is in place. NG also receives five percent of provincial revenues from the mine. Despite the complicated relationship between mining and Indigenous communities, including Vale being responsible for human and public health disasters in other parts of the world (Freitas et al., 2019), Voisey's Bay is often perceived as a relatively progressive and socially responsible initiative, especially in comparison to the MFP. Gibson (2006) asserts that the Voisey's Bay negotiation process was exceptional at the time for its focus on sustainability and conflict resolution between all parties, including the Innu Nation and LIA.

Inuit and those with significant ties in Nunatsiavut communities are considered 'beneficiaries' of the LILCA, the settlement between the federal government, provincial government, and LIA, which established the NG. The region is self-governing, with authority over issues such as health and social development, education, culture and language, environment, and other community matters. The five communities within the land claims area have Inuit Community Governments, and the elected community leaders, called AngajukKâk, represent their constituents in the regional Nunatsiavut Assembly based in Hopedale (see Figure 2). Inuit who live outside of the land claims agreement are

also represented by elected officials for the Canadian Constituency and Upper Lake Melville Constituency who serve in the Nunatsiavut Assembly on their behalf.

The other Inuit regions in Canada include the Inuvialuit Settlement Region (designated in 1984), the territory of Nunavut (created 1999), and the northern region of Quebec called Nunavik (designated 1978) (see Fig. 2). These four regions of Inuit Nunangat are culturally, socially, and economically connected in many ways, and many families are related across regions. However, it is necessary to recognize that there are distinct differences between these regions as well, including with governance structures. For example, Nunavut has a public government and is one of three territories in Canada (alongside Northwest Territories and Yukon). The other three Inuit regions have varying levels of self-governance and control over a range of issues such as, education, mining, wildlife management, environmental issues, health, social issues, and more.

While the Inuit land claims agreements have been lauded as some of the most progressive and well-established in Canada, it is also important to recognise their challenges. Within Nunatsiavut, there are tensions between the social and geographic boundaries of beneficiary status and Inuit communities (Procter et al., 2012). There are also bureaucratic challenges to Inuit land claims agreements. In the case of Nunavut, Kunuk Inutiq (2022), an Inuk lawyer, policy expert, and writer argues that "the assumption that the public government is a form of self-determination is a farce" (p. 2). She claims that Inuit have not benefitted from the creation of the Government of Nunavut, as material conditions (e.g. food security and housing) have not improved, Inuit culture is implemented in tokenistic ways, and "senior bureaucracy is made up of 85% non-Inuit upholding a system that benefits settlers" (Inutiq, 2022, p. 2).

While NG does not release information about their staff demographics, in a policy paper investigating the experiences of Inuit women's experiences in managerial roles in Inuit organizations across Inuit Nunangat, Patricia Johnson-Castle (2022) found that participants faced sexism, racism, ageism, embarrassment due to lack of higher education (there are no universities in any of the Inuit regions), lateral violence[3] (Whyman et al., 2021), tokenism, and an "old boys club" mentality amongst Inuit and non-Inuit male colleagues. While Inuit self-governments can be spaces for Inuit-led innovation and self-determination, they also require recognition from the Canadian state (Inutiq, 2022). Further, as Procter et al. (2012)

[3] Lateral violence is "the tendency of peoples from oppressed groups to direct their frustration and anger from their experiences of oppression at members of their own group" through behaviours such as gossiping, bullying, shaming, and social exclusion (Whyman et al., 2021).

acknowledge, the designation of a land claims agreement also includes increased government administration over people's lives and land. Despite these issues:

> …many Inuit see the land claims process and the Nunatsiavut government that it has created as the Inuit's best chance to withstand the pressure by outside governments and powerful industrial interests to control their lives and appropriate their resources. By taking things into their own hands, Inuit will be better able to deal with the complexities and incongruities of governing Nunatsiavut" (Procter et al., 2012, p. 11).

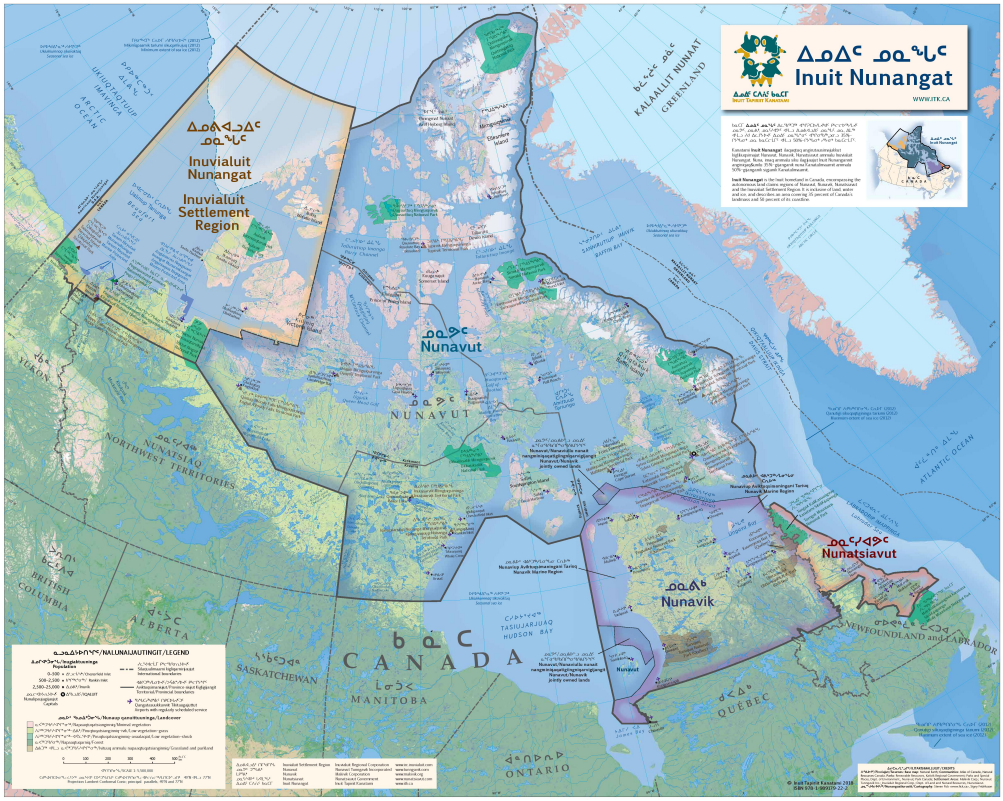


Figure 2. Map of Canada with Inuit regions highlighted. Nunatsiavut is the region furthest east, outlined in red (Inuit Tapiriit Kanatami, 2019).

Rigolet

In the 2016 Canadian census, Rigolet had a population of 305 people, with an average age of 37 years old (Statistics Canada, 2017b). Of the 305 residents, 290 (95.08%) identified as having 'Aboriginal ancestry', with 280 (91.80%) identifying as Inuk, and 10 (3.27%) as Métis[4] (Vowel, 2016). There are no roads to the community, and it can only be reached by boat in summer and autumn, snowmobile in winter, and by small planes all year round.

[4] Respondents were likely referencing NCC membership, rather than the Red River Métis diaspora which is based in Western Canada. Chelsea Vowel's (2016) book *Indigenous Writes: A Guide to First Nations, Métis & Inuit Issues in Canada* includes a chapter exploring the distinct identity of Métis people.

However, weather plays a large role in the availability of transportation, with wind and snow determining which options are safe and practical. Cost is another important consideration for travel and life in Nunatsiavut, including Rigolet. Plane travel is the quickest but most expensive, with a 30-minute flight from Happy Valley-Goose Bay to Rigolet costing around £250 one way. In the summer/autumn, the (sometimes unreliable) ferry to HVGB takes about seven hours, with a cost of around £16. Personal snowmobile and boats are also options, with costs depending on the price of fuel. In August 2022, the price of regular gasoline in the retail zone in which Rigolet is based (Zone 14/Coastal Labrador North) was 245.7 cents (CAD) per liter. This is approximately 160.1 cents GBP. While the price of fuel in Canada is generally cheaper than in the UK, the price of gasoline in Zone 14 is the second highest in the province of NL (Newfoundland and Labrador Board of Commissioners of Public Utilities, 2022).

Archeological evidence in and around Rigolet shows evidence of different groups of people (e.g. Maritime Archaic Indian, Paleo-Eskimo, Groswater Dorset, Thule and Labrador Inuit) living in the area as far as 6000 years ago (Rigolet Inuit Community Government, 2017). However, the current Labrador Inuit are believed to have expanded into the Hamilton Inlet area around 1600 AD. The land around current day Rigolet was first claimed by Louis Fornel for France in 1743, after which Fornel established a trading post in the area (Rigolet Inuit Community Government, 2017). Rigolet's establishment as a year-round community in its current form was facilitated by fisheries, trapping and trading, including by the Hudson's Bay Company (HBC) who opened a post in Rigolet in 1836 (I will discuss the HBC in more depth in the next chapter). People continued to spend summers and winters in different locations until recently. For example, when my mother was a child in the 1960s and 1970s her family would spend winters in Rigolet (and later HVGB) and summers fishing in her maternal family's summer home of West Bay. My grandfather's family would fish in Back Bay. To this day, many people maintain cabins in different areas where they continue to hunt and fish. The HBC post played a large role in the community until 1987, when it was purchased by the North West Company and re-named the "Northern Store" (Rigolet Inuit Community Government, 2017). The Northern Store continues to be the main shop in the community, selling groceries, clothing, and outdoor equipment. This is the case in many Northern Indigenous and Inuit communities across Canada where the North West Company has a monopoly on sales of essentials.

Today, Rigolet is a picturesque, small, and close-knit community. It is home to the longest boardwalk in North America (CBC News, 2015) and occasionally attracts tourists who

visit for the area's natural beauty. There are often events happening almost every evening for people of all ages, including craft nights, sporting events, and weekly radio bingo. Despite the vibrancy of the community, infrastructure limitations remain an issue in Rigolet and shape everyday life. This includes transportation (the plane can only land in ideal weather and is often delayed due to wind or fog) and other public infrastructure. For example, the piped tap water in Rigolet is a dingy brown colour, a result of it being chlorinated but unfiltered. While technically safe to drink most of the time (though Rigolet does have a history of long-term boil water advisories), research by Wright et al. (2018) has shown that Rigolet residents have negative perceptions about the safety and an aversion to chlorination (due to taste, perceived safety risks, and aesthetic impacts). Therefore, most people in Rigolet collect drinking water (using their own containers) from a potable water dispensing unit (PWDU) which uses multiple treatment methods, resulting in disinfected water free from solids and chlorine residuals. The PWDU looks like a small white shed and is located in a central area of town. In addition to water and transportation issues, Rigolet also experiences telecommunications limitations such as slow and unreliable connections, frequent outages due to poor weather, and exorbitant prices for sub-standard services (Inuit Tapiriit Kanatami, 2021b). These infrastructure challenges are similar to many other Inuit communities in Canada and affect social life (such as staying in contact with family and friends) and economic prosperity (limiting business and education opportunities).

Colonization of Inuit in Labrador

In this section I highlight three main mechanisms of colonization in Labrador including: different forms of forced settlement, the ways colonialism operates through service provision, and the management of Inuit ways of life such as hunting and harvesting, with particular attention to the situation in Rigolet. Indigenous peoples in Labrador have had contact with Europeans for centuries, as precursors to the current Innu are likely to have encountered Vikings around 1000 AD. However, the most consistent contact has occurred since John Cabot's voyages to the area in 1497 and 1498. Portugal and France later took a leading role in fisheries in Newfoundland and Labrador, and the Dutch were among the first to trade with Inuit in the 17th century (Fitzhugh, 1999). The first efforts of colonisation in Labrador can be attributed to Moravian missionaries in the 1700s, who attempted a "containment" policy by trying to encourage Inuit to live at mission stations established with the help of the British government (Rankin et al. 2012 cited by Stienstra, 2015).

Moravian involvement in Labrador began in the mid 18th century, continuing from missionary work done in Greenland. This period also coincided with increased British colonial government interest in developing fisheries and establishing peaceful relations with Inuit in Labrador. While most Moravian missionary work occurred north of Cape Harrison, there was also activity in other parts of Labrador. One example of this is the Inuit-led missionary activity of a Hopedale Inuit couple, Jacobus and Salome with their two children and other companions in the winter of 1871-1872 in Snooks Cove, 15 miles west of Rigolet (Rollmann, 2010). The couple had existing kinship ties at Snooks Cove and wished to spread Christianity amongst their fellow Inuit. There was even encouragement by the HBC to establish a Moravian mission in the Hamilton Inlet or Rigolet area through the 1800s, as an effort to curb what they felt was inappropriate alcohol use. However, The Moravians ultimately decided not to pursue building a station in Rigolet in 1902, and instead focus their energy on the Ungava Bay area.

The Moravian decision not to establish a mission in Rigolet was not necessarily made for spiritual reasons, but also economic ones. The Moravians were also traders and preferred to have a monopoly over the economies in which they operated (which they did in the Northern communities). This allowed them to have the power to force religion upon people via economic pressure, as the only/most prominent trading partner for essential goods (Zimmerly, 1975). In Hamilton Inlet or Rigolet, there was more competition, as the HBC and other trading companies had a long history and were well-established in the region. The decision not to build a mission in the area severed one link between Rigolet and the rest of the North Coast of Labrador, as Moravian and Inuit culture became interconnected in many ways (being Moravian become part of many Inuit's personal identity), and resulted in Rigolet having a stronger Anglican presence, rather than a Moravian one (Rollmann, 2010).

While the Moravian missionaries succeeded in controlling trade and migration, particularly for many Inuit in the most Northern part of Labrador (Brice-Bennett 1990 cited by Procter et al., 2012), this effort was also resisted, with many Inuit choosing to maintain travelling lives in which they moved to locations associated with better fishing and hunting grounds depending on the season. The management of Inuit communities continued through relocations of Inuit (and Innu) from the communities of Nutak and Hebron in 1956 and 1959, respectively. The supposed reasoning for this was to improve the social and wellbeing of Inuit in these locations, a project of 'modernization' (to be discussed more below) (Evans, 2012). The autonomy of Inuit who resisted was not respected and this

process moved hundreds of people to Nain, Hopedale, Makkovik and North West River (Procter et al., 2012).

Rigolet was sparsely populated, relative to the Moravian missions, which had concentrated populations (for example, by the end of 1848 Hebron had 347 congregation members). Most families in the area lived in respective summer and winter homes where they would trap/hunt in the winter or fish in the summer. It had significant infrastructure, including "wharves, warehouses, a carpenter shop, a cooperage, and a store, all connected by boardwalks" (Budgell, 2018, p. 30-31), but this was to serve the trading post, was still only home to a few families. It was not until the 1960s that people started moving to the community, and this was largely due to governmental pressure. As Ames (1977) writes, "It was primarily to simplify the Provincial Government's administrative problems that the people were encouraged to move off the land" (p. 282). Until then, education and medical care was sparse, itinerant, or required extensive travel, and the government felt it would be easier to service people if they were more stationary, as I will discuss further below.

When NL joined Canada in 1949, Indigenous peoples in the region were not provided any status or recognition in the Terms of Union. In fact, there was no mention of the Indigenous groups at all in the final agreement between the province and federal government. This lack of acknowledgement shaped a time-consuming process for the recognition of Indigenous rights in the province which is still ongoing. This is particularly the case for the Innu Nation, which was not included on a list of groups that the federal government would negotiate with in the 1970s, slowing their land claims process significantly. Overall, migration and settlement policies and choices in the region have shaped and been shaped by forces of colonialism operating through various social, political, and economic guises.

The administration of health and social services is also tied to colonization in Labrador. I will discuss Wilfred Grenfell and the International Grenfell Association (IGA) in more depth in the next chapter, however, they are essential to the history of medical and social service provision in Labrador. Until the late 1800s there was almost a complete lack of medical provision in Labrador. Alongside systems of exploitation (such as the uneven trading relationships) which resulted in poverty and poor living conditions, many people experienced negative health implications (e.g., nutrient deficiencies and tuberculosis). In 1892, Grenfell was a doctor sent to Labrador in to provide medical care to fisherman who

were experiencing extreme hardship due to the "truck"[5] system in Labrador that kept them in almost constant debt to merchants. However, after visiting the region, he became dedicated to improving welfare in the region, expanding from health to social, economic, and educational improvement. As Procter (2020) writes, Grenfell was driven by, "Victorian notions of heroism, imperialism, and self-sacrifice for a higher purpose" (p. 184).

While Grenfell and the IGA provided a necessary service to many throughout the 20th century, they also maintained systems of oppression and hierarchy. Grenfell himself, IGA staff, and volunteers maintained an elite clique that alienated local residents, as they saw themselves as distinct from, and better than, locals (Procter, 2020). The IGA's work was largely funded by philanthropy, and funds were raised by telling stories of suffering and misery in northern Newfoundland and Labrador. Grenfell particularly liked to tell stories about the plight of Inuit children, whose image played an outsized role in his fundraising efforts (Procter, 2020). Other initiatives taken up by Grenfell were particularly disruptive to family life and structures. He sought to "help" children from poor or struggling families by sending them to live with other families outside of Labrador, or to be maids and domestic workers in Canada, the US, and in England. In his own writing, Grenfell recounts trading essential goods for children, and takes pride in his removal of children. He writes, "I used to collect postage stamps, butterflies, and birds' eggs. When we sailed to Labrador, however…I started to collect children" (Grenfell cited by Procter, 2020, p. 190). As I will discuss later, the IGA played a significant role in Labrador social life, and there are mixed opinions on the harms and benefits of the organization. However, they operated from a specifically Eurocentric, colonial mindset which saw Indigenous Labradorians as beneath their non-Indigenous counterparts, and in need of "civilizing".

A process of so-called 'modernization' beginning in the mid 20th century, also had a significant impact on Labrador Inuit life. Peter Evans (2012) writes, "The memories of Inuit and the memoranda of administrators reveal that Confederation inaugurated a period of state-sponsored welfare administration that altered nearly every aspect of the Inuit culture that arose out of the nineteenth century" (p.85). Indeed, joining Canada and being excluded from recognition as Indigenous peoples in the Terms of Union actually set back

[5]The "truck" system was a cashless economy in Newfoundland and Labrador's fishery. In this system, merchants provided fishers with supplies (e.g., clothes, food, other store bought supplies that were hard to come by) and fishing gear at the beginning of the season on credit. At the end of the season, they would set the prices for the fish and originally supplied products (Procter, 2020). Fishers were dependent on the decision-making processes of merchants and the international market, and their debt could make accessing essential supplies during winter extremely challenging.

Inuit rights and self-determination, as in some communities Inuit already had a degree of autonomy with local elections and political and social advocacy (Evans, 2012). Instead, when the province joined Confederation, the 'social planners' of the 1950s set their sights upon improving the issues they saw in Inuit communities. Evans (2012, p. 87) writes:

> The dominant, though not universally shared, ideology of politicians and civil servants alike held that the route to salvation for those up to now outside the state's lure and pull was through centralized resettlement, the provision of health and social services, and the creation of modern forms of employment.

Traditional ways of life and governance were seen as backwards, and instead Inuit were relocated to areas which were seen to be easier to service (Evans, 2012). The most well-known examples of this in Labrador are the relocation of Nutak and Hebron. These relocations, which did not include consultation with Inuit, were failures with significant social and emotional impacts on Inuit. Oral histories describe how the government's choice of the Moravian church as the location at which to announce the relocation played a role in silencing Inuit concerns about relocating, as only the minister could speak in church. As one person said, "We had a community call, but the meeting was held at the Moravian Church. They didn't say why [it was held here]. We knew that in the church, we couldn't say anything. I guess that is the reason why the meeting was held at the church" (Semigak 1987 cited by Evans, 2012, p. 110). This interplay of church and state as silencing forces in Inuit social life is integral to the colonial process in Labrador.

Evans (2012) also places the relocations in Northern Labrador within a wider social and political context of federal-provincial-Inuit relations in the Canadian Arctic. In the post-war period of the 1950s, the government began to take an increased interest in including Inuit from all over Northern Canada in the national welfare system. This required a takeover from the previous patchwork of service provision, largely administered by the church, traders, and philanthropy (e.g. the Moravians, HBC, and IGA). In addition to Nutak and Hebron, relocations happened in other parts of the North, including the cases of Grise Fiord and Resolute Bay in what is now Nunavut in the 1950s. A key concern in the relocations in Labrador was the idea that Inuit had become 'too reliant' on white people, and needed social reform (Evans, 2012).

Another mechanism of control of Nunatsiavut Inuit is through the management of hunting and harvesting. For hundreds of years now, outside forces such as missionaries, traders, governments, and non-governmental organizations have attempted to interfere with Inuit

harvesting practices (Procter, 2012). These attempts were based on enduring beliefs as to what activities Inuit should be involved in (e.g., local subsistence hunting or participation in a global economy) (Procter, 2012). As Anderson (1990 cited by Procter, 2012, p. 190) expressed:

> Since time immemorial, the Labrador Inuit have used the resources from our land to survive. This survival stemmed from the cultural and customary law practices and the traditional method of hunting, fishing, and gathering. Since Confederation, federal and provincial laws and regulations have been imposed upon us. These laws and regulations have been drafted by governments who had no knowledge of, or respect for, the aboriginal rights of the Labrador Inuit, nor for our absolute dependency upon the land and its resources for our survival. These factors have led to increasing frustration, and mistrust toward governments and others.

The Moravians were some of the first of these outside influences to attempt to manage Inuit harvesting practices. Moravian missionaries would have preferred Inuit to stay at their mission stations all year round, but recognized it was essential that people travelled to get enough food for the survival of the community and the economic benefit of the mission (Procter, 2012). Instead, they encouraged Inuit to stay at the missions for at least part of the year. The missionaries also saw Inuit sharing practices as antithetical to protestant and capitalist ethics of 'rational' economic behaviour and discouraged this practice (Procter, 2012). However, the attempted interventions were largely ignored and sharing practices are maintained today. Later, the Moravians encouraged Inuit to participate in the cod fishery and commercial seal harvest in order to keep them closer to the missions for longer (Procter, 2012). However, they also had a commercial interest in encouraging Inuit to work in the cod industry, as they were also traders and wanted to broker cod sales in Europe to support their missionary activities (Hanrahan, 2012).

Inuit were also encouraged by missionaries, the Hudson's Bay Company, and later the government, to participate in the commercial fisheries and fur trade (Procter, 2012). However, this was a turbulent economy, with price fluctuations which could affect Inuit incomes and thus the purchase of essential goods, leading to severe economic hardship. At different times, Inuit were encouraged or discouraged from commercial harvesting, and were frequently affected by global market issues such as the animal rights movement's anti-seal hunting protests (Procter, 2012). A land use study in the Rigolet region (Ames, 1977) also shows how settlement in year-round communities changed hunting and fishing patterns. After the 1960s government pressure to move into the community, many people

started to centre their activities around Rigolet, rather than further away at their traditional winter and summer homes. Increased government oversight and the threat of development motivated Inuit to reassert control in the 1970s through the land claims process.

Under the LILCA, Inuit have harvesting and management rights, with specific conditions. Procter also highlights how, while the NG has increased jurisdiction, and co-management boards have been established with provisions for Inuit knowledge in wildlife management, this process still relies on a politics of recognition in which the governments must negotiate with what is recognized as "Aboriginal". While it may seem progressive for Inuit to supposedly manage their own harvesting, Procter (2012, p. 197) writes:

> Based in large part on the desire of the judiciary and the federal government to limit and define Aboriginal rights in order to protect non-Aboriginal interest, the politics of recognition employs many of the same ideas that other groups have used in Labrador to influence Inuit harvesting activities in the past

For example, to justify their decisions to provincial and federal partners, NG must monitor Inuit harvesting practices, increasing surveillance of Inuit hunters and harvesters. The Nunatsiavut land claims agreement also limits the commercial sale of harvested wildlife, allowing only for non-monetary exchange of products. Procter (2012) criticises this decision as it makes assumptions about Inuit as being solely subsistence hunters, not recognising longstanding participation in the global economy. She asserts that, while Inuit have managed to negotiate beneficial management and governance arrangements, within a politics of recognition, the state's efforts to relegate Inuit harvesting to subsistence purposes only actually reveals a desire for control over Inuit practices and rights (Procter, 2012).

Today, while the province may be named 'Newfoundland AND Labrador' and despite the hard-won efforts of Inuit in advocating for the Nunatsiavut land claims agreement, there remains a clear divide between the two parts of the province. Bannister (2012) writes that there is a "lack of genuine interest in Labrador, which most Newfoundlanders still tend to view through the lens of the island's interests" (p. 216). It is common for Newfoundlanders and those from outside of the province to refer to the province as simply 'Newfoundland', despite the 'and Labrador' part being added in 2001. This linguistic reference is representative of the way Labrador is often seen as an afterthought in the cultural and political structure of the province, as a space which cannot manage itself and instead must

be controlled by outside forces. Throughout this thesis I will place the MFP within colonial relations in NL, alongside relocations, harvesting practices, and narratives of modernity.

The Muskrat Falls Project and Upper Churchill Falls Project

The MFP is part of an initiative by Nalcor Energy to develop hydroelectricity for use in NL and to sell to other regions. Nalcor is a provincially owned enterprise[6], also called a "Crown" corporation. In Canada, Crown corporations are created to meet a public need, but are run like private corporations at an arm's length from the government (Bernier et al., 2018). The MFP is Part 1 of the Lower Churchill Project and is located about 30 kilometres outside of HVGB, Labrador. The project has faced significant criticism in the last several years due to environmental concerns, potential health and wellbeing effects, and on account of its economic impact on taxpayers given that the project is now over budget by over six billion Canadian dollars (Fitzpatrick, 2019). It was reported in late 2021 that the project was accruing 1.3 million dollars of debt per day in interest (CBC News, 2021a). While the Muskrat Falls power station in Labrador was deemed complete in November 2021, the project was still not operating at its full capacity due to issues with transmission software that would allow it to transport power to the island of Newfoundland. As of August 2022, it appeared the transmission line was only able to operate at about half of its anticipated capacity (approximately 450-megawatts out of an projected 824 megawatts), with experts stating that it may take a year or more for the full commercial capacity to be met (Saltwire Network, 2022, CBC News, 2022b) (see Fig. 3 for a timeline of the MFP).

There were few barriers for the MFP to overcome in order to be sanctioned and then constructed, as a GNL decision in 2000 exempted developments on the Lower Churchill from analysis by the Public Utilities Board (PUB), which regulates utilities in the province (Atlin and Stoddart, 2021). The initial environmental assessments undertaken by Nalcor were extremely limited in scope, and they did not comprehensively consider the potential impact of the MFP on the Lake Melville ecosystem. As previously mentioned, the JRP undertook an environmental assessment (EA) of the Lower Churchill plans (both MFP and Gull Island), with their report released in 2011. The panel recommended against the project, finding inadequate justification and need for it (Atlin and Stoddart, 2021).

[6] It was announced in 2021 that Nalcor would be dissolved and folded into N.L. Hydro, the provincial energy Crown corporation. As of September 2022, this has not been completed and there does not appear to be a set deadline.

Ultimately, the recommendations of the Joint Panel EA were ignored, and the project went ahead anyways.

As the project was under construction and after the ballooning costs and mismanagement of the MFP became known, a public inquiry into the MF project was launched in November 2017, with hearings held from late 2018 to early 2019. The inquiry focused on the economic and governance issues associated with the project. It largely refrained from discussing the environmental and social impacts of the project due to limitations in its scope. However, the inquiry findings, titled, 'Muskrat Falls: A Misguided Project' (LeBlanc, 2020, p. 3) found that:

> Although it had publicly professed that a business case for the Project would have to be established, in effect GNL had predetermined that the Project would proceed. In so acting, GNL failed in its duty to ensure that the best interests of the province's residents were safeguarded.
>
> Although GNL and Nalcor were united in their shared goal to proceed with the project, GNL had no capacity or strong inclination to effectively oversee Nalcor. Instead, it placed its faith and trust in the Crown corporation it had created. Before and after Project sanction, Nalcor exploited this trust by frequently concealing information about the Project's costs, schedule, and risks.

I will discuss more about Nalcor in subsequent chapters, but this context is important to understanding the role of the MFP in social and political life in NL. It is a project which has contributed to the economic destruction of the province, with additional social, cultural, and health impacts – the latter of which are the focus of this thesis. Another significant issue here is politics of knowledge in this context. Despite being constructed by a public body, the MFP has involved elements of secrecy and control of, and limiting access to, relevant information.

The MFP can be further contextualised by explaining its relationship to the region and its history within the legacy of hydroelectric development in Labrador. The public discussion of the MFP began around 2007, but it is part of a much larger picture of hydroelectricity on the Grand/Churchill River since the 1960s and 1970s with the construction of the Upper Churchill Falls project (UCFP) (Atlin and Stoddart, 2021). The development of the UCFP required an agreement with Hydro-Quebec since Quebec borders NL and transmission lines would need to pass through the province to reach the North American market where the power could be sold. Ultimately, the agreement between Hydro-Quebec and NL ended

up being much more advantageous for Quebec than for NL. This is because the agreement stipulated that the bulk of the energy would be sold to Hydro-Quebec. A provision in the contract also states that, instead of negotiating a contract renewal after 40 years, this was replaced by an automatic renewal for 25 years at a lower price (Atlin and Stoddart, 2021). Further, Hydro-Quebec owns 34.2% of the Churchill Falls Labrador Corporation Company, the NL Hydro subsidiary company mandated with constructing the UCFP (Atlin and Stoddart, 2021, Feehan and Baker, 2007). Over the decades, this contract has become a source of tension between the provinces, as NL views it as unfair and exploitative. Quebec, on the other hand, has benefitted greatly, allowing them to have an extremely cheap source of power; saving the province hundreds of millions of dollars a year in hydroelectric costs (Churchill cited by Atlin and Stoddart, 2021) and selling it on to other markets for a significant profit.

The UCFP project caused environmental issues, as its construction involved flooding land used by Innu people for hunting and fishing, as well as other sites of socio-cultural and historical value (Wadden 1991 cited by Quinn, 1991). As Samson (2017) writes, "With no consultation or forewarning, the Newfoundland provincial government authorized the flooding of 65,000 square miles of the beloved Meshikamau area, rendering it useless for hunting or fishing and reducing the massive waterfalls the Innu called Patshetshunau [steam rising] to a dribble" [sic] (p. 11). The local ecology was significantly changed, as the flooding drowned wildlife, caribou calving grounds were lost, and methylmercury contamination affected fish consumption (Samson, 2017). At that time, methylmercury contamination extended more than 300km downstream into Lake Melville (Anderson et al., 1995; Anderson 2011 cited by Calder et al., 2021). This is particularly troubling, as this is the same area that Nalcor says will not be affected by the MFP, despite the MFP being much closer than the UCFP. A lack of accountability for the project, disregarding expert recommendations, and a determination to overcome the issues associated with the UCFP, ultimately shaped the implementation of the MFP. As Atlin and Stoddart (2021) write, "…the path dependency of Churchill Falls and the desire to fulfil nationalistic hydro-electric independence, particularly after years of inequitable treatment from Quebec, clouded the perspective of decision-makers" (p. 49).

Since the MFP was announced, resistance has been present from public citizens and Indigenous groups, though Atlin and Stoddart (2021) highlight how there is a culture of 'patriotic correctness' in NL, "where dissent with the government is seen as synonymous with a negative attitude towards the province in general. This political culture inhibits

public engagement in critical dialogue about public policy" (p. 48). The term was coined by David Cochrane, a reporter for CBC, who said that 'patriotic correctness', "makes certain words or expressions unacceptable. But most significantly, it has fostered an environment where informed dissent is seen as nothing short of treason" (Meeker 2007 cited by Bannister, 2012, p. 217-218). Newfoundlanders and Labradorians who dared to question the MFP, especially in its early days, were shamed and presented as curmudgeons by the politicians in charge (such as former premier Danny Williams).

Some of the most significant public resistance to the MFP was established after the NG worked with Harvard University on the *Avativut, Kanuittailinnivut* study to research potential methylmercury contamination which could consequently occur and other environmental impacts (Durkalec et al., 2016). Nalcor was invited to participate in the NG research project but declined; they and the GNL have continually asserted there will be no impacts on Lake Melville or human health in the area (Calder et al., 2021). Research by Calder et al. (2016) based on data from three Inuit communities (HVGB, North West River, and Rigolet) showed that methylmercury (MeHg) concentrations will likely increase beyond safe levels in Inuit in Nunatsiavut (Calder et al., 2016). According to their modelling, they found that, after the Muskrat Falls reservoir is flooded, mean methylmercury concentrations in Lake Melville would increase 2.6-fold from 17 pg L^{-1} to 44 pg L^{-1} (Calder et al., 2016). Median MeHg exposures were expected to double for the majority of the downstream Inuit population and almost triple in the community of Rigolet. After flooding, Calder et al.'s (2016) work suggested that mean methylmercury concentrations in lake trout, seal, tern eggs, brook trout, and char liver would be at or above the Canadian retail limit for methylmercury. Median methylmercury exposures could at least double for the majority of the Inuit population downstream from the Muskrat Falls project, and could triple in Rigolet (Calder et al., 2016). According to Calder et al (2021, p. 96), "Peak methylmercury levels are likely to be observed in the aquatic environment in the first one to five years and in biota in the first two to ten years". As of September 2022, there has not been any widely shared follow up results to show if these predictions have materialised, however it is still early in the process after flooding.

Increases in methylmercury are a concern in Inuit food systems (and other people who rely on affected animals worldwide) due to processes of bioaccumulation and biomagnification. Bioaccumulation refers to "The accumulation of [methylmercury] in organisms' tissues over time" (Lehnherr, 2014, p. 236). Biomagnification refers to how the methylmercury "typically increases in concentration with each increase in trophic level in the food chain"

(Lehnherr, 2014, p. 230), for example from plankton to fish to seals. The biomagnification and bioaccumulation of environmental contaminants is a concern because many Inuit regularly consume affected animals as part of a traditional diet, thus many people already have elevated exposure to methylmercury (Lehnherr, 2014). While it is generally believed that the health, social and cultural benefits of traditional foods outweigh the risks of environmental contaminants, industrial/developmental causes such as the MFP and other hydroelectric projects increase the risk of these issues, without adequate consideration for Inuit food sovereignty.

Based on hair sampling done as part of the *Lake Melville: Avativut, Kanuittailinnivut* study Durkalec et al., 2016), it is known that Rigolet residents already have higher levels of exposure to methylmercury compared to the Canadian average due to exposure from a traditional Inuit diet which is high in aquatic species (Calder et al., 2016). In the research, 24% of participants in Rigolet exceeded the U.S. Environmental Protection Agency's Reference Dose for methylmercury, and 3% were above Health Canada's provisional tolerable daily intake (Calder et al., 2016). This, alongside the projected increase, is an explicit health risk because methylmercury exposure can lead to symptoms such as fatigue, anxiety, depression, memory loss, and trouble concentrating (Bernhoft, 2012). Further, it can lead to kidney and liver failure and neurocognitive delays in children and negatively impact cardiovascular, immune, and endocrine system health (Schartup et al., 2015).

In reaction to the results of the research programme, the Nunatsiavut Government launched the #MakeMuskratRight campaign. The website and social media outreach highlighted the potential impact of methylmercury contamination on Inuit in the Lake Melville area. This knowledge and strategic outreach (videos, a website, petition, a social media hashtag) motivated many people to mobilise and organise demonstrations at the Muskrat Falls site and at government offices, while solidarity rallies were held all over Canada. Some of the most consistent resistors to the Muskrat Falls project are the Labrador Land Protectors, with whom I worked during my own master's dissertation research (Penney, 2021a, Penney, 2019). In the MSc research I aimed to understand and highlight their main health concerns and motivations for resisting the project. This PhD project broadens the scope and will focus on structural and power relations between Inuit and the government who has implemented the project, as well as Nunatsiavut Inuit-specific socio-cultural, political, and health-related impacts.

A Brief Timeline of the Muskrat Falls Project

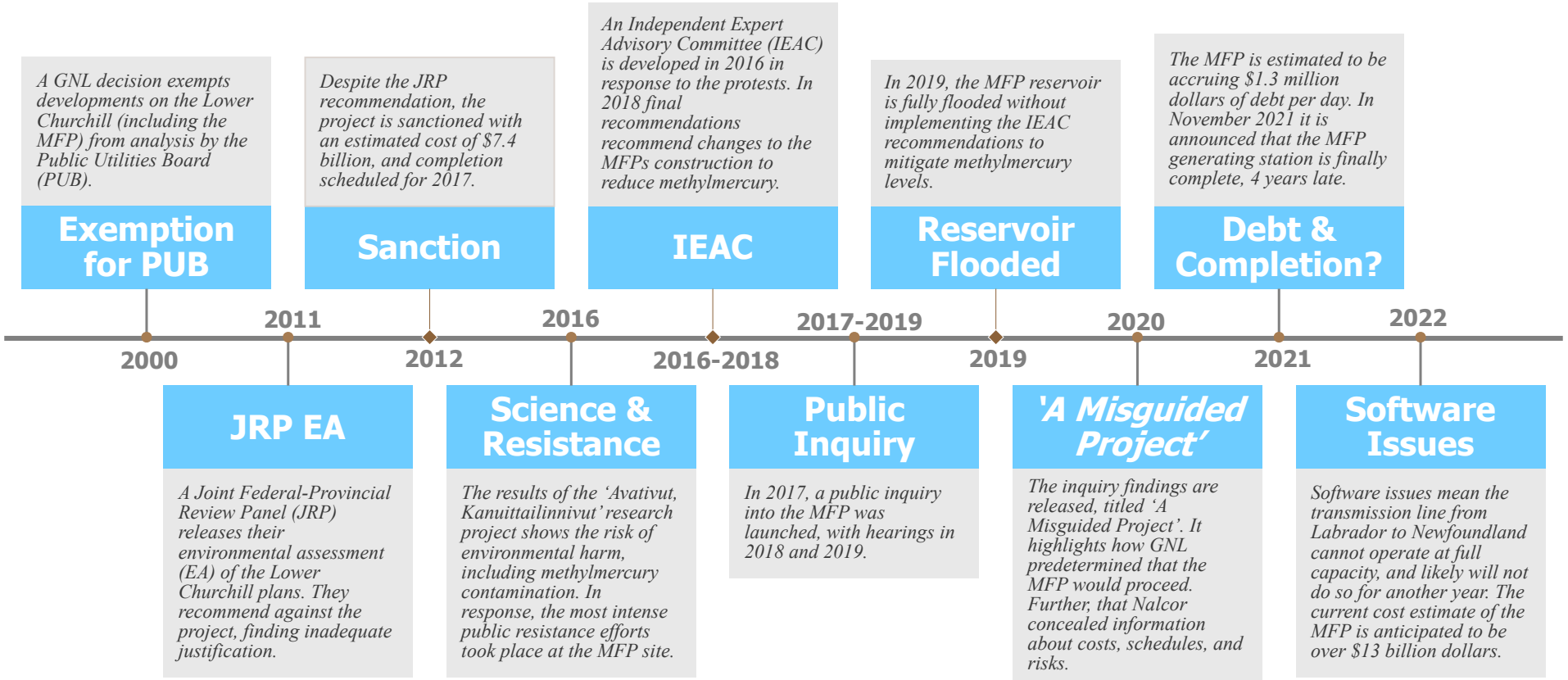
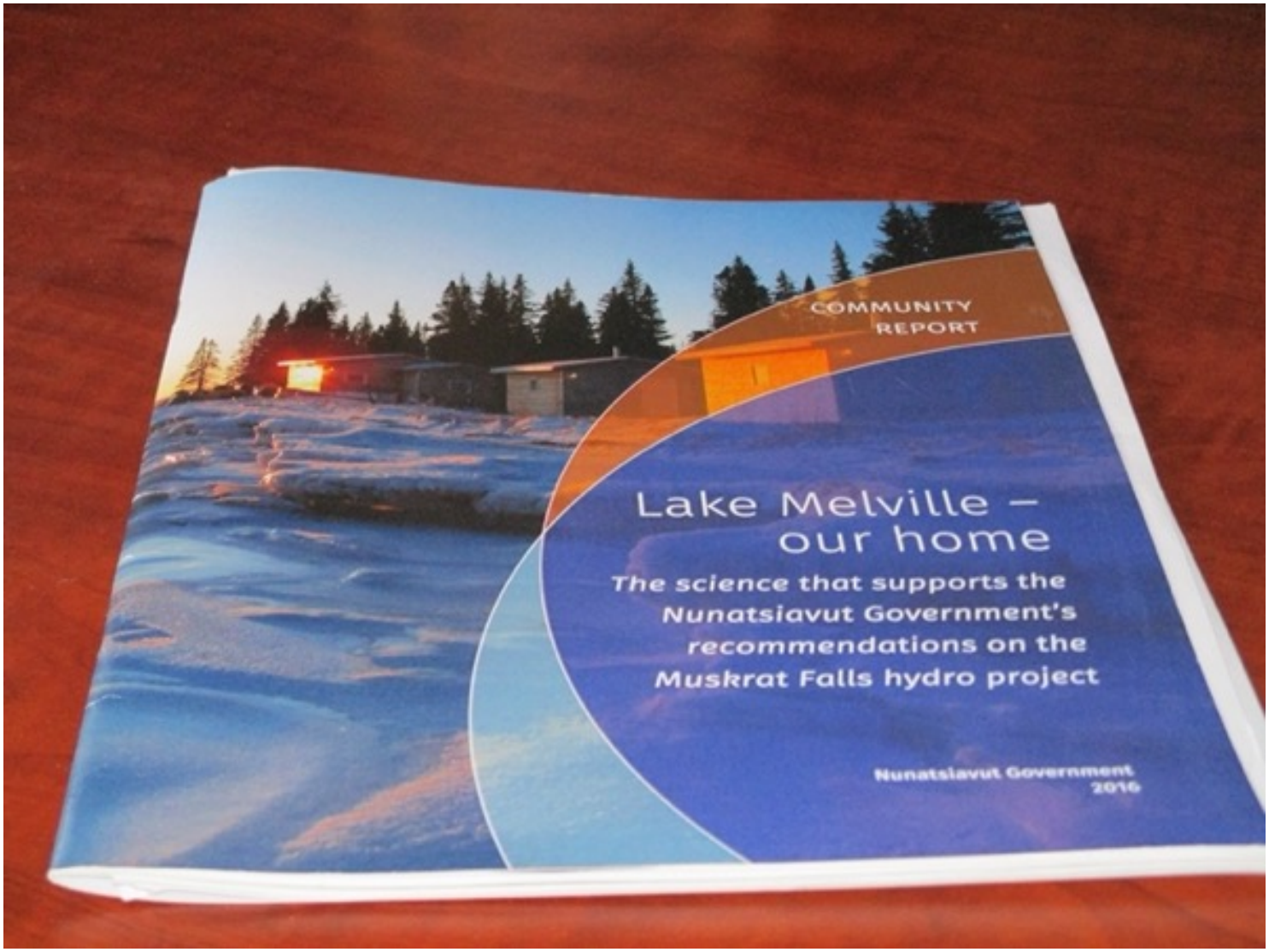


Figure 3. Overview of timeline of the MFP.

Interlude 2


COMMUNITY
REPORT
Lake Melville –
our home
The science that supports the
Nunatsiavut Government's
recommendations on the
Muskrat Falls hydro project
Nunatsiavut Government
2016

The environmental aspects that matter to me are relate[d] to the land, the water, the fish and wildlife.

The Muskrat Falls project's environmental impacts are very damaging to our very way of life and who we are as people.

There have been studies that predict the methyl mercury levels will increase in the ecosystem and eventually find its way into the food chain. A huge cause for concern as the fish and wildlife harvested from Lake Melville and the Rigolet area will surely be contaminated. Our traditional areas for harvesting will no longer be safe. I think about the changes that will impact our way of life – the spring seal hunt on Lake Melville, fishing, bird hunting and egg gathering. The unpredictability of the ice: safety for travel is already being experienced. It saddens me to think that a way of life is in peril, not only for my generation but generations to come. My grandchildren will not be afforded this unique and age old way of living as we have. A way of life that has sustained us for generations, wiped out in one fell swoop.

Lorraine Allen

Chapter 3: Literature Review and Conceptual Perspectives

This chapter focuses on relevant existing literature and conceptual perspectives employed throughout this work, primarily those addressing Indigenous health theories, colonialism, and environmental issues. It starts with an overview of colonialism in Canada, moving from the historical context to the specific role of hydroelectricity in settler-colonialism. Next, I discuss Indigenous and Inuit-specific health issues and concepts. I then review the role of the environment in Inuit health, food security, climate change, and other global social issues. Finally, I end with a discussion of how these factors influence my aims and objectives for this research.

First, I must clarify my use of the term 'Indigenous'. I use it to encompass the three main groups in Canada: Inuit, Métis, and First Nations. Each group is unique and has great diversity within it, but I use the umbrella term 'Indigenous' because of its political implications; it identifies a shared experience of colonisation in what is currently known as Canada, as well as globally (Wilson, 2008). It allows us to assert our "collective rights as self-determining people at an international level" (Wilson, 2008, p. 34) such as in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Other terms have been used in the past, including 'Indian', 'Native' and 'Aboriginal'. When this language has been used in referenced texts, I have not made changes. I also use the phrase "Indigenous peoples in Canada", rather than the possessive "Canada's Indigenous peoples" or "Indigenous Canadians" because many Indigenous peoples do not recognise the Canadian state as legitimate nor identify as Canadian.

Colonialism in Canada

Historical Context

Colonialism in Canada is intricately connected to European activities over the past several hundred years. Veracini (2017) defines colonialism as a social phenomenon that aims to reproduce itself by maintaining difference and inequality between the colonised and the colonisers. In Canada, this process is inextricably linked to natural resources and their trade to Europe. For example, as I will discuss next, The Hudson's Bay Company (HBC) played an integral role in the colonisation of Canada and the creation of the Canadian state as it is known today, primarily through the fur trade (Ray, 2005).

In the 17th century, the fur trade emerged as a major commercial enterprise in North America due to European demand for hats made of beaver fur (Ray, 2009). A British Royal Charter was proclaimed in 1670, giving the HBC exclusive trading rights in the vast

region around Hudson Bay. Indigenous peoples travelled to trading posts to barter furs for goods, and often acted as middlemen, bringing fur from communities inland (Ray, 2009). The presence of Europeans, and the trade, greatly changed ways of life and existing economic structures. While most Inuit interactions with the fur trade occurred later than was the case for First Nations and Métis, Suzie Napayok-Short (2017), writing on the intersections of 'Inuit, Capitalism, and Colonization' notes that Hudson's Bay Company traders exploited Inuit, paying them in cheap goods (flour, tea, tobacco, and bullets), for furs deemed highly valuable in the United Kingdom (Napayok-Short, 2017).

This is also the case in Labrador and Rigolet specifically. The HBC was a major colonising force in Canada and helped set the paternalistic and opportunistic tone for Indigenous-settler relations that exists to this day, including in Labrador. As discussed in the previous chapter, the HBC played a significant role in the creation of the community of Rigolet in its current form. The HBC post was established in Rigolet in 1836, after the Company purchased a trading post built by the French Canadian trader Pierre Marcoux in 1788. People's livelihood and wellbeing relied on the HBC being fair, but as Ames (1977, p. 281) writes:

> The Hudson's Bay Company was not and is not a charitable, benevolent, or philanthropic enterprise. Its one object was to make money from the fur trade. The relationship between the company and these trapper-fishermen was analogous to the debt-peonage system common in Latin America, wherein a man is bound to his patron through his debts. His economic position is irreversible: each year he borrows to pay off the previous year's debts, and he therefore entrenches himself, usually a little deeper, in debt to his creditor.

My own grandfather, from the Back Bay area near Rigolet, was a hunter and trapper as a young man, and spoke of being severely underpaid by the HBC, and of the hunger that resulted.

Under the HBC, trade and commerce became important in shaping racial categories, which had wider implications for the history of colonialism in Labrador in the 1800s. As Korneski (2016) writes, "After all, relations of exchange often figured prominently as mechanisms through which Europeans asserted authority over colonial spaces in this era" (p. 308). The HBC faced scrutiny for their brutality towards Indigenous peoples, including the starvation and control of Innu. They would only provide Innu with a small amount of powder and shot, to keep them close and coming back to the trading post. When they

would try to go further away to their traditional hunting grounds, people sometimes became ill, weakened, or suffered from starvation. In addition, racial attitudes towards Inuit shaped HBC employees' marriage practices, as European men married Inuit women. These men "likely preferred Inuit over Innu spouses because, accepting the logic of racism the HBC promoted, they viewed them as the more civilized of the indigenous groups in Labrador" (Korneski, 2016, p. 320). But Inuit were not equal to Europeans, instead they were seen as "quasi-civilized", and European husbands were strict about forcing their families to adopt lifestyles they felt were indicative of "civilized" life, including monogamy, Christianity, and not consuming raw meat. In this way, the HBC and European men were instrumental in weaving together racial categorization with "class, gender, and the policing of domestic life and sexuality" (Korneski, 2016, p. 324).

While Rigolet was once a hub for the HBC and a centre of industry for trapping, after 1941 the wage economy became of central importance. Instead, the focus shifted to the new military air base in Goose Bay and the newly established nearby community of Happy Valley (now Happy Valley-Goose Bay). Writing in the 1970s, Ames (1977) discusses how Rigolet had limited services and amenities, and "It is ignored for the most part – or, at best, it is serviced as an afterthought…" (p. 282). This sentiment is echoed throughout this research by the participants, who feel that the process of marginalization and erasure of Rigolet continues when it comes to the issue of the MFP and their concerns.

Canada's colonialism is also directly tied to Scotland and to Glasgow in particular. Almost five million people of Scottish descent live in Canada, almost as many people as live in Scotland itself (Calder, 2003). The first significant Scottish migration to Canada began in the 17th century, with efforts to settle Nova Scotia, which became a Scottish province and is now a Canadian one (translated to 'New Scotland') (Calder, 2003). Similar efforts were undertaken in NL, as seen in an advertisement in the Glasgow Journal in 1771 (Calder, 2003, p. 5). The advertisement reads:

> Any person inclining to make their fortune and live happily in the island of St. John's Newfoundland where the soil is excellent and a good healthy climate, great plenty of stone and timber and lime within a few leagues of water carriage, the sea and rivers full of fish…

This is an exceptional example of the attitude of settler colonial society at the time. It was welcoming to those seen to be enterprising and determined, as Calder (2003) writes, "It had all the vigour and potential of a pioneering country, but was still British" (p. x).

This idea of *terra nullius*, which permitted and encouraged disregarding Indigenous peoples' presence, is reflected in the words of John Maclean, a Scottish settler and poet who wrote (while lamenting his life in Manitoba, Canada), "I am a wanderer in this new land which has never been inhabited, nor has it been tilled" (Fryer et al., 2002, p. 277). He goes on to write, as described in *Scotland and the Americas, c. 1950 - c. 1939* (Fryer et al., 2002, p. 277-278):

> You cannot see anything but Indians in their thousands; With buttons like mirrors as rings on their hands; Their blankets are folded on their shoulders like plaids; And the trousers they wear, without crotch or behind […]
> Though we are now far from all our friends, If they are still living they will come out of their own will; And when we have made the land productive, We shall forget the days we left behind

Through Maclean's words it is possible to see prevailing colonial attitudes about Indigenous peoples and lands. First, Indigenous peoples are reduced to backwards caricatures and curiosities based on material and cultural differences. Further, the land, simultaneously 'uninhabited' while also being occupied by Indigenous peoples, is seen as unproductive until it is exploited by Settlers. The implication here is that Indigenous peoples are incapable of managing the land (perpetuating a stereotype of the idle/lazy/incompetent Native), which works to minimize their relationship to it. This perspective functions to assert that it is only Settlers who can make the land 'productive', thus justifying colonialism and displacement. Ultimately, the importance of land is highlighted in the Canadian colonial project as a means for Scottish settlers to overcome their own hardships, regardless of the impact on Indigenous peoples.

Further, the first Prime Minister of Canada, John A. MacDonald, was born in Glasgow in 1815. MacDonald was an influential figure in the colonial project, instrumental in the implementation of policies meant to assimilate Indigenous peoples by targeting children through the racist *Indian Act* (Todd, 2013). Recent recognition by the Scottish Parliament of MacDonald's policies and behaviour have led to references to him being removed from their website and funding in his honour being removed (BBC News, 2018). While Scottish nationalist rhetoric often (rightly) emphasises the oppression experienced by Scots, Métis scholar Zoe Todd reminds us how they were, in return, complicit in the oppression of Indigenous peoples in Canada. Much colonial administration was by Scottish clerks, traders and labourers who, expelled from their own land, re-created this experience on Indigenous communities (Todd, 2013). Colonialism in Canada is inextricably linked to

Scotland, as our past shows us that "Canada is, in the historical sense at least, a very quintessential Scottish product" (Todd, 2013).

Today, while Canada is globally portrayed as a tolerant, progressive nation, Mackey (2002) writes about how this 'tolerance' is used to manage populations and create identities in the nation. She writes, "In Canada…power and dominance function through…liberal, inclusionary, pluralistic, multiple and fragmented formulations and practices concerning culture and difference" (Mackey, 2002, p. 5). According to Mackey (2002) the idea of a pluralist national identity has the purpose of controlling diverse populations. This is seen in the constant battle between French and British national identities in Canada. French Canadians are viewed as 'intolerant' and 'racist', and English Canadians are seen as 'modern' and 'tolerant', which has been used to justify anti-separatist sentiment. Throughout this discourse, multicultural and Indigenous 'others' are used as weapons in the war between the two 'founding' (or colonising) nations (Mackey, 2002).

From this discussion of the historical and contemporary Canada, it is possible to see how the nation-state has been carefully curated to present in a way that is appealing to Europeans, and which placed Indigenous peoples at a strategic periphery. In the next section I will discuss how this influences the settler colonial context.

Settler Colonialism

Within the diverse iterations of colonial theory and the various designations of colonized lands/people, Canada can be clearly labelled as 'settler colonial'. Tuck and Yang (2012) summarise how theories of coloniality and postcolonial theories mainly focus on 'external colonialism' (in which parts of Indigenous worlds are labelled 'natural resources' and exploited for the benefit of the coloniser), and 'internal colonialism' (where people, land, flora and fauna are managed in a bio- and geo-political manner through systems such as prisons, ghettos, schools, etc.). Settler colonialism is distinct in that it operates in through both modes simultaneously with no separation between the metropole and colony because the coloniser stays (Tuck and Yang, 2012). It is characterised by a determination to erase colonised subjectivities rather than continue inequalities between the colonised and the colonisers (Veracini, 2017). Veracini (2017, p. 4) writes:

> Settler colonialism is a relationship. It is related to colonialism but also inherently distinct from it. As a system defined by unequal relationships (like colonialism) where an exogenous collective aims to locally and permanently replace indigenous

> ones (unlike colonialism), settler colonialism has no geographical, cultural or chronological bounds.

Since it knows no bounds, and is a structure, not an event (Wolfe 1999 cited by Tuck and Yang 2012), settler colonialism permeates all aspects of Canadian society. Settler colonialism is also a triad relationship, "between the White settler (who is valued for his leadership and innovative mind), the disappeared Indigenous peoples (whose land is valued, so they and their claims to it must be extinguished), and the chattel slaves (whose bodies are valuable but ownable, abusable, and murderable)" (Tuck and Yang, 2014, p. 224).

Focusing on the second part of that triad – Indigenous peoples' relationship to land – Adam Barker (2014) writes, "Canada is a settler colonial state, whose sovereignty and political economy is premised on the dispossession of Indigenous peoples and exploitation of their land base" (p.44). In Canada, this has been implemented in policies since the country's establishment. The Truth and Reconciliation Commission (TRC)[7] (2015, p. 1) writes:

> For over a century, the central goals of Canada's Aboriginal policy were to eliminate Aboriginal governments; ignore Aboriginal rights; terminate the Treaties; and, through a process of assimilation, cause Aboriginal peoples to cease to exist as distinct legal, social, cultural, religious, and racial entities in Canada

The TRC concludes that Canada has committed cultural genocide by attempting to destroy the structures and practices that allow Indigenous peoples to continue as a group (The Truth and Reconciliation Commission of Canada, 2015). The purpose of this effort was to rid the government of obligations to Indigenous peoples to gain total control of land and resources. As Tuck and Yang (2012) note, "[F]or the settlers, Indigenous peoples are in the way and, in the destruction of Indigenous peoples, Indigenous communities, and over time and through law and policy, Indigenous peoples' claims to land under settler regimes, land is recast as property and as a resource" (p. 6).

One central example of the settler-colonial federal government's policy effort to rid themselves of obligations to Indigenous peoples, and the main focus of the TRC, is that of residential schools. For over 100 years (until 1996), these schools comprised a mandatory

[7] The Truth and Reconciliation Commission was established because of the Indian Residential Schools Settlement Agreement to investigate the legacy of residential schools in Canada. In 2015, a final report with 94 calls to action was released.

system to assimilate and indoctrinate Indigenous children into dominant Euro-Christian Canadian society. Most schools were run by churches with financial support from the federal government. It is believed that over 150,000 First Nations, Métis and Inuit students passed through the residential school system. At these schools, children were not allowed to use their own languages, and physical, psychological, and sexual abuse was rampant. According to the TRC (2015), the educational aspect of the 'schools' was almost non-existent, children were made to work in what amounted to essentially "institutionalized child labour", marriages were arranged to make sure students did not marry someone who did not attend residential school (to prevent a return to 'uncivilized' ways), and students were often severely malnourished. The example of residential schools, of brutal assimilation attempts through violence in order to obtain land and resources, speaks directly to the cruel nature of settler-colonialism in Canada.

Several of my relatives attended residential schools and were abused and treated with impunity. In Labrador and St. Anthony (in northern Newfoundland), six residential schools were run by the Moravian church and IGA, including two Cartwright area boarding schools (the Labrador Public School and Lockwood School), and the Yale School and Dormitories in North West River (Procter, 2020). These were the two closest residential schools for Rigolet residents, though some people may have attended other schools throughout the region. The Labrador Public School was established in 1920, partly in response to a perceived lack of educational facilities in the area. It was also deemed necessary for it to also host an orphanage, as many children had been left without parents due to the Spanish Flu two years prior (Procter, 2020). At the school, there was an attitude that children were better off for having been removed from their families, and children were incorporated into British cultural practices.

After the school burned down in 1928, the Lockwood School was built by the IGA. The school mainly served people from the Sandwich Bay area, but some pupils also came from Rigolet. Students recalled feeling treated as though they were poor and dirty, and life at the school was lonely and restricted. Teaches at the school were strict and discipline could be physical or result in food deprivation. Class-based divisions were established between the staff and students or other locals, with some female students assigned as "maids" for the principal and his wife (Procter, 2020). While at first the schools (both the Labrador Public School and Lockwood) were voluntary, in 1949 financial aid (Family Allowances) was made conditional on children in a family going to school. Therefore, if parents did not send their children, they could not get access to much-needed financial support (Procter, 2020).

The Yale School in North West River was created by Dr. Henry Paddon, who was inspired by the Moravian boarding school system and wanted to recreate the model in central Labrador. There was a strong focus on vocational skills and consuming locally farmed and hunted wild foods. However, the ultimate goal was to separate children from their home environments and instil Western social values and skills (Procter, 2020). By 1948, students were attending the school from surrounding communities, but also from communities from West Bay (where my maternal grandmother's family fished) to Nain. Even when it was technically voluntary, parents were pressured to send their children to the school. Dr. Paddon was also a magistrate and used his position of power to invoke the Children's Act if a parent was reluctant to send their child (Procter, 2020).

In 1970 the Lake Melville High School opened in North West River, aiming to train Inuit youth in Western culture and values. Paddon wished to train students in the "Canadian" way of life which he believed would serve them better in the future (Procter, 2020). Alongside this, there was intense racism against Inuit students and those not from Northwest River. Students later expressed internalizing this racism and would deny their Inuit heritage or feel ashamed of it based on what they had been taught at the school. They also told of how, after leaving the dorm, they felt disconnected from their families and communities back home. Sexual abuse was present in the school, committed by both students and staff. Sadly, children placed in the school by social services were even more likely to experience abuse (Procter, 2020).

From the history of residential schools in Labrador, it is possible to see how the insistence on policies which reduce Indigenous peoples and their cultures fits with Patrick Wolfe's (2006) argument about the specific ways in which Indigenous peoples have been racialised in settler colonial societies through a logic of elimination. Education has served the purpose of removing Indigenous students' identity, to create shame and a denial of indigeneity. Wolfe (2006) writes how Indigenous people have been constantly seen to have their indigeneity compromised, to have their population numbers decrease through blood quantum rules. This contrasts with the racialisation of Black people, who have been the subject of the 'one drop rule' to promote enslavement of as many people as possible. The opposite was intended for Indigenous peoples in order to lessen their claim to land which was/is desired by the settler colonial state (Wolfe, 2006).

Hydroelectricity and Settler Colonialism

While hydroelectricity may appear to be a mere public utility - simply a means for switching on the lights - it is wrapped in narratives of nation building and modernity.

Caroline Desbiens (2013) building on the work of Gregory et al. (2009 cited by Desbiens, 2013), writes, "Electricity is a prime icon of modernity, and among all forms of natural resource exploitation, dams and hydroelectric power provide perhaps the most versatile reservoir of symbolic meaning that can be accessed by political power" (p. 3). Major hydroelectric projects initiated by the state can become represented as parts of nationalist projects, asserting dominance over Indigenous peoples and nature within the settler colonial context and beyond, as seen in hierarchies of science over nature and Enlightenment and Victorian notions of progress and development. This is a global phenomenon, as seen in the representations of the Hoover Dam in America and hydro dams as a symbol of modernity and sovereignty in post-colonial India (Crocker, 2021).

In *Power of the North: territory, identity and the culture of hydroelectricity*, Desbiens (2013) focuses on the province of Quebec's representation of the James Bay hydroelectric plan as a nationalist project in Quebec in the 1970s and 1980s, around the same time that the UCFP was being developed in Labrador. She asserts that James Bay represented a form of resource exploitation in Northern Quebec which aligns with Foucault's analysis of 'governmentality'[8] by aligning with the state's shift towards ensuring the wealth and wellbeing of the family (Madsen, 2014). In Quebec, Desbien (2013) asserts, the government's development of James Bay corresponded with the strengthening of the Quebecois national community. However, at the same time, the establishment of the James Bay project required a re-writing of this identity and relationship to place, as the existing national identity at that time did not encompass the northern part of the province which includes James Bay. Therefore, it was necessary to facilitate a rewriting of a national ambition to place James Bay within the Quebecois claims of ownership and connection to the land, despite prior inhabitation by Cree, Inuit, Naskapi and Innu people. This process regarded James Bay as *terra nullius* to justify resource exploitation for the benefit of southern Quebec.

While Quebec and NL are two separate provinces, their relationship is intertwined with hydroelectricity, as discussed in the previous chapter in relation to the agreement and tensions around the UCFP. The UCFP was framed by the premier of NL at the time, populist Joey Smallwood (the first premier of NL when it joined Canada), "through a narrative of industrial 'power' as progress" (Gwyn, 1972, p. 274 cited by Samson, 2017, p. 12). Though at the time, the UCFP excluded Indigenous people from the narrative of

[8] Coined by Foucault, 'governmentality' refers to the ways that governments use control techniques to make their citizens governable (Madsen 2014).

'progress' (Samson, 2017). Similarly, in the context of the MFP, Indigenous peoples were largely excluded from the official narrative. Instead, "When Newfoundland officials unveiled the project, Indigenous peoples were mainly mentioned in reference to the financial benefits and economic stakes they may have at Muskrat Falls […] they were submerged under the undifferentiated promises of jobs and dollars" (Samson, 2017, p. 14). In the resulting chaos associated with the financial issues which have come to light, commentators instead focus on tax and price increases, rather than Indigenous rights. Samson argues that Innu and Inuit have essentially been written out of the narrative of the MFP in NL (Samson, 2017).

Like in Quebec, officials in NL have presented hydroelectric developments as part of a project of *terra nullius* and Newfoundland nationalism tied into the attainment of modernity through material progress (Atlin and Stoddart, 2021, Bannister, 2012, Crocker, 2021). In fact, Smallwood likened the development of resources in Labrador to the operations of the East India Company and the HBC (Crocker, 2021). In a study of auto/biographies of settler politicians from Newfoundland, Neria Aylward (2021) finds an "obsession" with harnessing hydroelectricity from the Grand River (particularly from Smallwood), and an anxiety about reasserting Newfoundland's ownership over (and profit from) Labrador.

I refer to 'Newfoundland nationalism' intentionally, as Labradorians are not significantly integrated into this cultural narrative. In 2006 former NL premier Danny Williams presented the development of the Lower Churchill (i.e. Muskrat Falls and a second future anticipated project called Gull Island) as a means of allowing the province to become "master of our own destiny" (Atlin and Stoddart, 2021, p. 14). Bannister (2012) contends that Williams actually invokes a type of ethnic nationalism through a use of the term "race" to describe people from NL. Kathy Dunderdale, another former premier of NL, went on to reiterate similar views in a speech in 2012 (Bailey 2012b cited by Samson, 2017, p. 14):

> The most important benefit of this development is that it allows us as Newfoundlanders and Labradorians to stand tall and proud on the national stage, knowing that our forebears persevered to etch an existence on the edge of the North Atlantic, so will we with unrelenting focus and steadfast determination overcome all obstacles and transform challenges into success.

The MFP is presented as not only a product of settler colonialism, but a justification and reward for it. A nationalistic Newfoundland identity, explicitly calling back to the settlers of the past, is shaped by the progress narratives associated with a triumphalism over nature (Nixon 2011, p. 151 cited by Samson, 2017). This is in stark contrast to Indigenous perspectives, which are conveniently excluded from the conversation in any meaningful sense.

Instead, the narrative around hydroelectric projects is carefully crafted to be perceived as beneficial to the wider (non-Indigenous) public. In the case of Quebec, Desbiens (2013) writes, "What James Bay underscores, then, is the importance of reading economic development through a cultural lens. The production of James Bay as a landscape that the Quebecois could relate to culturally was a necessary step in creating access to its resources and legitimizing their exploitation" (p. 7). In NL we see a similar process, whereby the MFP is conceptualised within a narrative which emphasizes its centrality in "saving" the province without consideration for Inuit who may be harmed by the ramifications of the MFP, as was the case in the James Bay and Upper Churchill Falls projects decades ago. Contrastingly, throughout this thesis, I aim to read the economic development of the MFP through a social and cultural lens rooted in Labrador, rather than the settler colonial provincial level. As Desbiens (2013) writes, "Everywhere in Canada, northern development faces the challenge of intertwining cultural heritage, development, and conservation into effective resource management. This challenge can only be met by sharpening our vision of the role culture plays in structuring the landscapes in which resources are embedded" (p. 14).

Resistance

In recent decades, Indigenous peoples in Canada have become more prominent in politics and public life, through both participation and resistance. In relation to this, Glen Coulthard's (2014) *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition* builds on Frantz Fanon's work on the politics of recognition in colonial contexts (more specifically, his critique of the master/slave parable), and Marx's writings on the primitive accumulation of capital. Coulthard (2014) makes three adjustments to Marx's writings, arguing that the thesis on primitive accumulation must be stripped of (1) its temporal character and (2) normative developmentalist character, and (3) by including the recognition that colonial power need not be strictly coercive, repressive, or violent, but that settler-colonialism can rely on the productive character of colonial power to make its constitutive hierarchies appear natural.

Ultimately, he challenges the idea that the relationship between Indigenous peoples and Canada can be transformed via a politics of recognition, due to the settler-colonial setting, instead asserting that since there is no clear delineation between an authoritarian past and democratic present, reconciliation as implemented by Canadian governments works to present settler colonialism as 'in the past', without recognising current processes (Coulthard, 2014, p. 22). This leaves present colonial rule and injustice untouched, and labels anyone who does not agree to reconcile as irrational and pathological. Coulthard argues these reactions should be taken seriously, as a sign of "critical consciousness". Ultimately, he suggests, instead of a politics of recognition it is necessary to implement a "*resurgent politics of recognition* premised on self-actualization, direct action, and the resurgence of cultural practices that are attentive to the subjective and structural composition of settler-colonial power" [original emphasis] (p. 24).

As an example of 'resurgent politics of recognition', Coulthard analyses the Idle No More protests in Canada in 2012. Idle No More is the name given to a popular movement and discourse in Canada which took place mainly between November 2012 and January 2013. Founded by four Indigenous women, it was primarily directed at the Canadian government and targeted proposed changes to legislation (Bill C-45) which would lessen environmental protection laws, including for waterways and forests. Idle No More largely consisted of a public education campaign (including social media), public protests (in the form of "flash mob" round-dancing), rail and road blockades, as well as a high-profile hunger strike by a female Chief, Theresa Spence of the Attawapiskat First Nation (Coulthard, 2014). Coulthard (2014) presents Idle No More as a shift from Indigenous peoples engaging with the settler-colonial government on a rights-based approach (which conforms to colonial standards of respectability), to one that seeks "to practice decolonial, gender-emancipatory, and economically nonexploitative alternatives structures of law and sovereign authority grounded on a critical refashioning of the best Indigenous legal and political traditions" (p. 179).

Barker (2014) also considers Idle No More in the context of resistance to Canada. He asserts that while the name was problematic due to its implication that Indigenous peoples have been 'idle' with respect to colonisation, it was an effective innovation in the long tradition of repressing Indigenous resistance in Canada. In particular, Barker highlights the movement's use of social media and online organising, primarily through the use of the hashtag #IdleNoMore. While the colonial geography of Canada has often fragmented Indigenous resistance, he claims the speed and accessibility of social media helps

overcome this issue. Despite spreading online, the Idle No More movement transcended online spaces, as "…Idle No More's impact was felt simultaneously in cyberspace and in physical spaces. Activists and communities organized online, but danced and marched in public, crossing multiple boundaries in the process" (Barker, 2014, p. 51).

There are many parallels between the Idle No More movement and resistance to the Muskrat Falls Project in Labrador, including how their driving factors are informed by Indigenous environmental and socio-legal traditions. Resistance to the MFP mainly spread through the use of the hashtag #MakeMuskratRight, a slogan created by the NG in response to their methylmercury concerns to put pressure on the GNL to implement mitigation measures. Demonstrations and solidarity events were organised online and livestreamed via Facebook Live. Some of the most passionate resisters to the project continue to organise in Facebook groups and share their discontent on Twitter. Social media has become a tool for Indigenous peoples all over Canada and the world to resist settler-colonial oppression and policies that threaten Indigenous sovereignty. The next section of this chapter will discuss the Indigenous health theories and literature in relation to the issues discussed in the thesis.

Indigenous Health Research

Colonialism's Health Implications

From new diseases being introduced with contact with European settlers, to early and contemporary government policies, colonialism has shaped Indigenous peoples' experiences with both health systems and the social determinants of health (such as housing, education, and family structures). Colonialism was first embodied through introduced diseases and by the exacerbation of existing health issues. With reference to the experience of Indigenous peoples in North America, Waldram et al. (2006) describe the extent to which, "From the seventeenth century onward, smallpox, measles, influenza, dysentery, diphtheria, typhus, yellow fever, whooping cough, tuberculosis, syphilis, and various unidentifiable 'fevers' caused illness and death as they spread from person to person and from village to village" (p. 49). This includes 'virgin soil epidemics', which are characterised by high mortality in all age categories because the disease is new and immunity is not built up (Waldram et al., 2006). These introduced diseases led to huge variations in post-contact population sizes. While this is a complex issue with multiple causes and variations between societies, in North America it is believed that there were population depletions of 53% in the Arctic to highs of 89% in the Northwest Coast and 95% in California (Ubelaker, 1988, p. 293 cited by Waldram et al., 2006).

Post-contact epidemics were not the only source of mass death and illness. The Spanish Flu pandemic of 1918 is an illustrative example of this process in Labrador. The first wave of the flu did not reach Labrador due to its emergence before the shipping season opened (Harper, 2020). However, the second wave later was brought to Labrador later in the year by a Moravian mission supply ship to Hebron. Another freighter brought the illness to Cartwright, after which it spread to Rigolet and the ULM area. The Flu ultimately devastated Northern Labrador, killing one-third of the population (Harper, 2020) with Hebron and Okak experiencing on of the highest mortality rates in the work – a combined 71% mortality rate (Budgell, 2018). The most severely affected community was Okak, where only 59 out of 226 members of the congregation remained. After the devastation of the flu, many of the few survivors, who were children, were adopted in Nain and Hopedale. The Moravian Mission would later be closed in March 1919 (Brice-Bennett, 2017). This traumatic and devastating experience of the 1918 pandemic influenced an early and strict response in the COVID-19 pandemic (Penney and Johnson-Castle, 2020). The arrival of disease through religious and settler institutions, and subsequent lack of sufficient health services, speaks to the structures of colonialism in Newfoundland and Labrador and Canada more generally, where structural barriers to timely care and essential services continue today (Wylie et al., 2019, CBC News, 2021b).

In *Clearing the Plains: Disease, Politics of Starvation, and the Loss of Aboriginal Life*, James Daschuk (2013) employs Emmanuel Wallerstein's World Systems Theory to investigate what First Nations people did, where they lived, and what they ate over approximately 160 years as the global economy began to influence the Canadian plains. He identifies two main moments. First, the shift from the fur trade to agriculture and industrial capitalism operated to displace Indigenous people from their participation on the periphery of the global economy. Alienating people from the economic opportunities of the land and the imposition of the reserve system (where people needed permission to leave the boundaries of the reserve) played a key role in the decline of health in the 19th century (Daschuk, 2013). Secondly, along with the 'invisible hand' of the marketplace came increasing infectious diseases as smallpox and other pathogens shaped the historical development of the Plains region (Daschuk, 2013).

Daschuk (2013) recognises that North America was, of course, not disease-free pre-colonisation, but asserts that the burden of disease greatly increased with the arrival of Europeans. He highlights how disease and ill-health were a determinant in the history of this part of the country, and that TB and starvation could have been mitigated by the

Canadian government if it had acted in good faith (Daschuk, 2013). Drawing on Amartya Sen's (1982) theory that South Asian famines had more to do with the politics of food distribution than the scarcity of foodstuff, and Thursen's (1984 cited by Daschuk 2013) work on how African poverty is the result of colonial history and changed social relations of production, Daschuk asserts that TB being seen as a hereditary disease by government officials was a political decision. It allowed them to justify sickness and mortality levels and backed up their perspective that it was an inevitable natural process. While Daschuk's work focuses on the plains region of Canada, I assert similar government attitudes have pathologized Inuit and entrenched health issues such as tuberculosis and food security in our communities.

Settler-colonialism's focus on land and resources tends to damage Indigenous health and wellbeing. More empirical work by Richmond and Ross (2009) on the determinants of Indigenous health in Canada suggests that environmental dispossession is an underlying cause of health inequalities. In interviews with 26 Aboriginal Community Health Representatives from rural and remote Indigenous communities across Canada, it was found that disconnection from traditional territory leads to culture stress, the destruction of family ties and degrading circumstances (Richmond and Ross, 2009). The land and Inuit social life and structures are inextricable, and degradation of, or the inability to access land will inevitably impact community, as "the disruption of Indigenous relationships to land represents a profound epistemic, ontological, cosmological violence" (Tuck and Yang, 2012, p. 5). This is an experience that will be discussed further in the results chapters of this thesis.

There is a unique gendered impact of colonialism in settler-colonial Canada, as demonstrated by Winona Stevenson (2011). She highlights how Eurocentric ideals around womanhood were projected on First Nations women by early European colonialists. This 'cult of true womanhood' revolved around female domesticity (Riley 1986 cited by Stevenson, 2011, p. 46), and was transgressed in almost every way (appearance, social, economic, political, and spiritual position, activities, and authorities) by First Nations women. Stevenson asserts that these transgressions led to Indigenous women being considered in two main contradictory ways; either as noble savages (e.g. 'Indian princesses') or ignoble savages (e.g. 'Squaw drudges'). This binary classification has its roots in the Victorian patriarchal dichotomy of 'whore-virgin'. While these classifications were clearly extremely problematic, they were at least multidimensional. The later arrival of missionaries changed this, as they only saw First Nations women as 'savages'

(Stevenson, 2011). This imposed colonial patriarchy was resisted, as historical evidence shows that Indigenous women fought against losing personal autonomy and power, knowing that it threatened the socio-cultural cohesion of their communities (Stevenson 2011, p. 49).

This subjugation continued (and arguably continues) under the settler-colonial state. The 1867 *British North America Act* was the authority under which the federal government took control of what is now known as Canada. Section 91(24) gave the federal government exclusive jurisdiction over the administration of Indians and lands reserved for Indians. Missionaries were involved in this handover and worked with the state to ensure the colonial enterprise was maintained (Stevenson, 2011). One of the most harmful policies entailed how the government decided who, and who was not, an 'Indian'. The Indian Act 1869 imposed patrilineage, which meant First Nations women and their children could lose their status if they married a non-First Nations man. According to Stevenson (2011) this was an explicitly colonial policy, meant to reduce the number of Status Indians the government was responsible for, impose the European patrilineal system, and elevate the power of men at the expense of women. In 1951 this was changed to make the rule even more stringent, as women who 'married out' by marrying non-Indigenous men were denied their First Nation/Band membership. This meant she ceased to be an 'Indian' under the law and was denied the protection and benefits under the Indian Act and membership. Women lost the right to live on reserve, be buried on reserve, or participate in local activities, and raise their children according to their traditional extended family system. This remained in place until 1985 when the Act was revised by Bill C-31[9].

Inuit Health Profile

Within the Indigenous health landscape in Canada, Inuit have a distinct health profile. This work focuses on the health and wellbeing impacts of the MFP, and in order to examine these possible impacts, it is important to understand the state of Inuit health in Canada and in Nunatsiavut specifically. Significant Inuit health topics include access to health care, food security, housing, and language and culture (Wallace, 2014). Many of these issues are linked to the remote locations of Inuit communities and lack of infrastructure and resources. While there are inherent issues in comparing health disparities between Indigenous and non-Indigenous populations (Richmond et al., 2007), since conceptions of health and wellbeing are shaped by different worldviews and experiences, I will do so

[9] Bill C-31 was passed into law in 1985 to bring the Indian Act into line with the newly established Canadian Charter of Rights and Freedoms. It proposed restoring Indian status to those previously disenfranchised and allowing bands to control their own membership.

because the statistics demonstrate the extent of inequality lived by Inuit. Life expectancy is one indicator of this, as the life expectancy for Inuit men is 70 years, and 76.1 years for Inuit women (Tjepkema et al., 2019). This is 11.4 and 11.2 years shorter than that of non-Indigenous men and women in Canada respectively. The Aboriginal Peoples Survey (APS), a national survey of First Nations people living off reserve, Métis, and Inuit, found that 12% of Inuit had high blood pressure (compared to 4% of the total population of Canada) (Wallace, 2014). The Inuit suicide rate from 1999 to 2003 was 122.4 per 100,000 people, 10 times that in the rest of Canada (Kral and Idlout, 2009). Tuberculosis is also a significant health concern, as the rate of TB among Inuit living in Inuit Nunangat is over 300 times the rate experienced by the non-Indigenous, Canadian-born population (Indigenous Services Canada, 2018).

Inuit in Nunatsiavut experience many of the same health and wellbeing issues as other communities in Inuit Nunangat. A household food security survey by the Nunatsiavut Government in 2017 found that 61.1% of households in Nunatsiavut were food insecure, meaning they experienced “worry about or difficulty in accessing food on a regular basis” (Nunatsiavut Government, 2017). The suicide rate in Nunatsiavut is 275 people per 100,000, the highest among the Inuit Nunangat regions and has been rising in recent years (Inuit Tapiriit Kanatami, 2016). In 2012, 19% of Inuit in Nunatsiavut had high blood pressure, compared to 4% in the total population of Canada (Wallace, 2014). Though the lowest rate of Inuit living in Inuit Nunangat, 50% of Inuit in Nunatsiavut smoked in 2012, compared to 16% of the total population of Canada aged 15 and older (Wallace, 2014). I share these statistics not to elicit pity or paint a negative picture of Inuit, but to preface the social reality in which this research takes place. In fact, in 2012 Nunatsiavummiut (people living in Nunatsiavut) were the most likely of any Inuit region (other than those living outside Inuit Nunangat) to self-report ‘excellent’ or ‘very good health’, at 50 per cent (Wallace, 2014). However, this is in contrast to the total population of Canada, which was 63% (Wallace, 2014). In the next chapter I will be contextualising these health statistics in relation to existing Indigenous health theories and literature.

Traditional Inuit Health Perspectives

In *Interviewing Elders: Perspectives on Traditional Health*, Laugrand et al. (2001) found that Inuit elders’ discussions of traditional health practices and medical knowledge encompassed techniques to heal wounds and cure sicknesses, but also recollections of how to develop a strong mind and resilient body. Mind and body health are deeply interconnected for Inuit, as "Elders stress that only a strong mind allows for a healthy

body. The body is hence put in close relation with all human experiences including quality of interpersonal relationships, quality of relations to the environment and game [wildlife], and quality of relations to the deceased and the spirits" (Laugrand et al., 2001, p. 1). In contrast to capitalist modernity, where health is largely considered a personal matter, in Inuit societies health is conceived of as a "harmonious order in which the person is integrated in an encompassing social, temporal, spiritual and non-empirical environment" (Laugrand et al., 2001, p. 1). Traditional Inuit therapeutic treatments are based on the principle of opposites. It's believed that sickness comes from outside the body and travels through it, therefore, any treatment implies the extraction of the offensive element. In order to be successful, healing requires at least two main conditions: extraction of the offensive element from the body (for example talking to a reliable person in the case of depression), and rehabilitation of the sick person in the community and eventually among the ancestors (humans or spirits) (Laugrand et al., 2001)[10].

Similarly, Shirley Tagalik (2015) describes how Inuit Qaujimajatuqangit (IQ)[11], the Inuit worldview developed with elders and widely used in policymaking by Inuit governments and organisations, contains core concepts of *connectedness* and *belonging*, and is based on respectful relationship building as essential to the Inuit intention of building a good life [emphasis added]. As Tagalik (2015, p. 25) writes:

> Relationality and the rules that govern how one interacts, both with others and within the natural world, require a holistic perspective because no one thing can be separated from its other relational aspects. Successfully negotiating a holistic approach in life is entrenched in the need to continually maintain harmony and balance in all things. The interconnection of these concepts is an indicator for collective and personal well-being [sic].

In Tagalik's research, Elder L. Angalik articulates the analogy of travelling on the land to demonstrate the holistic perspective. 'Western' thinkers tend to follow a straight path, but Inuit elders think in terms of the whole environment, and relationships with different parts last throughout one's lifetime. The loss of this holistic perspective is believed by elders to leave one disconnected, diminishing the sense of belonging and wellness (Tagalik, 2015, pp. 25-26).

[10] While I am wary of generalising these perspectives to all Inuit communities or regions, the rooting of Inuit health in relationality is a consistent theme in Inuit health literature.

[11] Can be translated to 'Inuit traditional knowledge'.

Further importance is given to the concept of living a 'good life', which consists of living respectfully and being in close relationship to everything and everyone. Tagalik (2015) explains how this is linked to the concept of being in and living in harmony, which is a cultural expectation for Inuit. I have personally observed this, noticing that Inuit, in general, are very willing to forgive transgressions and support one another, when in 'Western' society those people may be shunned. For Inuit, harmony and balance were essential and considered the ultimate determinant of health (Tagalik, 2015).

I must note that the above work is from research with Inuit elders in Nunavut. While elders are revered and respected in Inuit culture and continue to shape society, Inuit youth are being raised in a global world with access to social media and other outside influences that may shape their conceptions of health and wellbeing in different ways. However, Inuit youth have also described the importance of holism in their health. Research using data from the 2004 Nunavik Inuit Health Survey found that crucial factors for youth mental wellness were: land and culture, social factors, and education, income and housing (Gray et al., 2016). Gray et al. (2016) found that "pride in Inuit identity and participation in traditional activities relating to the land were associated with greater mental wellness" (p. e254). It is vital to recognise traditional views and how they may influence contemporary perspectives. It is also evident in the results chapters of this thesis how traditional Inuit conceptions of health and wellbeing continue to be a priority for Inuit in Rigolet.

Social Determinants of Inuit Health

Sociologist Michael Marmot (2015) asserts that, "If you want to understand why health is distributed the way it is, you have to understand society" (p. 7). Poor health outcomes can be understood through a social determinants of health (SDH) approach, and more specifically, through considering Social Determinants of Inuit Health (SDIH), proposed by Inuit Tapiriit Kanatami (ITK), the national Inuit organisation in Canada (Inuit Tapiriit Kanatami, 2014). SDH theory takes into account the social dimensions of life in health outcomes, asserting that social inequalities are ultimately the cause of poor health outcomes (Marmot, 2015). As described by the World Health Organization (WHO) (2013 cited by Inuit Tapiriit Kanatami, 2014), social determinants of health are "the conditions in which people are born, grow, live, work and age, including the health system" (p. 3). These conditions are influenced by things such as economic capital, power relations, and global distribution of resources, all influenced by policy decisions.

ITK has adapted the WHO definition to key factors seen to specifically determine Inuit health outcomes (Inuit Tapiriit Kanatami, 2014). Each determinant is connected and

understood in relation to the environment. The key determinants are: quality of early childhood development; culture and language; livelihoods; income distribution; housing; personal safety and security; education; food security; availability of health services; mental wellness; and the environment (see Fig. 4). To improve Inuit health, ITK advocates for a change in focus from narrow indicators of health status to a holistic view of social determinants of Inuit health with a focus on food security, acculturation, and livelihoods in addition to specific health outcomes. They also advocate for financial support and collaboration from all levels of government and Inuit organisations.

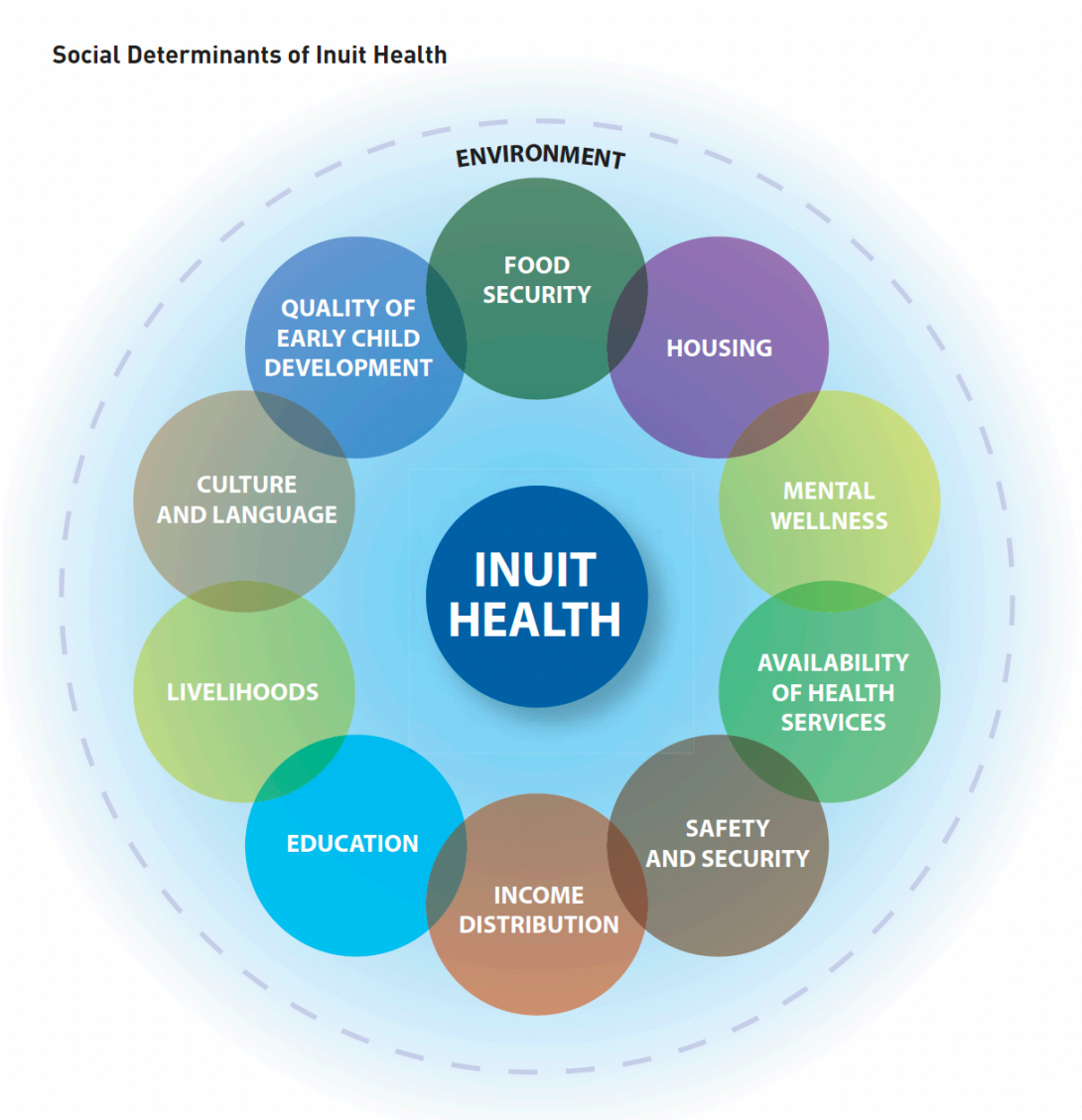


Figure 4. Social Determinants of Inuit Health (Source: Inuit Tapiriit Kanatami, 2014)

The example of TB can be used to illustrate this model of the social determinants of Inuit health. For Inuit, TB is entangled with other diseases such as addiction and social issues such as poor food security and overcrowded housing. While TB is caused by mycobacteria usually acquired through inhalation, alcohol and drug abuse (common issues in Inuit communities due to intergenerational trauma) is associated with acquisition of infection

and development of TB (Alvarez et al., 2014). Further, nutrition and food insecurity are considered important social determinants of health in relation to TB (Alvarez et al., 2014). In 2012, 53% of Inuit living in Inuit Nunangat lived in homes that experienced food insecurity. The main reasons for this include unemployment, low household incomes, and the high cost of food in remote, northern communities (Egeland 2011 cited by Inuit Tapiriit Kanatami, 2014). Finally, poor housing with inadequate air circulation/ventilation leads to the spreading of infectious diseases such as TB (Alvarez et al., 2014). Overcrowding (in which more than one person per room lives in a household) is a significant issue for Inuit; in 2016, 51.7% of Inuit in Inuit Nunangat lived in crowded housing (Inuit Tapiriit Kanatami and Government of Canada, 2019). The 2011 National Household Survey found that twenty-nine percent of Inuit lived in homes needing major repairs (Wallace, 2014). From the example of TB, it is possible to see how social issues such as mental wellness, food security, and housing interact to result in poor health outcomes.

The SDIH discussion paper is an important piece of work in guiding Inuit health research, policies, and programming. It is evidence-based and rooted in the lived experience of Inuit on a national scale. However, it is important to acknowledge that Inuit in different regions of Canada have varying needs and outcomes. While there are obviously similarities, each region has unique histories and self-governance structures that influence health (Richmond et al., 2007). For example, research by Richmond et al. (2007) exploring the dimensions of health for Inuit and Métis people published in 2007, drawing on data from the 2001 APS, found that the ordering of health dimensions for Nunatsiavut Inuit (n=315) was different from other Inuit regions, as it was the only region in which social support was not the primary dimension. Instead, personal wellness explained 26.2% of the variance in the observed variables, followed by social support (12.9% of variance). Physical function and community wellness dimensions were similar to other Inuit, explaining 11% and 7.9% of the variance observed (Richmond et al., 2007). This shows that there is cultural and geographic heterogeneity among Inuit groups, as each region has distinct political situations and unique physical, cultural, and social environment. For this reason, guiding documents such as ITK's SDIH should be used alongside regionally specific considerations. Later in this thesis I will apply the SDIH framework with Rigolet-specific concerns for the impacts of the MFP.

Environment and Health

Land and Inuit Health

The MFP's main anticipated impacts are related to environmental issues which may in turn affect other parts of life and health. This necessitates a conceptual discussion of environmental destruction and health within settler-colonialism. As Arvin et al. (2013, p. 13) write:

> Settler colonialism is a persistent social and political formation in which newcomers/colonizers/settlers come to a place, claim it as their own, and do whatever it takes to disappear the Indigenous peoples that are there. Within settler colonialism, it is exploitation of land that yields supreme value. In order for settlers to usurp the land and extract its value, Indigenous peoples must be destroyed, removed, and made into ghosts.

The land and environment are essential for both Indigenous peoples and the maintenance of settler-colonialism, making it a key site for social change with impacts on health. Though in the case of Indigenous peoples, land is more than property as it is in settler-colonialism, but it is "knowing and knowledge"; it is central to Indigenous epistemologies (Arvin et al., 2013). The Muskrat Falls project is anticipated to raise methylmercury levels in the water, and thus food sources, to a potentially harmful level (Calder et al., 2016, Schartup et al., 2015, Durkalec et al., 2016). The settler-colonial government decision that allows this type of impact on Indigenous communities is an expression of structural violence. Structural violence, coined by Johan Galtung (1969), speaks to a type of harm done when the perpetrator is not an individual actor. Instead, it is built into the social structure and can be seen as 'normal'. As Galtung (1969) writes, "Structural violence is silent, it does not show – it is essentially static, it is the tranquil waters…structural violence may be seen as about as natural as the air around us" (p. 173).

Also on the topic of decisions which shape marginalised peoples' proximity to harmful environmental situations, Northridge and Shepard (1997) write about environmental racism, arguing that discrimination on the basis of race results in poorer environments and health outcomes. They situate racial segregation at the core of the problem of environmental racism, as people of colour in poorer communities are more likely to experience hazardous working and living environments. They make several suggestions for solutions, including: studies to address the distribution of environmental hazards by locality and their relationship to health risks; taking into account the social/cultural dimensions that shape affected communities through community-driven research;

monitoring and surveillance; and building on previous public health campaigns that have been successful (e.g. anti-smoking campaigns). As previously mentioned, Calder et al. (2016) note that all 22 hydroelectric projects in Canada being considered for development are within 100km of Indigenous communities. This includes the Muskrat Falls project and speaks to environmental racism in Canada.

While environmental racism is a useful framework for understanding the decision to allow the Muskrat Falls project to go ahead, it should also be seen as part of the larger settler-colonial project which aims to remove Indigenous peoples' connections to the land for strategic purposes. It is well-established that environmental health is a determinant and protective factor of Indigenous peoples' health, including for Inuit (Petrasek MacDonald et al., 2015, Cunsolo Willox et al., 2012, Cunsolo Willox et al., 2013, Durkalec et al., 2015). This goes beyond the practical implications of issues such as poor air quality or rising sea levels. Indigenous spiritual, cultural, mental, and of course physical health is dependent on interactions with what is often simply referred to as 'the land' in English or 'nuna' in Inuktut (which for Inuit encompasses most forms of the environment). As previously mentioned, SDH are a way of understanding health inequalities that understands that the circumstances in which people live and work influence their health outcomes (Marmot, 2006). For Inuit, the environment is a key social determinant of health; it is an overarching factor that permeates every other determinant. In the upcoming sections, I aim to highlight some of the ways Inuit health is impacted by environmental issues, such as food insecurity, and climate change. Further, I will discuss the gendered nature of environmental and health issues.

Self-determination, Food (In)Security and Environmental Destruction

Within Inuit societies, food harvesting, preparation, and sharing is a key part of social relations, health, and connection to the environment. In this section I aim to outline crucial contexts for food security, food sovereignty, Inuit self-determination and how they tie into the issues related to the MFP as well as wider concerns related to Inuit health and wellbeing.

Food security is defined as a situation in which "all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Food and Argricultural Organization of the United Nations 1996 cited by Inuit Tapiriit Kanatami, 2021a, p. 5). ITK has developed the Inuit Nunangat Food Security Strategy (INFSS) to respond to the prevalence of food insecurity in Inuit communities and reassert the importance of the issue within a human

rights framework (Inuit Tapiriit Kanatami, 2021a). ITK recognizes that comparable data on food security in Inuit communities is limited due to variations in research methods, but the 2017 APS showed that 68.4% of Inuit in Nunatsiavut experience food insecurity (APS 2017 cited by Inuit Tapiriit Kanatami, 2021a).

Food *sovereignty* goes a step further than food security to recognize the role of self-determination in decisions around food systems and consumption. According to ITK, "Inuit food sovereignty is achieved when our people are able to freely define the policies shaping the Inuit Nunangat food system so that it reflects our food priorities and preferences. It is achieved by strengthening Inuit self-determination in all aspects of the Inuit Nunangat food system" (Inuit Tapiriit Kanatami, 2021a, p. 4). Further, self-determination in Inuit food systems is shaped by policy decisions within the settler colonial structure, as relocations, resettlements, residential schools, and the killing of sled dogs used for transportation impacted Inuit mobility and interrupted intergenerational knowledge sharing related to food harvesting and preparation (Inuit Tapiriit Kanatami, 2021a).

According to the INFSS, "The Inuit Nunangat food system encompasses the infrastructure, environmental factors, policies, and regulatory practices that influence the quality, costs, and availability of food throughout Inuit Nunangat" (Inuit Tapiriit Kanatami, 2021a, p. 7). The Inuit food system includes country food harvesting, commercial harvesting, and store-bought foods transported to communities by plane and ship. These food sources are facilitated by supply chains and retailers, community networks of harvesters who distribute country foods and locally grown foods (Inuit Tapiriit Kanatami, 2021a). While local food cultivation is minimal, it is emerging via community greenhouses, hydroponics, household gardens and other initiatives. In fact, there are already accomplished gardeners in Rigolet who grow some of their own food such as tomatoes, zucchini, and root vegetables.

The cost of store-bought foods in Inuit communities is shaped tremendously by geography/distance from production locations, but also by infrastructure issues, such as aging and insufficient marine and aviation transportation infrastructure. Other issues include predatory pricing due to a lack of regulation of market prices (Inuit Tapiriit Kanatami, 2021a). The federal government has attempted to mitigate food prices through the Nutrition North Canada program, which subsidises 'healthy' foods considered essentials. Despite this, the cost of food remains high in Inuit communities. The INFSS illustrates information on variable food costs and incomes across Inuit Nunangat, including by community by considering what proportion of income would be needed to afford the full cost of the Revised Northern Food Basket (RNFB). The RNFB is an estimate of what

it costs to feed a family of four a healthy diet for one week[12] (Lawn, 2007). According to the INFSS, the weekly median income in Rigolet in 2014 was $557.54, and the weekly cost of the RNFB for an individual in 2019/2020 was $92.14, meaning the individual would spend 17% of their income to afford the full cost of the RNFB. The average Canadian household spends 14.3% of their income on food, however this cannot be considered a direct comparison, especially considering the higher cost of living in Inuit communities for other essentials such as fuel and clothing (Inuit Tapiriit Kanatami, 2021a).

While traditional food harvesting is a way to meet Inuit cultural and food needs largely outside of southern retailers, it is also affected by infrastructure issues. Marine ports, maintenance services (such as garages) and other public facilities are necessary to support expensive personal investments such as boats, snowmobiles and ATVs which are used for harvesting marine mammals, fish, berries, clams, and other foods. Further, there has been a concerted effort by Inuit to increase search and rescue (SAR) capacity in the North. The INFSS also highlights the importance of local processing plants to increase the shelf life of traditional foods. These types of infrastructure are rare in Inuit communities, but ITK asserts they should be considered on the same level of importance as agricultural facilities in southern Canada (Inuit Tapiriit Kanatami, 2021a).

According to the INFSS, without the addition of country food harvesting in Inuit communities, retailers would not be able to meet Inuit food or cultural needs (Inuit Tapiriit Kanatami, 2021a). Further, country food harvesting provides essential and significant cost savings in comparison to store-bought protein sources (Inuit Tapiriit Kanatami, 2021a). This important reliance on food harvested from the land stresses how environmental destruction directly influences Inuit health through food insecurity. Research by Power (2008) argues that to rectify the high rates of food security in Indigenous communities, conceptualisations of the issue must change to respect Indigenous food practices related to harvesting, sharing and consumption of traditional foods. She writes, “Food obtained from traditional food systems links the environment and human health, and forms the basis of social activity, social cohesion, and social integration” (Power, 2008, p. 96). This holds true for Inuit, as the procurement of traditional food, as well as its preparation and consumption has social and cultural significance that is linked to Inuit identity (Wein et al., 1996). For example, narwhal skin (maktaaq), with some attached fat (uqsuq) is a staple

[12] The RNFB is a general recommendation, but not without its issues, as it makes assumptions and generalizations about food preferences, preparation, and only includes store-bought, non-traditional foods. Similarly, Nutrition North Canada has been criticized for its choices to subsidize some foods, while not subsidizing others which are more desired by Inuit.

food and delicacy for some Inuit societies and also provides raw materials such as sinew that can be used for waterproof seams (Lee and Wenzel, 2004).

In addition to the social and cultural impacts, there are dietary implications to lessened availability of traditional foods due to environmental destruction. In a study of Inuit and Dene food systems, Kuhnlein and Receveur (2007, p. 1113) found that each cultural group used over 100 species of animals, fish, and plant foods. Through 24-hour food intake recalls and frequency interviews, they found that, while both market and traditional foods were important:

> When traditional meats or fish were included, daily intakes were significantly higher in percentage of energy as protein and many micronutrients, including vitamin D, vitamin E, riboflavin, vitamin B-6, iron, zinc, copper, magnesium, manganese, phosphorus, potassium, and selenium than when MF [market foods] were consumed.

Intake of traditional foods varied by age and gender (with older people and men consuming more) and consuming them was associated with increased dietary quality (Kuhnlein and Receveur, 2007). It has long been known that traditional Inuit food is more nutritious than store bought foods high in sugar and carbohydrates. Hanrahan's study of nutritional change amongst Labrador Inuit highlights how, in the 1800s and early 1900s people started noticing increases in acute and chronic health conditions. Inuit who maintained a traditional diet were healthier than those who increased their intake of Western foods (encouraged or provided by missionaries), with better dental health and less incidence of rickets (Hanrahan, 2012). This is important to consider in relation to the Muskrat Falls project because contamination of country food may impact the amount and quality of nutritional intake, this having wider effects on Inuit physical health.

In addition to historical data about the benefits of country foods, we know that even contemporarily, Inuit continue to live in synchronicity with the land and sea through the maintenance of harvesting practices which are flexible and adapted to current social life. Research by Felt et al. (2012) quantifying participation in harvesting activities in Labrador Inuit communities found that "Approximately 85% of households are active harvesters in at least one animal from those species studied is harvested" (p. 166), and many households harvested more. The species studied included several types of seabirds, salmon, Arctic char, and caribou. The team of researchers found that, "Despite the incursion of many elements of modern life in coastal communities and households, subsistence harvesting

continues to be a dynamic and flexible activity critically relevant, if not essential, for life in the Labrador context" (Felt et al., 2012, p. 169). Traditional foods are also key to physical health and key contributors of nutrients, as research by Calder et al. (2019) found that, for Inuit in Rigolet, traditional foods (such as wild fish, birds, and marine mammals) made up 4% of total calories but up to 70% of nutrients consumed.

Food sovereignty as a concept also provides a helpful conceptual framework for advocating for Inuit food systems. It is not enough that Inuit have the right not to be hungry, but we should also have the ability to control our food sources and access in a way that best suits Inuit culture, society, wellbeing and self-determination. In the next section I will continue to discuss the relevance of the environment to Inuit health.

Climate Change and Health Research in Labrador

While the main considerations of this thesis are community perspectives on environmental degradation from hydroelectric development, climate change is another obvious process that threatens the environment, and thus (as has been established throughout this chapter), Inuit health. A large amount of recent work in Nunatsiavut has focused on the impact of climate change on lifestyles and cultural activities, as well as the health and wellbeing in/of the region. The importance of connections to the environment for Inuit health means communities in Nunatsiavut are particularly vulnerable to the impacts of climate change. In northern Canada, climate change is leading to shorter winters and unpredictable weather and sea ice conditions, which leads to physical dangers to Inuit; for example, more people could fall through the ice when travelling on snowmobiles or with dog teams due to unpredictable ice conditions. Additionally, there are mental health impacts linked to climate change in Nunatsiavut (Petrasek MacDonald et al., 2015, Cunsolo and Ellis, 2018).

Much research in this area in the last decade has focused on "human dimensions of climate change" and how to mitigate impacts in the Canadian Arctic. Cameron (2012, p. 104) identifies two major strands in this research field. The first integrates Inuit knowledge and Western scientific understanding of climate change and its impacts in the Arctic. The second strand focuses on engaging Inuit communities and their knowledge in identifying localized climate change factors and strategies for adaptation. Both strands are responses to Inuit calls to action in Nunavut research priorities (Government of Nunavut 2005; Inuit Tapiriit Kanatami and Nunavut Research Insititute 2007 cited by Cameron, 2012). These calls speak to the shift towards self-determination in Inuit research which has intensified with the establishment of the National Inuit Strategy on Research (Inuit Tapiriit Kanatami, 2018) (to be discussed in further detail in the next chapter).

As I have shown, land is of the utmost importance to Inuit culture, society, and health. Research in Nunatsiavut undertaken by Petrasek MacDonald et al. (2015), consisting of interviews with youth found five key protective factors for enhancing mental health and wellbeing: "being on the land, connecting to Inuit culture, relationships with friends and family, strong communities, and staying busy" (p. 138). Considering the extent to which Inuit culture and social structures are rooted in land, water, and sea ice-based activities (e.g. family snowmobile outings, taking care of dog teams, seal hunting), it is argued by researchers and community members that climate change will likely have significant effects on mental health and wellbeing in Nunatsiavut (Petrasek MacDonald et al., 2013, Ostapchuk et al., 2015, Harper et al., 2012, Cunsolo Willox et al., 2012, Cunsolo and Ellis, 2018).

An Inuk participant in a study by Cunsolo Willox et al. (2013) about climate change and mental health in Rigolet told researchers: "The truth of the matter is that the land is really, really special to me. And you know, besides my family, I would die for my land" (p. 19). It was found that changes in land access due to climate change (e.g. less snow, ice, and unpredictable weather) elicited negative effects on mental and emotional wellbeing (e.g. feelings of sadness, anxiety, and anger). Work on 'ecological grief' in Nunatsiavut has shown that environmental changes and associated loss of local knowledge triggers deep sadness and distress (Cunsolo and Ellis, 2018).

While my work does not focus on climate change per se, it does consider environmental change of which climate change is a critical component. It is logical that the cultural and mental health concerns associated with climate change may apply to the impacts of the MF project, as it could interrupt cultural and social activities and the benefits they have for Inuit. Further, the combined impact of both climate change and the impacts of the MFP occurring simultaneously should be considered for policymakers to respond appropriately.

Gendered Impacts of Environmental Issues

There are unique considerations for the effect of environmental issues on women which are intertwined with power relations which inform both environmental change and patriarchy. Indigenous feminist scholars have theorised the link between settler-colonialism, heteropatriarchy (in which heterosexuality and patriarchy are dominant), and heteropaternalism (normalisation of the nuclear family in which the father is the leader) (Arvin et al., 2013). In the environmental literature, connections have been made between resource extraction, development, and the oppression of Indigenous women (Kuokkanen, 2008, de Finney, 2017).

Rauna Kuokkanen (2008) also asserts that economic globalisation represents violence against Indigenous women, as multinational corporations are given permission to exploit Indigenous peoples' territories and infringe on rights and sovereignty through environmental degradation and militarisation, which prevents the practice of social and cultural activities. Kuokkanen (2008) explains how the "epidemic" of Missing and Murdered Indigenous Women (Anaya 2013 cited by de Finney 2017) is connected to colonialism. She suggests that the high level of violence experienced by Indigenous women is intricately connected to social and economic marginalisation, a consequence of colonial dispossession. As a result of this marginalisation, women are forced into vulnerable situations such as poverty, homelessness, and sex work (Kuokkanen, 2008).

There is a known pattern of gender-based violence and impacts on reproductive health associated with hydroelectric projects in Canada (Pasternak, 2021). In the case of Muskrat Falls, Stienstra (2015) emphasises the role of women in resisting the project to prioritise social and community issues, particularly the Mokami Status of Women Council (2011 cited by Stienstra 2015), who raised concerns about violence against women, poverty, child care, housing, and mental health due to the presence of the hydroelectric project in the ULM region.

Reproductive health is also affected by environmental issues, including methylmercury contamination. Exposure to methylmercury in utero can cause serious harm to foetuses. Since it crosses the blood-brain and placental barriers, methylmercury is a potent neurotoxicant affecting developing foetuses (Debes, Weihe, and Grandjean 2016; Lohren et al. 2016 cited by Calder et al., 2021). Elevated prenatal exposure has been linked to neurological impacts from IQ deficits to mental retardation and cerebral palsy (NRC 2000 cited by Calder et al., 2021). In Labrador, Calder et al.'s (2016) work suggests that women of childbearing age and young children are particularly at risk of increased exposure levels to methylmercury (Calder et al., 2016). In Rigolet, this demographic already has an exposure to methylmercury which exceeds the U.S Environmental Protection Agency's reference dose and is most sensitive to the neurodevelopmental impacts of methylmercury exposure (Mahaffey et al. 2011 cited by Calder et al. 2016). This speaks to the gendered impact of the MFP, as women experience more risks than men. There are also intergenerational impacts, as a study in Nunavik links prenatal methylmercury exposure (through the traditional diet) to attention deficit hyperactivity disorder symptoms in school age Inuit children (Boucher et al., 2012).

Global Energy Production Priorities

Environmental destruction in Labrador in the context of the Muskrat Falls Project must be understood in the context of global energy production. With global attention rapidly shifting towards the urgency of climate change and need for renewable energy, hydroelectricity is often at the top of peoples' minds and government priorities. It is often considered a form of 'green', 'clean', or environmentally friendly energy production, since it uses water, a renewable resource, to produce electricity. On Nalcor's (n.d.) website, they describe the MFP as a pillar of sustainable energy production, stating:

> With the completion of the Muskrat Falls Project, Newfoundland and Labrador will be a leader in clean energy. It is estimated that power from the project can displace three to four megatonnes of carbon dioxide annually from thermal generating facilities. This will reduce greenhouse gas emissions and the carbon footprint throughout Northeastern Canada and the United States – equivalent to taking almost one million cars off the road for one year. […] Once in service, power from Muskrat Falls will help meet the province's long-term energy needs by providing clean, renewable energy for future generations.

There is no mention of how the project might affect future generations of Inuit; and in reality, hydroelectric energy production is more complicated than it appears.

While hydroelectricity produces fewer carbon emissions than fossil fuels, it has a significant impact on local environments through the transformation of terrestrial and aquatic ecosystems, the alteration of biogeochemical processes and impacts on local food webs (Calder et al., 2021). Evidence from around the world, including Chile and Portugal, stresses the importance of considering hydropower's impacts on flora, fauna, landscape and historical remains and importance of systematic assessment of project performance (Goodwin et al., 2006, Botelho et al., 2017). Rosenberg et al. (1995) are highly critical of the environmental and social effects of large-scale hydroelectricity such as landscape destruction, mercury contamination, and potential greenhouse gas emissions due to microbial decomposition associated with the flooding of forest uplands. The former two issues are present in the case of the Muskrat Falls project and backed up by scientific models that found that methylmercury levels are likely to increase (Schartup et al., 2015, Calder et al., 2016, Durkalec et al., 2016). In essence, the environmental impacts of hydroelectricity have been well known for decades, yet mitigation measures were not taken in the case of the MFP.

Collectively, hydro also has a worldwide environmental impact. For example, hydroelectric project reservoirs are a significant global contributor to greenhouse gas emissions. Flooding land fuels microbial decomposition, "converting the organic matter stored in above and below biomass to carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O)" (Deemer et al., 2016, p. 949), in addition to other environmental concerns related to GHGs. While GHG emissions and other issues are highly dependent on reservoir characteristics, my intention in raising this issue is to highlight how 'green' labelling is not entirely helpful as a concept, as it glosses over complex issues. Thus, the local ecological, health, and social impacts of hydroelectricity may conflict on some levels with global energy priorities (though the term "local" is problematic for imposing an "intellectual and spatial confinement" of Indigenous peoples (Appadurai 1988 cited by Cameron 2012, p. 105)). Industrial activities have a history of negatively impacting Indigenous group in Canada and across the world.

The social issues associated with the financing and development of hydroelectric projects have been document globally and have had significant impacts on rural and marginalized communities in particular. Between 1920 and 1970, many dams were built in North America and Europe. This process slowed after the 1970s as the social and environmental costs were deemed unacceptable (Moran et al., 2018). Instead, the hydroelectric power industry has shifted to building dams in developing countries (in areas such as the Mekong River Basin, Amazon River Basin, and Congo River Basin), where the problems identified in North America and Europe (e.g., ecological harm, greenhouse gas emissions, population displacement, and harm to food and agriculture quality), persist. In addition, according to Moran and colleagues (2018), one of the most overlooked dimensions is the effect on local social systems and institutions, as local people have a lack of say in the development process, their concerns and wishes are overlooked, and urban sectors are prioritized. A study by Del Bene and colleagues (2018) found that there are increasing social and environmental conflicts associated with hydro projects globally, with resistors facing processes of criminalization, repression, and violence. Further, they found that violent repression is more likely to take place when Indigenous peoples are involved.

The financing and development of these problematic hydro projects is also tied up with global capitalism, as they are often funded through international financial institutions, such as the World Bank, New Development Bank and Chinese agencies (e.g., China Export-Import Bank, Bank of China, and Industrial and Commercial Bank of China). Research by Middleton et al. (2015) on recent projects in Laos and Cambodia found that public-private

partnerships and build-operate-transfer models are emerging and are closely tied to neoliberalism and the privatization of state activities. This model, “leaves the state, local communities, the environment and electricity consumers with a disproportionate share of risk, to the benefit of the private sector developers and financiers” (Middleton et al., 2015, p. 218). All over the world, the development of large-scale hydroelectric projects has been found to frequently benefit those in power (and those with capital), leaving local communities with the consequences. While Rigolet is far from the Amazon River Basin, it is possible to see similar patterns of power relations. Despite the irreputable fact that our world is interconnected and needs radical, structural changes in renewable energy, local impacts must be considered, particularly when energy policy decisions can harm already marginalised peoples through an entanglement with settler-colonial power structures.

Conclusion

This chapter has provided an overview of key topics for this research, including an overview of historical and contemporary settler-colonialism in Canada. It outlines essential Indigenous and Inuit-specific health theories and empirical research about the ways health and social life intersect through settler-colonialism, social determinants of health, traditional Inuit health views, and gendered considerations. It also contemplates environmental concerns, both in terms of the impact on Indigenous peoples’ land-based health perspectives, and also local versus global priorities in our climate change-oriented world. The next chapter will discuss my methodology and the specific methods I will mobilise to meet the research aims and objectives.

Interlude 3

Q2- How do I feel about the Muskrat Falls project?
I feel that the impacts are far too negative and the claims that it's non-invasive are a huge lie.
See the colour in this shore ice? It's wrong, and all along the shoreline [where] it is seen the sea ice that usually forms EVERY Winter is not able to form. There is too much sediment there for the snow, sea water and wind to make good ice.

Rochelle Rich

Chapter 4: Methodology, Inuit Worldview and Research Practice

Vignette

I flew into Rigolet on May 24, 2019. I had spent the three weeks before that in Happy Valley-Goose Bay, attending the Labrador Research Forum and meeting with various people who work on the topic of research in Labrador, Muskrat Falls, and health and wellbeing in the region. I boarded the twin otter at the Goose Bay airport with excitement and slight nervousness about what it would be like to spend time in Nunatsiavut as a researcher, and not on a family vacation. There were about twelve fold-down seats and no assigned places on the plane. I took the "milk run", flying North to Nain and then heading back down south, stopping briefly in all five communities in Nunatsiavut, with my stop being last. Throughout the entire journey we flew under the clouds, low enough to see the land and water. Spruce trees slowly became sparser as we travelled north to Nain and tundra emerged; and on the way south through Hopedale, Natuashish, Makkovik, Postville, and finally Rigolet, we could see the waves of the Labrador Sea.

I was one of maybe two or three passengers that disembarked in Rigolet. I spotted my uncle standing outside the blue airport terminal right away. It had been two years since I visited Rigolet and he and my mother are starting to look more alike as they age. He helped me carry my 50-pound duffel bag from the plane door, through the chain link fence separating the gravel runway from the airport parking lot, to his all-terrain vehicle's (ATV/quad-bike) cart. I have not been on an ATV for years either, but over the next few weeks I would get accustomed to it being my main form of transportation as the cars and trucks around town were still thawing out from winter. The roads in Rigolet are not ploughed free of snow in the winter, so people either get around via snowmobile or on foot. My uncle dropped me off at his daughter's (my cousin's) house, where I would be staying, and where she was making lunch for her daughter. The slight clumsiness of not having seen each other in a couple of years dissipated as we caught up and it emerged that our adult selves share many interests: cooking healthy food; yoga; low quality and slightly problematic reality television shows and generally being homebodies.

The intention of my trip to Rigolet was to explore the possibility of undertaking my fieldwork in the community. I suspected it would be a good location, and desperately wanted to work there and spend more time with my family but did not want to be presumptuous about whether or not the community more widely would be interested in the research project I had in mind. However, the afternoon of the day I arrived, when visiting

friends with my cousin, I instantly received encouragement and was told that the topic of the Muskrat Falls project was important and needed to be explored more. This was reassuring and assuaged some of the fears that had been ruminating in my mind over the past few months. Over the next couple of weeks that I spent in Rigolet before taking a trip to Nain, I would be welcomed by almost everyone I met, and told by different people in various contexts (meetings, community events, sewing groups) that they were happy I was there and interested in the work I was doing.

My prior research experience, study of colonialism, and personal experience in Inuit Nunangat has greatly informed my research perspectives and approach. I feel privileged to be able to undertake research in my home territory and believe that I can only do so in a way that is reflective of community values and in line with local expectations about how research should be undertaken. These expectations have emerged over time, as the community has been the subject of many research projects. Protocols are imposed by local governments (e.g. forms and approvals) and also community members. In Rigolet, I was told, community members are particularly outspoken about efforts (research projects, other outsider-imposed activities) that are presented to them, and quick to ask hard questions and demand accountability.

Sometimes, Indigenous research protocols can be framed as paternalistic systems to protect vulnerable Indigenous peoples from researchers (usually presumed to be non-Indigenous). However, I suggest that, especially within self-governing Inuit regions, community and institutional approval processes should be understood as a form of resistance to harmful practices and as entailing the implementation of Indigenous knowledge built on generations of experience with research. In a way, I believe the institutional and community-determined protocols for research in Inuit communities are themselves a form of Indigenous knowledge. Following the characteristics outlined by Grenier (1998), this includes the recognition that Indigenous Knowledge is accumulative and based on experiences, observation and experimentation, as well as being dynamic and adaptable.

Communities have established what works and what does not based on participation in research project after research project, resulting in a complex, multi-faceted research approvals process that involves multiple levels of government, consultation, and approval. On a personal level, I feel accountable to these processes and to everyone in Rigolet to do research in a respectful, culturally appropriate way, as best I can, as discussed throughout this work. To expand on this, the following section highlights my methodological stance, and the theory that informs what I have done in this research project.

Indigenous Research Methodologies

Relationality and Accountability

Indigenous research methodologies (IRM) inform this project's research epistemology, ontology, and methods. IRM are ways of undertaking research which are positioned explicitly within Indigenous worldviews and empower Indigenous peoples to determine their own research agendas (Wilson, 2008). IRM are rooted in relationality and relational accountability; this is practiced in the processes of choosing what to research, how to do research, during analysis, and in the presentation of findings (Wilson, 2008). How this is applied depends on the circumstance and Indigenous community, but could include addressing locally determined research questions, holistic/collaborative analysis of results, and returning results to the community for discussion before sharing in academic or other public contexts. IRM also assumes a relational ontology, where social life is concerned with connections humans have with the land, earth, environment, and other beings (Chilisa, 2012). While Indigenous peoples have always done research, in more recent decades, Indigenous peoples globally have been developing academic research frameworks which reflect these values, such as Kaupapa Māori research (Walker et al., 2006), yuṯa anthropology (Miyarrka Media, 2020), and protocols for researching specific cultural activities (Stolte et al., 2020). Community-researcher relationships are also implicit in these factors. Doing research that is useful and beneficial, while respecting community research protocols and requirements, is key to practicing IRM.

These values are present in Inuit society, as well as in our academic and non-academic methodologies for understanding community life and addressing social and interpersonal issues or conflicts. Relational epistemologies are central to Inuit knowledge systems, where knowledge is shared, often with Elders as important teachers and knowledge holders, including on topics of health and wellbeing. Storytelling is another important mechanism for sharing knowledge in Inuit communities, as it serves as a way of communicating lessons, cautions, and family stories. For example, on the topic of Inuit nutrition and climate change, Egeland et al. (2013) engage Elders and youth through storytelling about traditional food. Storytelling is also present in Indigenous research methodologies implemented in other communities, including what is commonly called 'research dissemination' in academia (Smith, 2013). Storytelling can deconstruct the researcher's position, putting them in relation with participants through the co-creation of knowledge (Kovach, 2010, Datta, 2018).

Relationality is also key to my conceptualization of power throughout this thesis, which is informed by several strands of social theory, mainly from the fields of Indigenous and

settler colonial studies (Wolfe, 2006; Coulthard, 2014; Simpson, 2017), but also other fields such as disability and feminist studies (Stienstra, 2008; 2015). Throughout this research I try to keep in mind the ways that power is exerted not only by people over other people, or by corporations or institutions over people, but also how the land is wrapped into relationships of power in Labrador. After all, this research focuses on Inuit relationships to the land, water, and animals. This dynamic has been central to power practices in Labrador for centuries, since the first traders landed, and continued through to the extractive industries of today. A place-based consideration of power is necessary for understanding how hydroelectric projects and other industries are developed in Labrador, and how Inuit are involved (or not).

While power relations are most explicitly prominent in Chapter 8 of this thesis, the concept is really woven throughout the work, as it is present in every aspect of social life, including discussions around epistemology in Chapter 6, as knowledge is intertwined with what kind of information is made available to who, and in Chapter 7 which discusses how community health is highly related to environmental. My understanding of power also encourages a nuanced discussion of resistance and strengths-based analysis, which understands that power relations go both ways. I hope this work also conveys the power that Inuit have because of their relationship with and knowledge of the land, ability to adapt to changing circumstances, and the power the community of Rigolet has in resisting colonial efforts, including by telling their own stories in this thesis by participating in interviews, surveys, and photography.

While this chapter discusses IRM influenced by other Indigenous scholars such as Coulthard (2014) and Simpson (2017) it is important not to fall into the trap of ‘pan-Indigeneity’, which can essentialize and romanticize Indigenous peoples (Paradies, 2006). Indigenous groups are incredibly diverse, and we have myriads of value systems, laws, and ways of being and doing. Therefore, it is essential to clearly state that this work is rooted in Inuit research methodological practices and my personal experiences as an Inuk woman, while simultaneously learning from other Indigenous researchers who share experiences of settler-colonialism. Like Maile Arvin (2015), I see Indigeneity not solely as an identity, but as a powerful analytical tool for critiquing racist, colonial structures. It also has important political implications for international solidarity (Wilson, 2008).

For Inuit specifically, our relationship with nuna[13] is representative of our relational epistemology and ontology. Nuna is translated into English as 'land' and its importance in Inuit society is highlighted in its place as a root word in key titles such as 'Inuit Nunangat' (Inuit homelands in Canada), 'Inuit Nunaat' (Inuit homelands internationally) and the geographic regions of 'Nunatsiavut', 'Nunavut', 'Nunavik', and 'Kalaliit Nunaat'. Nuna-based activities are integral to Inuit society and culture. It is the place where families spend their time, where intergenerational skill transfer occurs, where pride and identity are constructed (often through overcoming challenges), and where material goods are obtained. Interactions with Nuna are evident throughout my methodology and experience of undertaking research in Rigolet.

In addition to wider IRM, there is a growing field of work focusing on conducting research according to Inuit ontologies and epistemologies to directly benefit Inuit communities. The Piliriqatigiinniq Model for Community Health Research was developed to incorporate a holistic, relational Inuit way of knowing into health research (Healey and Tagak Sr, 2014). Piliriqatigiinniq "is the concept for working in a collaborative way for the common good" (Healey and Tagak Sr, 2014, p. 10). The model incorporates Inuit knowledge into research by integrating Inuktitut[14] conceptual ideas around health research methods and practices into an inclusive research framework. The Piliriqatigiinniq Model includes the concepts of:

- **Inuuqatigiitiarniq** (respecting and caring for others) which can be related to reflexivity, understanding the community context, defining research questions which focus on the community's health questions, establishing good research relationships, and ensuring community engagement;
- **Unikkaaqatiginniq** (storytelling, its power, and role in Inuit ways of being) which can include stories to share knowledge in the research setting, careful presentation of stories, and reflection on our own stories as researchers;
- **Iqqaumaqatigiinniq** (thoughts and knowing coming into one) which connects to finding meaning and understanding in the analysis process; and
- **Pittiarniq** ('being good') which can relate to ethics through consent processes, protecting stories shared in research according to the wishes of participants, and accountability to our relationships with participants and audiences of our research.

[13] I intentionally avoid italicizing Inuktut words so as not to 'other' Indigenous languages in academic writing.

[14] Inuktitut is the Nunavut dialect of Inuktut, the Inuit language.

The resulting model is collaborative, multi-disciplinary, and inclusive of each person and organization's strengths in order to achieve community wellness (Healey and Tagak Sr, 2014).

On a broader policy level, ITK has developed a National Inuit Strategy on Research (NISR), which aims to advance Inuit governance in research through improving the ways research is governed, resourced, conducted, and shared (Inuit Tapiriit Kanatami, 2018). It recognizes that Inuit have long been the subject of investigations undertaken by researchers, yet historically it is the researchers who have benefitted from these interactions through grant funding and career advancement. NISR stresses the importance of partnerships, relationships, and the role of Inuit in setting the research agenda; monitoring compliance with ethical guidelines; and data collection, storage, use, and sharing (Inuit Tapiriit Kanatami, 2018). These priority areas shape how I conceptualize and realize my own research as beneficial for advancing Inuit collective wellbeing.

Overall, reflexivity and an awareness of one's positionality are central to ethical qualitative research in many contexts (not just IRM) and is tied to the emergence of relativism and questioning of power in research. As Macbeth (2001) writes, "Reflexivity recommends an inquiry into the very possibilities of our unreflective knowledge and practices, and in this way, the reflexive move is an aggressive one for bringing more of an unsettled field into view" (p. 37). However, reflexivity has become central in research in Indigenous communities broadly, Inuit communities specifically, and my own work in Nunatsiavut. It is impossible to adhere to the aforementioned IRM concepts without being reflexive. Often, I was greeted by community members with the words, "Welcome home", representing the way that I was received by many family members and residents of Rigolet. These words were incredibly meaningful to me because I did not grow up in the community. They speak to the value of ancestral land and the idea that, even if I did not grow up there, I belong there, and that belonging comes with responsibility and accountability in my research practice.

My own relationship with Nuna is convoluted. I was raised in a different region of Inuit Nunangat than where my Inuit maternal family are originally from. While my family spent time snowmobiling on the land and ice in Nunavut, it was not our land, and there was an absence of the relational aspect of learning from grandparents, aunts, and uncles. When I was 17, I stopped living in Inuit Nunangat full time, moving first to southern Canada, and then to Scotland, with visits to Nunavut in the summers.

Through my role as a researcher I have been able to re-establish my relationship with the Nuna my family knows and belongs to in Nunatsiavut. During my time in Rigolet I stayed with cousins and an aunt and uncle, who spend a significant amount of their time at their cabins, hunting, fishing, and doing other land-based activities. They invited me to come along with them on multiple boat trips. On the first occasion in June 2019, they took me 'egging' for the first time, a term for picking eggs to eat from gull and duck nests. This is a skilled practice, during which you must only take eggs from certain nests in order to ensure the developing embryo is not yet formed and that the mother bird will continue laying eggs. This is representative of Inuit relationality with Nuna and aligns with IRM values of not undertaking extractive research (Kimmerer, 2013). In this context it means taking only the number of eggs that you and the community need and leaving the bird population to flourish. In research methodologies, this can be offered as an analogy for an important lesson: to only collect necessary data and ensure community relations and individual stories are maintained and respected.

Figure 5. Collecting gull and duck eggs in June 2019.

For Inuit, traditional foods have complex social and cultural value. My way of incorporating that value into this research and showing my thanks to participants was by gathering food myself, showing care to the ingredients by using traditional recipes, and distributing it through the research process. On my second boating trip with my aunt and uncle in October 2019, we went picking redberries[15] in coves close to the community. It was a beautiful sunny autumn day, with the trees and grass having already turned vibrant shades of red, orange, and yellow. Redberries are picked after the first frost, so the air was crisp, but it was not at all cold. Once we climbed out of the boat, I only wore a fleece jumper to sit on the shoreline and pick the biggest wild berries I have ever seen. My aunt and uncle remarked that the berries were not as big as usual, but having grown up further north in Nunavut, where plants and berries are generally smaller, I thought they were huge. In all, I picked about six cups of berries that afternoon, which I cleaned and froze when we got home.

Redberries are tart, taste similar to a cranberry, and perfect for baking. Therefore, when it came time to prepare for my open house research information sessions, I used the redberries I picked to create sweets for the events. Community meals are common, and snacks are generally available at most events. For this reason, I wanted to use the berries I picked at the events that I hosted. I baked the redberries into tarts, bread, and squares, all from traditional recipe books. These treats were well-received with smiles and laughter while everyone mingled, with my little cousin shyly asking if he could have some more. Food is shared within the community in Inuit society. Young hunters customarily share their first catch with elders, and most subsequent hunts result in sharing as well. It is a practical way to redistribute food, as elderly people often cannot hunt anymore, but also a way to show respect and care for valued members of the community. The topic of traditional food systems is also inherently linked to the concerns this research attempts to address, as the MFP threatens these same structures through possible contamination.

[15] Also known as partridgeberries in Newfoundland, or lingonberries in Scandinavia.

Figure 6. Redberries picked near Rigolet in October 2019.

One way I have tried to incorporate reciprocity is through culturally responsive gifts for community members and participants. Caribou have been a longstanding source of food, clothing, and culture for Inuit, including Inuit in Nunatsiavut. Caribou meat is prized as delicious and healthy, the fur can be used for clothing or crafts, and hunting is an intergenerational activity that creates bonds within and between families. However, since the early 1990s in Labrador, the George River caribou herd has been dwindling. The current population is only one per cent of the historic high of over 750,000, with a population of about 8,100 animals remaining in 2020 (The Canadian Press, 2020, Government of Newfoundland and Labrador, 2020). However, there is optimism, as the 2020 estimate is an increase from the 5,500 animals recorded in 2018 (Government of Newfoundland and Labrador, 2020). There has been a moratorium on hunting from the herd since 2013. Fortunately, other regions of Inuit Nunangat have healthier caribou populations and can hunt. I spent time in Iqaluit, Nunavut in August 2019 and was able to source several kilograms of nikkuk, dried caribou meat, from an Inuit-owned company, which I was then able to bring to Rigolet. I shared this meat at information sessions and gave portioned packages to interview participants to thank them for their contribution to the research. This was positively received, with plenty of comments about how excited people were to be eating caribou again.

Nuna as Grounded Normativity

In *Red Skins, White Masks: Rejecting the Colonial Politics of Recognition*, Glen Coulthard (2014) defines the concept of place-based Indigenous thought and practice as 'grounded normativity', defining it as "the modalities of Indigenous land-connected practices and longstanding experiential knowledge that inform and structure our ethical arrangements with the world and our relationships with human and non-human others over time" (Coulthard, 2014, p. 13). He goes on to show how the Dene Nation's critique of capitalist imperialism in the 1970s was informed by grounded normativity. Grounded normativity is instructive, teaching us not only how to get along with others, but to practice solidarity with our relations (Coulthard and Simpson, 2016).

In *As We Have Always Done: Indigenous freedom through radical resistance*, Simpson (2017) draws upon these ideas, relating her Nishnaabeg nation's way of life and relationship with their land, Nishnaabewin, as their grounded normativity. Of Nishnaabewin, Simpson (2017, p. 23) writes:

> This *procedure* or practice of living, theory and praxis intertwined, is generated through relations with Michi Saagiig Nishnaabeg land, land that is constructed and defined by our intimate spiritual, emotional, and physical relationship with it. The procedure is our grounded normativity. Living is a creative act, with self-determined making or producing at its core. [original emphasis]

Simpson (2017) outlines how colonialism attacks grounded normativity, confining it to "a quaint cultural difference that makes one interesting" (p. 25) so as not to let it interfere with the goals of settler colonialism.

Following on from this work, I relate the concept of grounded normativity to Inuit relationships with Nuna within Inuit Nunangat. As previously discussed, Nuna is the conceptualization of land, and shapes Inuit ways of being and knowing through social relations, and cultural practices such as hunting. In 'Nuna: Dispossession & Reclamation in Inuit Nunangat', Sandra/Kunuk Inutiq (2020, p. 1) writes about how the knowledge and language around land, ice, and snow is the basis for the Inuit world, as:

> Inuit knowledge and belief system was and is informed by transmission of experiential knowledge, cultural norms, laws, practices, storytelling, and all wrapped up in land names. A place can be called 'many fish' like Iqaluit, checked and validated through human relationships, regular land activities, and observation of the natural cycle of seasons and wildlife.

Further, dispossession of this land, through the imposition of wildlife policies, religious indoctrination, and the wage economy, has resulted in the destruction of Inuit ways of life and family units (Inutiq, 2020).

Nuna has been theorized by other (often non-Inuit) researchers in the context of Inuit political life and linguistics. Pongérard (2017) writes that Nuna has been used by Inuit to advocate on behalf of a political constituency in the vein of Anderson's *Imagined Communities* (1983 cited by Pongerard, 2017), and that, "the very naming and conceptualizing of the land as Nuna has helped Inuit communities to claim a certain territory, but also a specific mode of relating to it which is a key in the construction of their collective identities" (Pongerard, 2017, p. 38). My conceptualization of Nuna as grounded normativity differs, as it moves us beyond understanding Inuit social and political life. I see the principles that emerge from Inuit interactions with Nuna as actually teaching us how to behave. While I agree that Nuna can be a force to unite Inuit and political communities, this is not, in my opinion, through the naming of the land, rather it is through the shared activities and relationships that Inuit have with and on the land that bring us together. In this way, Nuna embodies relationality but also implies, as Coulthard (2014: p. 13) states, the land is "*a system of reciprocal relations and obligations*" [original emphasis] which teaches us to relate to one another and the natural world in an anticolonial, anti-capitalist, non-dominating and non-exploitative way.

Like grounded normativity, Nuna shapes our relations with each other as people as well as human relations with the land and animals. This is evident in the observance of food sharing practices that govern acceptable behavior (as described above). In this way, our relations with different people in society are fundamentally shaped by the land and the animals who are part of it, and sharing food creates bonds between families and communities (Inutiq, 2020). Nuna is also educational, teaching patience, practice, and intergenerational learning through experiences such as hunting, fishing, and gathering berries and plants. Through Nuna as grounded normativity, Inuit land-based knowledge is *practiced.* As Simpson (2017, p. 24) writes, grounded normativity is not:

> so much as an 'ethical framework' but…a series of interconnected, cycling processes that make up a nonlinear, overlapping emergent and responsive network of relationships of deep reciprocity, intimate and global interconnection and interdependence, that spirals across time and space.

For Inuit, these networks of relationships are with each other, as well as animals and the natural world. I endeavor to exhibit this with the example of Inuit-seal relationships below. Peter Irniq, in a foreword to David F. Pelly's (2001) book *Sacred Hunt*, reflecting on his life as a child, describes how hunters waited patiently for seals at their breathing holes, how children learned skills and responsibility by being part of the process of making sealskin clothing, and how his father instructed him to always respect the animals they hunted. In the same book, a quote from Moses Koihok outlines the value of sharing present in the butchering of a seal (Pelly, 2001, p. 67):

> If I was told to fetch seal meat to my relatives, I would respond right away. The seal's heart was the smallest part. The seal's heart, although small, was a delicacy. You had to cut pieces of the seal's heart to share amongst others in camp, no matter how small it can be. The rich seal broth too, even a small portion, you had to share with everyone in your camp. That was how the Inuit had shared their meat. They shared in the old days – Moses Koijok, born 1921, Bathurst Inlet, Nunavut. Translated by Tommy Kilaodluk, Collected by Doug Stern

These stories highlight the grounded normativity present in land-based activities such as hunting, and through interactions with animals on the sea ice. In this way, as described by Coulthard and Simpson (2016), the interactions we have with human and non-human others on the land, water, and sea ice shape value systems and teach us how to enact solidarity with respect to the issues that affect us all.

The processes which have led to the development of the MFP are in direct contrast with Inuit grounded normativity. Key to Inutiq's (2020) discussion of Inuit's changing relationships to the environment is dispossession through imposed Christianity and Western lifestyles and economies. Coulthard's (2014) discussion of Marx's concept of primitive accumulation emphasizes how "the history and experience of *dispossession*, not proletarianization, has been the dominant background structure shaping the character of the historical relationship between Indigenous peoples and the Canadian state" ([original emphasis] p. 13). There are countless examples of this within the settler-colonial Canadian state (residential schools, reserves, forced locations, the child welfare system), but they all have a common theme of dispossessing people from land. Similarly, as a research participant stressed to me during my Master's work (Penney, 2021a), Muskrat Falls was a waterfall before it was a hydroelectric project. The falls have been flooded, completely changing their appearance, and people are no longer able to access the area for social,

cultural, or spiritual activities. The MFP is a form of dispossession from land and water and thus, place-based knowledge.

However, returning to Coulthard and Simpson's (2016) point about grounded normativity being instructive on how to enact solidarity, Nuna also teaches us how to respond to and examine such issues. Nuna as grounded normativity informs my methodology by instructing us in how to be in relation in all contexts, including within a research context. Kovach (2010) writes, that "the focal discussion of Indigenous methodologies ought to be a deep concentration of worldview or paradigm" (p. 40). From this we can see that grounded normativity and Indigenous methodologies go hand in hand as "our doing is intricately related with our knowing" (Kovach, 2010). Both inform our ethical practices, and while methodologies in the social sciences tend to focus on our relationships with humans (though not to disregard the sizable and rapidly increasing field of more than human social science engagement), grounded normativity can help extend that to all relations we have with the environment. Further, considering how Inuit health and wellbeing is holistic and connected to the environment, as extensive research on climate change impacts in the region demonstrates (Durkalec et al., 2015, Cunsolo and Ellis, 2018, Cunsolo Willox et al., 2012), it only makes sense that Inuit research methodologies incorporate grounded normativity. This means solidarity with participants, animals and the wider environment which inform Inuit health through plants, cultural wellbeing, social relationships, and food security.

Positionality Statement

Key to practicing relationality and relational accountability as researchers is being honest about who we are, where we come from, and how this shapes what we do. This is the case for insider/outsider researchers in any context and shapes research approaches and interpretation (Keikelame, 2018). Georgina Martin, a Secwepemc scholar considers how researchers must locate themselves when working within our own communities, and that extra care must be taken when doing so (Martin, 2018). In Inuit communities, often the first question asked when you meet someone or enter a new space is, "who is your family?". This question frames all personal and research interactions. Therefore, my own experience and intentions are central to my methodology and methods. I am a mixed Nunatsiavut Inuk, with family from Rigolet and Carbonear, Newfoundland. However, I was raised in Iqaluit, the capital city of the Inuit territory of Nunavut. This experience of being raised in a majority Inuit community, with visits to my extended family in Newfoundland and Labrador, shapes my work and how I relate to people who participate

in my research as we identify existing relationships (e.g., between families) or forge new bonds.

Being on the Nuna of my ancestors had a profound impact on the way I related to myself, my work, and participants. First, it shaped the way I saw myself as a member of the community. People identified me as being from the community through their greetings, asking about my family, or recounting stories about my visits to Rigolet as a child. This quelled insecurities about my place and right to do this research. Secondly, being able to do cultural activities such as berry picking and egging helped me to better understand Rigolet Inuit epistemologies and ontologies more comprehensively, and gain context for conversations with participants.

My position as a young woman also influenced my positionality within the community and the kinds of knowledge and ways of knowing and being that I have been exposed to throughout my life and research. In my first research visit to Rigolet in June 2019 I was welcomed into a slipper sewing group by my great aunts, the instructors. I spent evening hours surrounded by a large group of Inuit women who were learning, teaching, laughing and chatting about community events. In October 2019 I took part in a saltwater grass picking workshop, during which we learned how to pick a type of seagrass used to make baskets, jewelry, and other items. The nature of this activity and the sewing group meant all participants were women, and many of them also my relatives. These gendered activities shaped my exposure to the community in a way that I expect also shaped my participant recruitment. Everyone who signed up for an interview at the open house events was a woman (while men did participate in the research later). I suspect this is due to my positionality as a young woman, which embeds me in a specific cultural system within the community. While my position helps me gain insight into some peoples' perspectives, it can also be limiting when I intend to gain a fuller picture of the impacts of the MFP on the community.

Despite the large amount that I have learned over my doctoral research process, I know that I still have a lot to understand. I cannot claim that a few boating trips have given me the knowledge that a life-long resident has built up over time. During an interview, one participant remarked that they wished they had a map to show me about a certain area which has experienced environmental change. If I had lived in the community my whole life, I may have already been familiar with this place. It is important not to romanticize Inuit relationships with Nuna and wider epistemology and ontology as being easily understandable through a brief series of activities over several months. However, it is just

as important to recognize that the nature of relationality is that each Inuk has their own relationship with each other, Nuna, and our culture and values.

I must also situate this research within its funding context. I sought funding for this PhD project after my Master's research on the same topic. I applied to several different funding schemes and was successful in receiving funding from the Commonwealth Scholarship Commission. While it might seem paradoxical to undertake Indigenous research funded by the Commonwealth (essentially the colonizers), I see this as a process of reorienting resources to Inuit, almost as a type of reparation. Throughout this project, I attempted to purchase as many products and services as possible from Inuit businesses. Ultimately, I must be clear that the funder had no impact on the direction or critical perspective of my work.

Conclusion

This chapter has aimed to situate me, as a researcher and community member, within the research context, as well as place the research within a wider set of Indigenous and Inuit-specific methodologies. These methodologies are continually shifting as Indigenous researchers continue to assert ourselves within academic and research spaces. While we are, at times, limited by the histories and legacies of research and academic institutions, there are also strengths in upholding relationality, accountability, reflexivity and grounded normativities. In the next section I will discuss in more detail the practical mobilization of IRM through my research methods. This includes my choice of research site, consultation processes, creating community-focused spaces, interviews, surveys, and creative participatory photography.

Interlude 4

A good (indigenous) friend of mine from "away" was amazed how our people continue to live off of the land. She said not all indigenous peoples do that - we are so strong and so lucky. I feel that it's important to hunt, fish and gather on our beautiful land as long as we can safely do so. I say this because there will come a day when this lifestyle will be just a memory. I think this is a major loss and will greatly affect our identity as a people.

Katheline Pottle

Chapter 5: Research Methods and Analysis

Introduction

This chapter provides an overview of my operationalization of Indigenous and Inuit-specific research methodologies and values. It includes a discussion of my research aims and objectives, the centrality of community engagement and networking in the project, and efforts to incorporate Inuit values by creating research spaces which prioritize intergenerational knowledge sharing and experiences. I then go on to highlight each of the data collection methods used in this project: interviews, surveys, and participatory photography. Finally, I discuss my analysis of the various forms of data collected. I should also note that some participants participated in multiple methods within the research. For example, two photography project participants also completed interviews. It is also likely that some interview participants and the participant-photographers completed the survey, however it is difficult to say how many, as the survey was anonymous. The choice to develop multiple methods was made to engage as many people as possible, in the formats that they were most comfortable with.

As an overview of the timeline, my first visit to Labrador was in Spring/Summer 2019, where I spent time scoping out the most appropriate place to undertake the research and building relationships in order to shape the research project. Then, I visited again in Autumn 2019 for a first round of data collection. I originally intended to incorporate seasonality into the research by returning in different seasons, thus was planning to return to Rigolet in late winter/early spring 2020. However, the pandemic interrupted my travel plans and instead I shifted to online and remote research methods until autumn 2021. I then returned to Rigolet to finish data collection, meet with participants and government/community contacts, and share initial findings with the community.

All research undertaken in this project was approved by the University of Glasgow College of Social Sciences Ethics Approval process (Application Number 400180217). It was also approved by the Nunatsiavut Government Research Advisory Committee (NGRAC).

Research Aims and Objectives

To reiterate, based on the background outlined, and existing literature, these following aims and objectives have been determined. The research methods discussed below aim to address these specific subjects.

Aim:

The aim of this study is to understand how Nunatsiavut Inuit perceive the Muskrat Falls hydroelectric project (MFP) and its potential impacts. To meet this aim, I set the following objectives.

Objectives:

- To explore how the potential or perceived risks of the MFP are understood from the perspective of local Inuit conceptions of health and well-being.
- To understand desired health risk communication strategies for information about the Muskrat Falls project.
- To explore the relationship between the Muskrat Falls project and existing structures of colonialism in Canada.

My focus is on the political and power dynamics which allow hydroelectric projects to be built in a manner which is unacceptable to communities. Further, I consider community members' perspectives on how to improve upon health risk information which they rely upon to make decisions for their (and their family's) traditional food consumption and cultural activities. The methods below explain the methods I adopted to pursue this investigation.

The core emphasis of this research has stayed relatively similar from the inception of the project to its completion, with the early discussions with community members, leaders and government officials shaping the orientation of the work. In early conversations with community members and NG officials, we discussed the overwhelmingly negative social perception of the MFP. While we felt it still worth delving into that topic to understand nuanced perspectives, we also discussed how investigating information sharing and health risk communication in relation to the project would be useful on a policy level while also being impactful to the community. This is because both the health and environmental concerns related to the MFP are frequently discussed locally, posted about on social media, and come up in the news regularly; often with many questions raised and sometimes misinformation shared. Based on these conversations, questions about information around the MFP were integrated into the surveys and interview guide. Chapter 6 focuses on communication around the MFP, as well as information needs identified by the community and potential mechanisms for sharing such information.

Figure 7. Visual representation of methods and research strategies employed in this project.

Communication and Network Building

In an online article in *Northern Public Affairs*, Morgan Moffitt, Courtney Chetwynd, and Zoe Todd (2015) argue that Northern research should be directed towards, "a reciprocal, accountable praxis that is deeply rooted in the issues that are identified by, and that matter to, Northerners". The reality is, as Chetwynd writes, "Collaboration is not a trend, but a fact of living in the North". Due to this fact, much of the first year of this project focused on building lines of communication that would allow me to proceed with the work in a way that was rooted in reciprocal, mutually beneficial relationships (this eventually became essential in moving the project forward during the pandemic). The following paragraphs outline the ways in which I attempted to construct these associations with local governing bodies. My previous work experience in government health policy, which included monitoring and approval of health research projects, allowed me to understand that collaboration would strengthen the meaning and impact of my research.

In Spring 2019 I travelled to the central Labrador hub of HVGB for about three weeks and spoke with other researchers, community representatives, and the NG Researcher/Evaluator at the NG Department of Health and Social Development, who indicated that the community of Rigolet had expressed that they wanted more information about the MFP. After this, I travelled to Rigolet to gauge further community interest (as detailed in the previous chapter), and travelled to Nain to visit the Nunatsiavut Research Centre and staff who govern research in the area (through the NGRAC). The Research Centre staff also provide guidance on research topics and methods.

This consultation process with NG, RICG and community members was essential in shaping the research design. It was evident, based on my experiences with people in multiple communities in Labrador, that there is a lot of mistrust about the MFP and also a significant amount of misinformation, much of which is shared on social media. This said, I do not see my role as one of correcting misinformation, instead I considered what people know, what they want to know, and the best way to share accurate information about the Muskrat Falls project and its impacts in a dependable way. In this research, community engagement shifted and reshaped my research questions and objectives as I progressed through the project. While the main focus of the project remained the social and wellbeing impacts of the MFP, the addition of the focus on health risk communications arose from conversations with community members and government officials. In this way, the research was responsive to community concerns.

Figure 8. Rigolet's harbour at sunset (June 2019).

A practical implementation of collaborative, multisectoral (i.e., government, non-governmental organization, community) research in Inuit communities requires engagement beyond the consultation phase (Healey and Tagak Sr, 2014). It includes bringing others into the research project from the beginning to the end, and even beyond that through the delivery of results and follow up over time. In this case, I have developed a close working relationship with NG and the Rigolet Inuit Community Government (RICG) which has allowed me to consult these organizations on the research results and ideas for sharing data. Considering the importance of community accountability, results were only to be shared in an academic context (e.g. conference or journal article) *after* being shared within the community. Any resulting academic publications will be shared with the key organizations involved, along with a plain language summary of the document.

Sharing data with the community through a formal data sharing agreement with the NG is another way of implementing accountability as outlined by Healey and Tagak Sr. (2014). In addition to practical forms of sharing such as purchasing supplies locally, sharing skills, and giving gifts at events or in interviews, sharing data and research results is a way of recognizing the community's right to know how important issues in which they are intertwined are being portrayed in research. It also provides a form of member checking for accuracy of interpretation.

In terms of on the ground community communication about the research, open house information sessions were essential. I held two open house events in Rigolet in 2019, which were advertised on Facebook and by posters placed around town (e.g. in the town council building and local store). Around 45 people, or 15% of the community's population, attended the first two open house meetings. I attribute this high level of participation to a belief that people are generally interested in engaging with the topic of the MFP, as well as open house being valuable and well-liked forums for community gathering and sharing ideas and food. I also must consider how my own positionality played into attendance, as I am sure that some family and friends attended because they know and support me and my family or were curious about what I was up to.

I also held two open house events in Rigolet in 2021, which were advertised on Facebook and the radio. These were held in conjunction with other researchers who were in town, so we held a sort of 'research sharing night' at the local community hall. About 20 community members attended each of the two events (approximately 40 people total). As this was during the period where I was sharing preliminary results with the community, I displayed photos from the photography project (more details below) and participants and other community members attended to see this work. I also provided a pamphlet about the research/results and generally chatted with attendees about their reflections on the research and photography. All of these communication strategies were essential to raising awareness of the project within the community, building trust and being transparent.

Despite the benefits of a support network and existing connections, there are undeniable challenges which come with working in ones' home community. There can be pressure from friends and family to operate in a specific way, or to undertake (or not) certain activities. However, I tried to be aware of these issues and believe I have been able to manage them and even reframe them in terms of accountability. Being invested in the place I work can lead to higher quality work, as I feel it is necessary to accurately portray the perspectives of people with whom I have lasting relationships that go beyond my research. There are very few Inuit researchers working within academia, despite research in our communities being incredibly common. I see part of my role as being an example of what we can do within our own communities and on our own terms.

Creating Intergenerational Space

Another way I aimed to reflect Inuit epistemology and ontology in my work was by creating intergenerational space by having children, adults, and elders present at community events related to the research. As is common in research projects in

Nunatsiavut, I held the open house information sessions mentioned above for the whole community to learn more about the research. Children were welcome, and I provided activities and raffle prizes (for adults and children). This is a multi-pronged intentional approach, aimed at engaging the whole community. First, it allows parents to attend without having to find a babysitter to look after the children. Second, it creates a space for children to engage in a culturally relevant activity (Inuit legend coloring pages were provided), while being around a discussion which is inherently connected to their wellbeing and future. While children were not often actually engaged in the conversation around the MFP, they are the most likely to be impacted by any neurotoxin health impacts (Calder et al., 2016).

During the first open house event, a little girl of about two to three years old attended with her mother. She was born after the caribou moratorium, thus presumably has had limited or no access to caribou since birth, unthinkable for any other generation until now. During the event, her mother gently shared a small piece of meat with her and her siblings. Her older siblings ate it, but soon returned to the snack table for vanilla cupcakes. The little girl sat with her mother a while, coloring the Inuit legend pictures. After a few minutes, she indicated by pointing across the room that she wanted more nikkuk. Her mother helped her off her lap and encouraged her to walk over to the snack table, where she was passed another piece of meat from the bowl. I watched her do this a couple more times. The room collectively radiated with pride at a child who had discovered a love for a food that is now scarce, that would once have been a staple in her ancestors' lives. In this research I build on the scholars and community members who have challenged researchers to create research spaces which reflect Inuit worldviews and tried to use my available resources to provide access to a material and social good that is difficult to come by.

Working within ones' own home territory and around ones' family is a particular experience that challenges any positivist notions of objectivity or impartiality. My position in the community and experience with Inuit health research greatly shapes my choice of methods (described in detail below). This was immediately clear to me when I arrived in Rigolet for consultation and then preliminary data collection and was faced with navigating my family's role in my research. I call my mother, who lives in a different part of Canada (not in Labrador), once a week while I am in Scotland, every Sunday evening. The seven-hour time difference makes it difficult to call during the week when we are both working; by the time my parents get home from work I am already asleep. When I travel to Canada, of course, we speak more frequently. While I was in Rigolet my mother and I exchanged

messages[16] at least once a day, and had phone calls every couple of days. She was excited, and I suspect slightly jealous, that I was spending so much time with her family and learning new skills, such as sewing slippers, picking saltwater grass, and playing bingo every Wednesday with her aunt and cousins.

Anyone who knows my mother knows she is opinionated. It is a trait among the women in my maternal family, who will not hesitate to tell you what you need to do and how and when to do it. This creates an interesting dynamic in the research process. For example, the community of Rigolet has a Facebook page that is used for a variety of purposes, including advertising events, fundraisers for local causes, the occasional lost dog or search for a snowmobile windshield. I advertised my events on this page, which my mother is also a member of. This proved to be a great way to spread the word about my events, but the nature of Facebook means posts are open to comments from anyone in the group. Knowing my mother, I was not entirely surprised, but still somewhat alarmed, when she started encouraging people to attend my events and emphasizing our relationship as mother and daughter. My research design courses had not covered *this* recruitment method. At first, I worried about whether this was a form of coercion. Eventually, I decided not to take it too seriously, as it was for community information sessions, not data collection. However, this experience stressed for me some of the considerations for community-based research in ones' own home territory, and the ways in which relationality exists in practice. The nature of relationality is that we are in relation with others, and inherently not in full control of those relationships. Other community members, including mothers, can determine how research is publicly viewed and how to engage with it. This experience directly challenges the idea that researchers are a self-contained agency of knowledge production.

This next section develops these considerations whilst describing in more detail the methods used in this research project including: consent; interviews; participatory photography; anonymous surveys; and data analysis processes.

Consent, De-identification, and Anonymization

Consent is an ongoing process, and one which requires, in addition to written consent, consistent attentiveness to verbal and physical cues. In this research, possible interview participants were given an information sheet about the research and consent form in advance when possible, in order for them to familiarize themselves with the work prior to

[16] Via internet, as there is no mobile phone signal in Rigolet.

our discussions. Otherwise, participants were given these documents at the interview and given time to review them, ask questions, and sign when they were comfortable.

When the project shifted to remote methods, consent forms for the interviews and photography project were put online on the University of Glasgow Online Surveys platform. On this platform, participants could also save PDF files of the research information. Survey participants also reviewed an information sheet and consent form in advance of completing the survey on the same platform. See Appendix C for the interview information sheet and consent form.

Interview participants were de-identified during transcription and randomly assigned a participant number. Surveys were completed anonymously, however participants could choose to participate in a prize draw, which required leaving their name and phone number to contact the winner. This contact information was separated from their survey responses. After the photography project, participant-photographers were given the option to be de-identified, or to have their name displayed alongside their photo and descriptions. All but one decided to have their name displayed. The decision to include names (if desired) was made to acknowledge the artist behind the image and message. Participants in this part of the research also filled in a form to designate how their photos could be used (e.g., in photo exhibits, academic publishing, etc.). Next I will outline the specifics of each method.

Interviews

I completed 14 semi-structured interviews with adults living in Rigolet who wanted to share their thoughts on the MFP and/or its impacts on their community. Participants were engaged by either signing up for an interview at an open house event, by showing interest in informal conversations about the research project, or due to their leadership role in the community. In interviews, we discussed their overall perspectives on the MF project, their understandings of the project and its issues over time, and viewpoints on existing and desired health communication strategies. All interviews and other research activities took place in English, as it is the dominant language in the community. While Rigolet has its own dialect of Inuktut, it is only spoken by a few members in the community.

Semi-structured interviews allowed for both focus and flexibility (Bryman, 2008). They also allow for the interviewee to shape the conversations, as “the emphasis must be on how the interviewee frames and understands issues and events – the is, what the interviewee views as important in explaining and understanding events, patterns, and forms of behaviour” (Bryman, 2008, p. 438). I employed techniques such as storytelling and

envisioning, in which the researcher asks participants to tell them a story about their experience (e.g., “Can you tell me about the first time you heard about the Muskrat Falls project?”), or to imagine a positive future situation (e.g., “What would good communication about the Muskrat Falls project look like to you?”) (Smith, 2013). These are culturally relevant tools that help form networks and bonds. They result in rich data comprised of the values and emotions associated with a reflective retelling (East et al., 2010). Storytelling can also have benefits for the storyteller, as East et al. (2010) highlight how, “The relating of personal stories to interested listeners in an affirming environment can provide the foundation for the development of resilience. Storytelling is a powerful process and method that extends beyond research and has the ability to bring about strength and healing.” (p. 23).

Most interviews were audio recorded with written consent. Handwritten notes were also taken. After the interviews, they were transcribed using MAXQDA software. Considering Inuit knowledge is embodied in connection to the land and environment, Healey and Tagak Sr. (2014) suggest that for interview-related data collection, sessions should be conducted in a space that is comfortable for the participant. Therefore, I met in-person interview participants in their homes or in a centrally located community space, the local museum/historical center. This is a bright, spacious building with community artifacts and photos of our ancestors on the walls.

Figure 9. Local community heritage building where open house event and interviews were held.

Participatory Photography

Before the COVID-19 pandemic, I planned to undertake arts-based research with youth at the local school. In fact, I had already gained ethical approval for this from the University of Glasgow and Newfoundland and Labrador English School District. Unfortunately, this did not proceed as planned due to the public health measures put in place during the pandemic. I was only days away from travelling back to Rigolet for more fieldwork when the COVID-19 pandemic escalated in Canada and the United Kingdom. Therefore, I was required to adapt my research methods. To do this, I considered the ways I could adjust my methods to continue with data collection, as time passed, the MFP was still being constructed, and the issues remained. I wanted to continue my engagement with creative methods, as online/phone interviews and focus groups were not ideal due to the weak internet connection in Rigolet which would prevent the use of software like Zoom or Skype. The solution I came up with was an online creative participatory photography project, inspired by the photovoice research method. The intention was for participatory photography to be a tool to connect with community members online and continue the research relationship remotely.

Arts-based methods allow for personal expression and can also be completed on one's own time which is suitable for remote methods. They come from the perspective that research is a productive process, that it "makes things rather than simply documenting them" (Tarr et al., 2018) (p. 37). Tarr et al. build on Back's (2007 cited by Tarr et al., 2018) argument for 'live' methods, that acknowledge and incorporate the dynamic nature of social life. They assert that arts-based workshops as a method are a research process, constituted by the experience of participation and the backgrounds of researchers and participants, rather than a research product. Collaborative creative experiences have been seen to be beneficial to participants, both when experiencing a research-related workshop (Tarr et al., 2018), or when reflecting on their regular participation in arts such as crafts-making (Maidment and McFarlane, 2009).

Photovoice is a creative method developed by Caroline Wang and Mary Ann Burris (1997). It is often used in community based participatory research/participatory action research (Nykiforuk et al., 2011, Palibroda et al., 2009). It is influenced by feminist inquiry and addresses the power balance of the researcher/subject relationship by bringing participants into the whole research process (Palibroda et al., 2009, Poudrier and Mac-Lean, 2009). Photovoice has been used in research similar to this project, including health promotion and research with Indigenous communities (Nykiforuk et al., 2011, Poudrier and Mac-Lean, 2009). In photovoice projects, a group of participants usually takes photos

prompted by a certain subject or topic and discusses them with the group and researcher. The photos and the social engagements are the research data. Community members are considered co-researchers who tell stories about the photographs they take and what they mean to them. The images and stories are used as tools to engage policy and decision makers, ultimately to improve conditions/make changes (Palibroda et al., 2009).
There are five key concepts to the photovoice method, as outlined by Palibroda et al. (2009):

1. Images teach
    - Images identify concerns and experiences, depict struggles, and show a view of a community.
2. Pictures can influence policy
    - Pictures convey messages in a strong, emotional way and enhance policy makers' understanding of an issue.
3. Community members ought to participate in shaping public policy
    - Community participation gives people an opportunity be involved and influence decisions.
4. Influential policymakers must be audience to the perspectives of community members
    - Exhibits or presentations can facilitate the sharing of exchange of information between participants and policy/decision makers.
5. Photovoice emphasizes individual and community action
    - Photovoice creates information and evidence for social action and change.

Photovoice's flexibility made it a good option for this project and my research methodology, as it can be adopted in ways that best meet partner community needs (Nykiforuk et al., 2011). This made it well suited to respond to the pandemic situation which was fluid and ever-changing.

The Prairie Women's Health Centre of Excellence (PWHCE) used photovoice to empower women and girls to represent their health-related needs and interests (Palibroda et al., 2009). While most participatory photography projects are completed in person (including the PWHCE project), online iterations have been attempted. Lichty et al. (2019) used a password-protected and invite-only blog-based space through Wordpress. In the end, participants in this study felt Wordpress was not user-friendly and recommended Facebook

as a more familiar platform through which to facilitate engagement[17]. Due to the feedback from Lichty et al. (2019) and Facebook's existing popularity in Rigolet, I ended up choosing the platform for this project. Facebook as a research platform is increasingly common, and has been used in smoking cessation support groups by Cheung et al. (2017)[18].

Since I could not travel to Rigolet due to the pandemic, I partnered with Eldred Allen, the owner of Bird's Eye Inc., a local photography and drone company, for the photography project[19]. Before the start of the project, I purchased and shipped all of the necessary equipment to Rigolet (cameras, a laptop, memory cards, cables). Then, Eldred hosted two workshops with six participants in total at the community hall in Rigolet (participants attended both workshops). The first workshop focused on how to operate the cameras and upload photos. The second focused on photography techniques (e.g. framing photos) and storytelling through imagery.

Participants were recruited on the local community Facebook page, since it is on the same platform being used for the research project. I posted an image describing the project (see Figure 10) and had about 10 people express interest. As I had only ordered supplies for eight participants, I selected the first eight people to get in touch with me to participate. Two people had to drop out for personal reasons, therefore six participants ended up contributing to the project.

[17] In Lichty et al.'s (2019) study, each blog had 6-12 youth participants. Participants were asked to give a 'thumbs up' 'rating' for posts they wished to discuss further and researchers posed questions and facilitated discussions in the comments. The 'rating' system was removed once discussion posts were identified.

[18] In Cheung et al.'s (2017) research, participants agreed to have their posts analysed without disclosing personal information in the results dissemination. The moderator posted in groups and discussed with participants, and posts could only be read by participants and the moderator. Content was then archived and converted to anonymous transcripts for content analysis. This differs from my project due to the increased level of involvement from participants but is similar in the set-up of the groups and privacy settings envisioned.

[19] Eldred is an acclaimed photographer and drone operator and has worked with many researchers and corporations on photography and videography projects.

Figure 10. Advertisement for photography project.

After the participants were selected, we all entered the private Facebook group, where I posted more information about the project including: an outline of the project structure (see Fig. 11), the consent form (which had been converted into an online form with checkboxes for consent), and two short YouTube videos about other photovoice projects. Then, I posted broad instructions and a 'mind map' of how to go from a research question to an actual photo, adapted based on a model from the Rutgers 'Photovoice Facilitator's Guide' (Jongeling et al., 2016, p. 124). After Eldred delivered the two workshops, I posted in the group asking questions (see example in Fig. 12 and Appendix D for full list of questions), and asked participants to respond to them via photography, while providing an example through my own response to the question. I posed questions approximately twice a week, unless participants indicated they would like more time. To make decisions around timing of the photos and questions (e.g., 'how frequently would you like me to pose questions?'), the 'poll' feature was used in the Facebook group. The process of responding to questions was very open to personal interpretation to allow for creative expression and flexibility. As seen in Figure 12 below, a few open-ended questions on the same topic were asked, and participants could answer any, all, or none of them. Some participants answered all of the questions, while others only chose to answer once or occasionally.

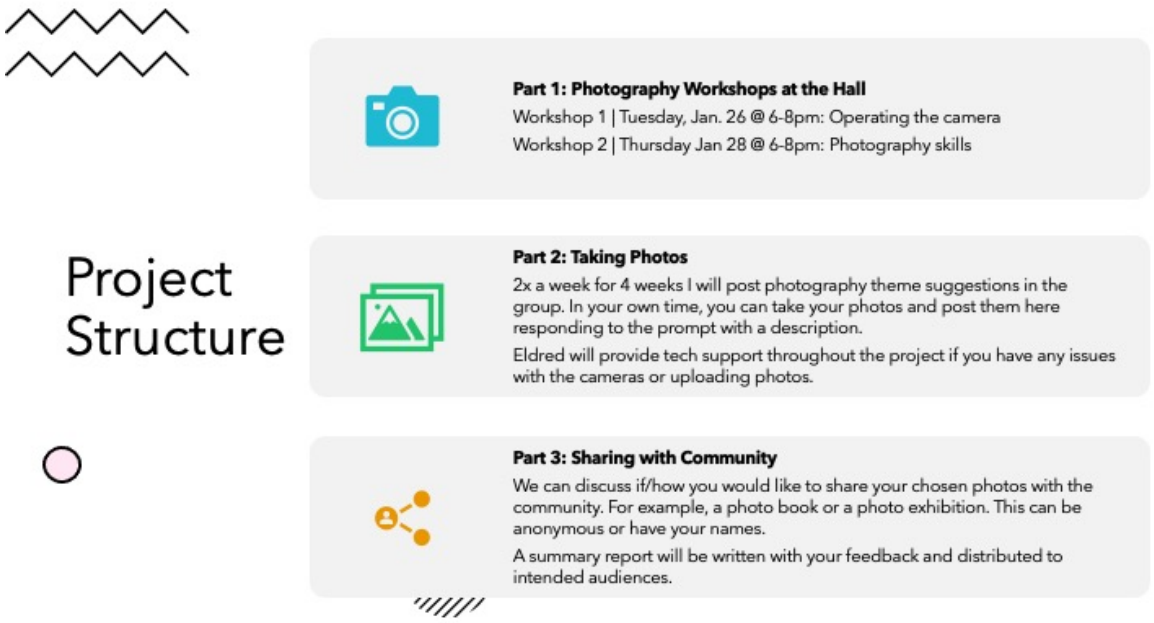


Figure 11. Photography project structure information shared with participants.

At times, it was necessary to take breaks between posing questions because of increased household responsibilities (e.g., during lockdown periods when participants may have had additional caring responsibilities). We also had to breaks due to infrastructure issues, as the internet would sometimes not work in the community for up to a week at a time (I reflect on this in Chapter 9). In total, I asked seven questions, a process which took about three months in total. I have integrated the photos and descriptions throughout this thesis (e.g., in the interludes between each chapter and throughout Chapters 6, 7, and 8), alongside the other data sources to provide another layer of visual and textual complexity to community perspectives on the MFP.

Figure 12. Example of questions asked to participants.

The photography project had three main types of outputs. First, the photographs uploaded in the Facebook group. Second, the text-based data in the form of the descriptions of the photos. The third type of data includes discussions outside of the formal research process about the experience, called 'headnotes' (Emerson et al. 1995 cited by Tarr et al., 2018). Tarr et al. (2018) note that when using workshops as a research method, bodies of data are partial and do not necessarily triangulate. The different types of data do not necessarily say the same thing, but instead they layer to create a fuller picture of the topic at hand. They claim that these layers are bound by the experiential layer, which can be difficult to record as data. However, I attempted to include these 'headnotes' through reflection on my discussions with participants and community members in November 2021. At that time, I was able to travel to Rigolet and held two community open house sessions at which the photos and descriptions were displayed. All participants attended, as did many of their family members, friends, and those simply interested in the project. These discussions were valuable for gaining insight about the impact of the photography project, provoking conversations about the MFP. I will discuss more about this throughout the remainder of the thesis.

Common ethical questions raised in social media research are: "How will data from research subjects be kept secure on the social media platform?" and "How will the privacy of research subjects be maintained?" (Franz et al., 2019). I addressed these issues in the consent form and the 'About' section of the Facebook page (see Figure 13), where participants were asked not to share other peoples' posts outside of the group. The Facebook group was private and hidden. The following text was included in the consent form:

> **Privacy and Confidentiality**
> Confidentiality is ensuring that identities of participants and information collected from participants are accessible only to those allowed to have access. In this project, participants will be given the choice in whether or not they would like to be identified (for example, if you want your name next to your photos and stories in an exhibit or book). I will always ask if you want to be identified and respect your decision. I will ensure confidentiality unless evidence of wrongdoing or potential harm is uncovered. If this is the case I may have to contact relevant legal bodies or agencies. I take participant confidentiality seriously and will protect your data to the best of my ability.
>
> Every reasonable effort will be made to keep your information confidential, and you will not be identified in any reports or publications without your explicit permission.

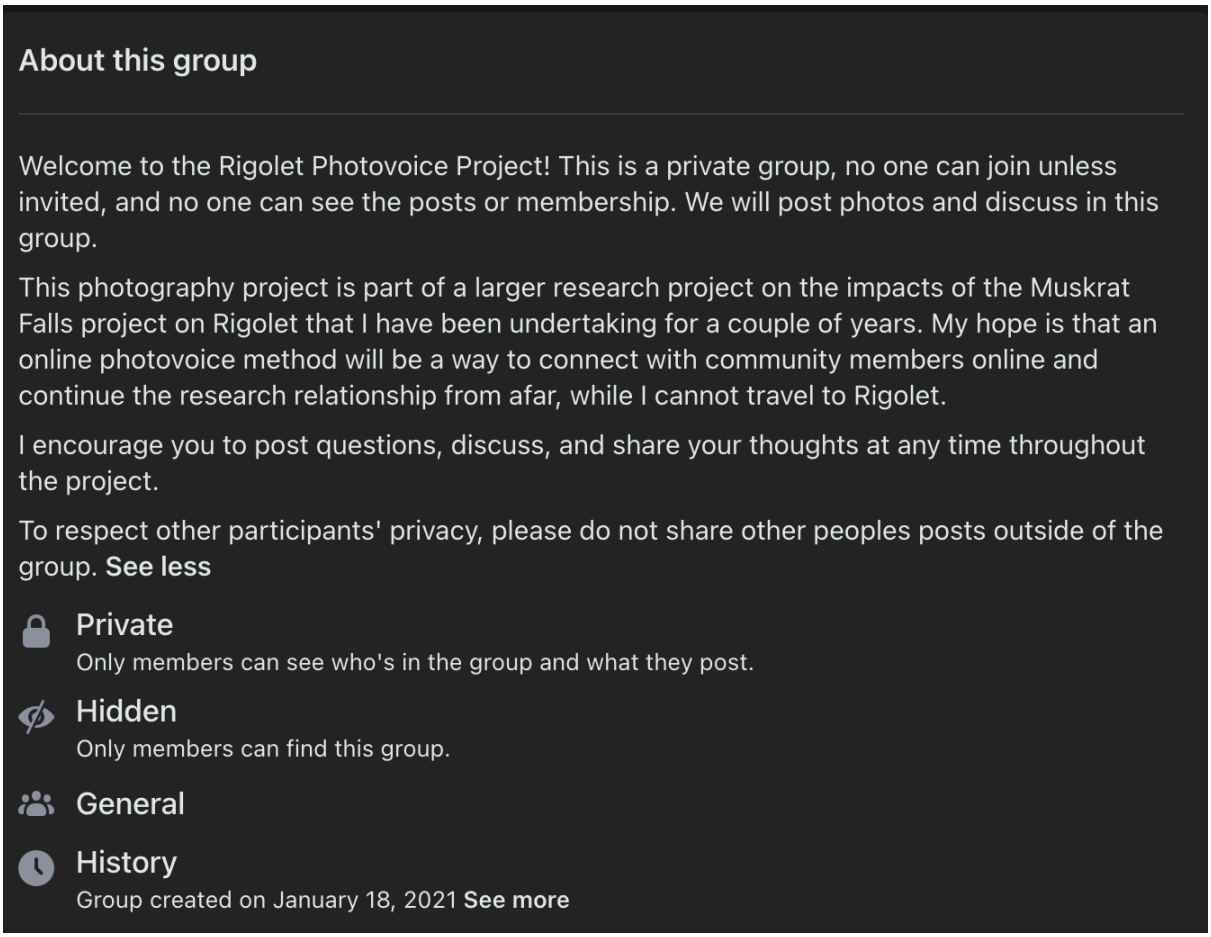


Figure 13. Photography project 'About' page details.

One of the major challenges for photovoice is the claim that it will influence policy or the decision-making process in organizations, communities, or governments. To avoid letting down participants, there needs to be community relationship building to create awareness and manage expectations (Nykiforuk et al., 2011). Johnston (2016) also suggests engaging policy and decision-makers from the outset, and to stress that photovoice can be policy-*informing* rather than policy-changing. Managing these expectations was a priority for this project and I did not promise that we would change policy with the results but communicated that I would share the results with policymakers.

For participants, taking part in photovoice can involve a large time commitment, can cause trouble presenting complex/abstract ideas, and bring up negative feelings (Palibroda et al., 2009). In this project, these issues were mitigated by having the project online (participants could partake at a time that worked best of them, or easily exit from the group), by providing gifts to acknowledge the time commitment (participants were given printed copies of all of their photos), and by providing support resources (a helpline resource included in the consent form) if negative feelings arose.

Anonymous Surveys

Leading and facilitating health research in the area (particularly quantitative types) required a recognition of past harms associated with research in Inuit Nunangat. Healey and Tagak Sr. (2014) frame this as understanding the community context, which can result in a deeper grasp of the findings. While they give the example of knowing about whether a community has a historical connection to residential schools, another important consideration may be about how health research specifically has been conducted in the past. For example, skin grafting experiments, where skin from family members was grafted onto each other to investigate why some grafts work and others fail, were conducted on Inuit in the late 1960s and early 1970s. This was done without informed consent and resulted in participants feeling wronged and as though they were taken advantage of by the researchers (Oudshoorn, 2019). All research must be considered in the wider research and community context, but research that is separated from peoples' words, such as surveys, require a great deal of sensitivity in Inuit society.

I do not mean to assert that qualitative research is harmless, and all quantitative work is harmful, as surveys are still an important source of data in Inuit Nunangat. For example, there is currently excitement about the recently announced National Inuit Health Survey, titled 'Qanuippitaa?' (meaning "how are we?"), which began in early 2022 and with data collection occurring every five years. It will be the first health survey where data collection will be led by Inuit in each of the four regions of Inuit Nunangat and results will be controlled by Inuit. 'Qanuippitaa?' has six principles: it is Inuit-determined; focused on Inuit health and social equity; strengths-based; collaborative; rigorous in methods; and innovative (Inuit Tapiriit Kanatami, 2022).

The surveys in this project were developed with this context in mind. Anonymous surveys were developed as part of the data triangulation process, to complement qualitative data, and to better understand the perspectives of people who did not wish to participate in an interview or group conversation. It focused on perceptions of the MFP, anticipated harms, and benefits, as well as collecting information about best practices for health risk communication strategies. The survey originally consisted of 10 questions and was available to fill out at open house events and group conversations. After the pandemic began, I decided to also put the survey online (advertising on Facebook) and expand the number of questions. I used the University of Glasgow's Online Survey tool for this purpose, and 47 participants provided responses (10 in person paper responses and 37 online).

The survey (see Appendix B) clearly stated that participants must be Rigolet residents, and the second iteration also collected demographic data on age, gender, and employment. Participants in interviews and the photography project were not asked to provide detailed demographic information. Instead, participants were asked to introduce themselves as they would like to be known. This decision was made to give people agency within the de-identification process. While I could not share much information because of the size of the community and risk of identification, it allowed people to describe themselves in ways important to them, with as little or as much information as they choose. A relational nature was often present in these descriptions, as people introduced themselves in relation to people meaningful to them (e.g., as parents and grandparents) and in relation to the land and areas they and their families are from (e.g., how long they have lived in Rigolet or other communities they were raised in).

Ethnographic Refusal

Ethnographic refusal is a concept which describes practices whereby not all knowledge is made available to the academy (Tuck and Yang, 2014). Alex Zahara (2016), in an online article titled 'Refusal as Research Method in Discard Studies', writes:

> Ethnographic refusal is a practice by which researchers and research participants together decide not to make particular information available for use within the academy. Its purpose is not to bury information, but to ensure that communities are able to respond to issues on their own terms. An ethnographic refusal is intended to redirect academic analysis away from harmful pain-based narratives that obscure slow violence, and toward the structures and institutions that engender those narratives. It is a method centrally concerned with a community's right to self-representation.

Therefore, ethnographic refusal is a collaborative process. Participants holding back or asking for something they say to be excluded from the research is part of ethnographic refusal, as researchers also decide not to communicate some results or experiences of their work. Refusal can be a form of resistance to making some information public, as "In short, researcher and researched refuse to fulfill the ethnographic want for a speaking subaltern" (Tuck and Yang, 2014, p. 239).

Refusal is a concept intertwined with frameworks described in previous chapters which inform my work, including IRM and decolonizing and anti-colonial research methodologies (Zahara, 2016). Refusal, as conceptualized by Tuck and Yang (2014) is also

informed by postcolonial literature and settler colonial studies which consider the exploitation of people, land, and knowledge systems. It is also already practiced by settler colonial knowledge systems, as "the academy as an apparatus of settler colonial knowledge already domesticates, denies, and dominates other forms of knowledge. It too refuses. It sets limits, but disguises itself as limitless." (Tuck and Yang, 2014, p. 235).

Tuck and Yang (2014) highlight how social science researchers often make meaningful relationships with participants who then entrust us with their stories. But we must also account for "the academy's voracious hunger for the secrets" (p. 234). This is something I contend with, as I personally have access to many different spaces by virtue of my family. At times, people told me things, within and outside of data collection settings, because of who I am and who I am related to. Because of this, I need to consider my positionality in relation to the data and the impact that it might have if I were to share certain information with the academy or outside of the community. Audra Simpson (2016) contends with these tensions, writing, "Can I do this and still come home; what am I revealing here and why? Where will this get us? Who benefits from why?" (p. 78). Ethnographic refusal allows Indigenous researchers to maintain our relational accountability by upholding our responsibilities to our communities (Zahara, 2016).

This does not prevent a critical view of power dynamics and problematic behavior or structures, which should still be interrogated. Refusal also does not completely abandon or reject research as a mode of inquiry. As Tuck and Yang (2014) write, "as fraught as research is in its complicity within power, it is one of the last places for legitimated inquiry. It is at least still a space that proclaims to care about curiosity" (p. 223). In practice, this means a commitment to anti-colonial Indigenous research methodologies and methods which aim to situate Inuit desire within the context of the MFP.

Ethnographic refusal and being privy to some forms of knowledge brings up the topic of negotiating personal and professional identities during fieldwork and in research more generally. Cash Ahenakew (2016, p. 327) describes this uneven interface between Indigenous and non-Indigenous worldviews in his poem 'Academic Indian Job Description', which includes the following verse:

> have to know
> how to live with the guilt of having credentials, a secure job
> and the awareness of compliance with a rigged system
> built on the broken back and wounded soul of your family members

These are the thought processes that go into deciding what you 'need' in ethnography and data collection, as an Indigenous researcher. We are constantly forced to reckon with the legacy of harmful research practices and consider if we can justify our existence within the research and academic structures that have harmed our communities.

Simpson (2017) discusses the tensions between Indigenous epistemologies and ontologies and those of universities when discussing her experience doing research with elders. She writes, "The parts of me that I drew on in this circle of Elders were liabilities at university – gentleness, humility, carefulness, and the ability to proceed slowly." (p. 14). Instead of prioritizing settler knowledge systems, she suggests that Indigenous peoples need to refuse that system and continue working within our communities, rooting ourselves in Indigenous knowledge systems. For me, ethnographic refusal relates to immersion in Inuit knowledge systems and respecting that some forms of knowledge are not meant to exist in academic spaces. In my own research practice, this involved being attentive to participant tone and body language during discussions and excluding data from the record when asked.

Keeping these considerations in mind, the next section of this chapter will describe my data analysis process.

Analysis

Theoretical Basis

The theoretical basis for this analysis is rooted in 'Iqqaumaqatigiinniq', described in the Piliriqatigiinniq Model as "the Inuit concept of all thoughts, or all knowing, coming into one. It is often referred to as part of the holistic Indigenous worldview" (Healey and Tagak Sr, 2014, p. 8), and 'Unikkaaqatigiinniq', which recognizes the importance of storytelling and its power and meaning in Inuit society (p. 6). Key to this is relationality and reflexivity, as described in every step of this research process. This means respecting peoples' stories as told and according to their wishes.

Inductive narrative analysis allows for the inclusion of storytelling, as well as relationality and reflexivity (Chase, 2011). Narrative analysis results in coding large chunks or blocks of text, retaining the participant's story/narrative. This contrasts with other forms of analysis which may break up the participant's words and combine them with others' transcripts. Narrative analysis encourages the researcher to analyze and present the participant's story in its context. This is part of a social constructivist paradigm which is also concerned with how interviewers and interviewees co-create the ways that accounts are presented through social interactions (Earthy and Cronin, 2008). These values are

present in this work from the beginning, thus narrative analysis techniques fit well in this project.

Storytelling is an incredibly powerful method for connecting people, places, and social issues. As Bochner and Riggs (2014) write, “Storytelling is the means by which we represent our experiences to ourselves and to others; it is how we communicate and make sense of our lives; it is how we fill our lives with meaning.” (p. x). In this research, narrative and storytelling cues were integrated into the interview guide (see Appendix A). This included broad questions and those referring to time/chronology (Earthy and Cronin, 2008). For example, “Can you tell me a about the first time you heard about the Muskrat Falls project? Has your opinion changed from the first time you heard about it until now?”. Other storytelling probes were used including, “Can you tell me more? Would you expand on that? Could you give me an example?”

Operationalization

In practice, I was informed by several guiding principles and steps for analysis. This is part of an iterative, cyclical process whereby each step may be returned to several times until a holistic picture is revealed. This is part of an “Immersion/crystallization” process whereby the researcher must engage cognitively and emotionally to “get beyond the obvious interpretations to hear, see, and feel the data” (Borkan, 1999, p. 180). Key to this process is the self, openness, and reflexivity. For this reason, this process is well suited to the research context in this project which explicitly considers the role of the researcher and community. Borkan (1999) advises several ways to arrive at analytical insights, including distance from the material, group analysis, and gathering insights from informants, which can be employed in this project as well. This has been used in other Inuit health research (Healey, 2014).

Guiding principles included:

- Keeping stories intact as much as possible
- Holistic analysis
- Broad thematic analysis, rather than coding in small pieces or single terms.
- Relating different forms of data to one another to see a bigger picture
- Presentation of data in a holistic manner as much as possible

This was practiced by:

- Reading transcribed texts in their entirety
- Writing summary notes and reflections of data

- Identifying broad themes through coding using MAXQDA software with an inductive narrative analysis approach (see below)
- Revisiting transcriptions after coding with guiding principles in mind
- Member checking as a form of validation, accuracy, or 'trustworthiness' via transparency (Reissman 1993 cited by Earthy and Cronin, 2008)
- Making changes as necessary based on discussions

In relational data analysis, it is important to discuss ideas with others, including colleagues and participants. Some questions that can be asked include, "How are these ideas coming together? What do they offer to the Inuit community? What do they offer to the community of colleagues, collaborators, partners and participants?" (Healey and Tagak Sr, 2014, p. 8). In this project, the discussions occurred with supervisors, researcher colleagues at the University of Glasgow, and with participants themselves. Chilisa (2012) highlights that, "community members who were involved in the data collection should also participate in the analysis and interpretation of the findings and in identifying data-informed challenges and solutions in the community" (p. 253). Therefore, participant discussions took the form of the community research feedback sessions in Rigolet in Autumn 2021. These sessions influenced the analysis through conversations which highlighted themes which were of significance to the community. For example, when community members would point out a photo or description that they felt aligned with their perspective. Further, conversations with community members of different ages at a session influenced the analysis by highlighting the intergenerational impacts of the MFP. Ultimately, informal conversations about the research data created generative spaces to understand the analysis in new ways.

Photovoice Data

Narrative analysis applies to different forms of data collection, not just interviews or focus groups, and can include textual and photo analysis as well. In fact, Riessman (2008 cited by Chase, 2011) argues that visual images are central to human life and thus, social scientists should take them into account to understand how people communicate meaning. Narrative analysis is also, like photovoice, particularly attuned to social change and social justice with the relation between narrator and audience as central to the process (Chase, 2011). It recognizes the benefits of telling stories for the speaker, of being heard, of collective stories having the ability to demand change, and how stories can create public dialogue (Chase, 2011). These are also aims of the photography component of this project.

Therefore, as above, many of the same analytical principles and steps apply to the photos and textual data from the photography project. However, there is an added aspect that participants have had the opportunity to spent time drafting and carefully crafting their responses to the photo prompts. This is different than an interview, where participants do not know the questions ahead of time and generally respond 'off the cuff'. Therefore, some structure/form may be integrated into analyzing the stories as they are presented.

Survey Data

Basic descriptive analysis of the survey results was completed using the MAXQDA software. This is helpful in visualizing some of the basic demographics of the participants, as well as general feelings towards the Muskrat Falls project and information sharing. In addition, the survey data was interpreted and presented alongside the other forms of data to bring it into a holistic picture, drawing out what might be meant by some of the shorter responses and statistics.

Conclusion

In this chapter, I have attempted to communicate my mobilization of IRM. I implemented these methodologies on a community and personal level with consideration for the Nunatsiavut Inuit context and my individual positionality as someone who is from the community but has not lived there extensively. While I try to do this appropriately, I must assert that this is one way, not the only way, to do research in a respectful and responsive matter. My goal was to do this research in the best way possible given the structures and resources available to me at this time. The holistic grounding of the concept of Iqqaumaqatigiinniq encourages bringing all data together to inform a wider story of how the MFP impacts the community of Rigolet. Therefore, as outlined here, while there are several forms of data in this project, they will be brought together in the analysis process.

Interlude 5

The STORM

Like the storm that builds outside; the storm also builds inside.

The Muskrat falls project invokes in me, frustration, anger and rage over the ignorance, culpability, and disregard for the harm being done to the environment and the people of Labrador , especially Rigolet. My feelings are like a raging storm. The picture I chose represents the storm that is building. The darkness of the background and the low ceiling represent the darkness of the corporations that loom over the people and the harm that is being invoked; the thick snow on the ground as well as the snow falling represent the challenges that the people have faced and continue to face; the color of the boat represents the anger and rage that I am feeling inside. There is however hope in the picture as the shed that is battered and worn, still stands, facing the storm, never breaking and showing its resiliency just as those who continue to fight!

Anonymous Participant

Chapter 6: Epistemological Landscapes: Knowledge and Information Sharing

Results Overview

This section provides a brief overview of results and themes to frame the next three chapters of the thesis. The following results are based on three sources of data described above:

- 47 short survey responses
- 13 semi-structured interviews
- Photos and descriptions from 8 photovoice participants (including the researcher and professional photographer). With a combined total of 26 posts/individual contributions.

Demographics were collected from most online survey participants. The first iteration of the survey with 10 responses did not ask for employment status.

Gender

Most participants who took part in the research were women. Forty-five survey participants answered the question about gender; 33 participants were female, and 12 were men. In the interviews, 11 participants were female and 2 were men. In the photovoice portion, all participants were female with the exception of the professional photographer, who is male.

Age

Age was collected from survey respondents (n=37), with the youngest participant being 22 and the oldest being 69 years old. The most common age groups were 35-39 and 60-64, both with 8 participants each.

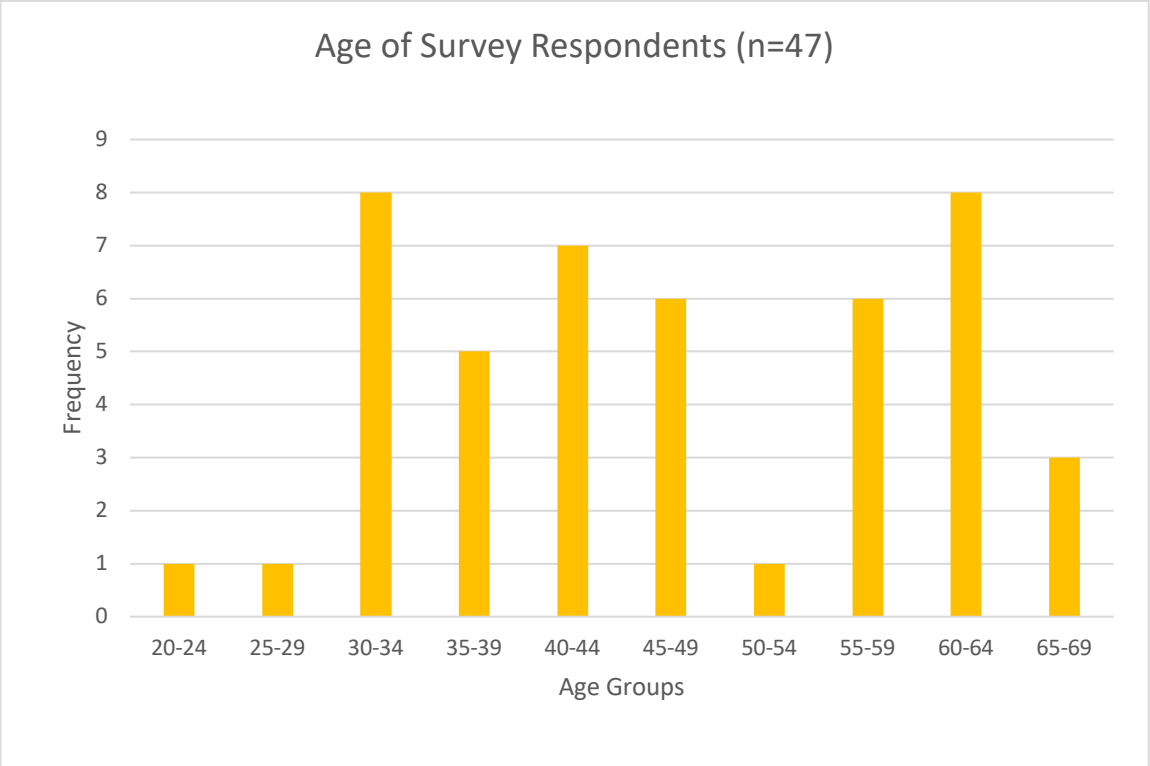


Figure 14. Age of survey respondents.

Employment

Participants worked in a variety of industries, but the most common category was being unemployed (12 people or 34.3%). This closely represents the statistics of the wider community in which 33.3% of the population of Rigolet was unemployed according to the most recent census (Statistics Canada, 2017b). See Figure 15 for more information on employment status. However, it should be noted that many people in the community work in seasonal employment (e.g., fishing) which may shape responses. While people may have been unemployed at the time of completing the survey, they may undertake paid employment in other parts of the year or participate in unpaid harvesting or care work. Future research could consider a more nuanced employment question.

There were three main themes in the data, which I will discuss in more depth over the next three chapters. The first relates to the lack of adequate health risk communication and uncertainty about the impact of the MFP. The second theme highlights the health concerns expressed by participants in all research methods. The final theme draws upon discussions of power and colonialism in the context of hydroelectric projects and extractive industries in Labrador.

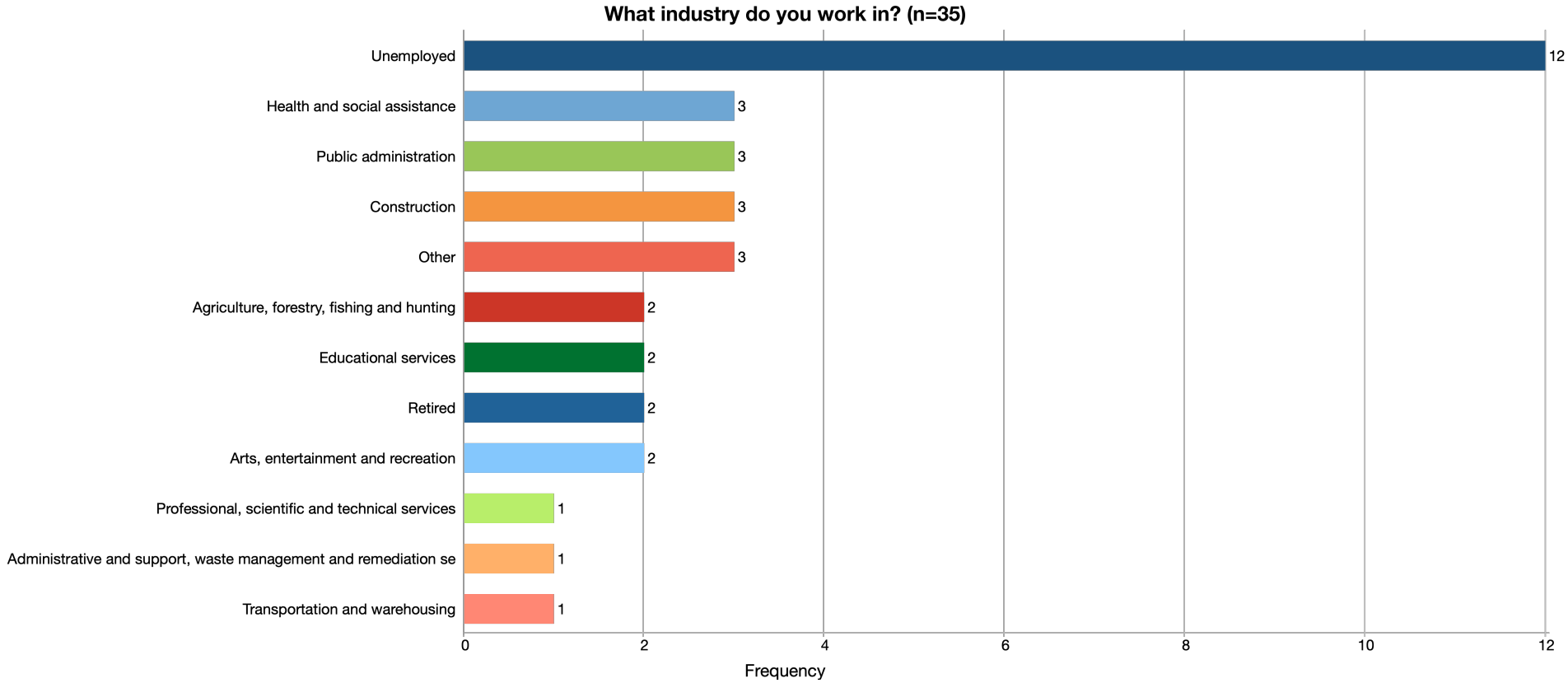


Figure 15. Employment status of survey participants.

Introduction

This is the first of three results chapters considering the power dynamics at play in relation to knowledge and information around the MFP. Discussions with participants and analysis of information sources shows that available information related to methylmercury contamination is highly stratified, held and shared by governments and Nalcor, and not conveyed in an accessible manner to the affected communities. To investigate this issue further, I analyze the roles of various knowledge holders and sharers in the context of the social and wellbeing impacts identified by participants. It is clear that participants are knowledgeable about the histories of environmental issues on their lands and waters, but they also identify significant knowledge gaps which they would like addressed. Therefore, I also consider strategies to improve health risk communications and discuss the social perceptions of risk, highlight concerns held by community members, and potential roles for various actors in communication practices.

Health Risk Communications

As I will discuss throughout the remainder of the thesis, there is a widespread sense of uncertainty relating to the environmental and health impacts of the MFP; a questioning of what might happen and when the impacts might be felt. This uncertainty speaks directly to health risk communication, as participants highlight a lack of information and trust in the sources who can provide desired information as the reason for their uncertainty. Risk communication "consists of experts intentionally conveying information about health and environmental risks, obtained by scientists and technical experts, to a targeted audience of non-experts through designated channels" (Krimsky and Plough 1989 cited by Bruneau and Grondin, 1994, p. 357). There are key values in the field; oft cited are Covello and Allen's (1988) 'Seven Cardinal Rules of Risk Communication'. They include:

1. Accept and involve the public as a legitimate partner
2. Plan carefully and evaluate your efforts
3. Listen to the public's specific concerns
4. Be honest, frank, and open
5. Coordinate and collaborate with other credible sources
6. Meet the needs of the media
7. Speak clearly and with compassion

These 'rules' stress the importance of involving the public and other interested parties early and in a genuine manner, as "Trust and credibility are difficult to obtain. Once lost they are almost impossible to regain completely" (Covello and Allen, 1988, "Be honest,

frank, and open"). Based on the results related to existing knowledge around the MFP, trust and credibility are sorely lacking.

More specific to the case of the Muskrat Falls project and concerns around methylmercury contamination, is the field of health risk communication. Defined by Krummel and Gilman (2016) "Health risk communication involves messages and advice designed to reduce harm and maintain and improve health, delivered in a culturally and socially respectful manner" (p. 1-2). There is also a wealth of Inuit-specific research on health risk communication focusing on environmental contaminants, a byproduct of a significant amount of research done since the 1950s, when concerns were raised about the environmental transportation of polychlorinated biphenyls (PCBs) and other harmful persistent organic pollutants (POPs) to the Arctic (Bruneau and Grondin, 1994, O'Neil et al., 1997, Egan, 1998, Furgal et al., 2005, Krümmel and Gilman, 2016, Boyd et al., 2019). I will refer to this literature throughout the chapter.

I should also note that it is important to take a critical perspective on the public health system, as well as standard, biomedical health risk communication practices. The model described above relies on a top-down relationship in which the public is positioned as the passive recipient of scientific knowledge, rather than the active producers of multiple forms of knowledge (e.g. historical and contemporary observational knowledge) that they are. To this end, I will discuss the need for critical public health epistemologies later in this chapter. Additionally, the concept of health risks itself requires a discussion of the social conceptualization of risk. As Panter-Brick (2014) writes, “Risk is both a statistical notion and a social categorization” (p. 432). There is a danger in using the concept of risk when it becomes deterministic, asserting that a specific outcome is likely without an analysis of social oppression and marginalization. Instead, it is important not to conflate statistics with personal attributes and biosocial categorization (Panter-Brick, 2014), as “Health beliefs do shape health-seeking behaviors, but health-seeking behaviors are often constrained by political and economic contexts” (Panter-Brick, 2014, p. 436).

Further, Rigolet community members (and everyone else) are constantly weighing risks as part of everyday social life. For example, when deciding whether a snowmobile path is safe. A decision like this relies upon historical knowledge of weather conditions, as well as contemporary observations of the water, currents, ice, and snow. Further considerations may involve questions like: “can I afford to travel by plane?” or “will travelling on the ice allow me the opportunity to hunt seals to feed my dog team?”. These social and economic

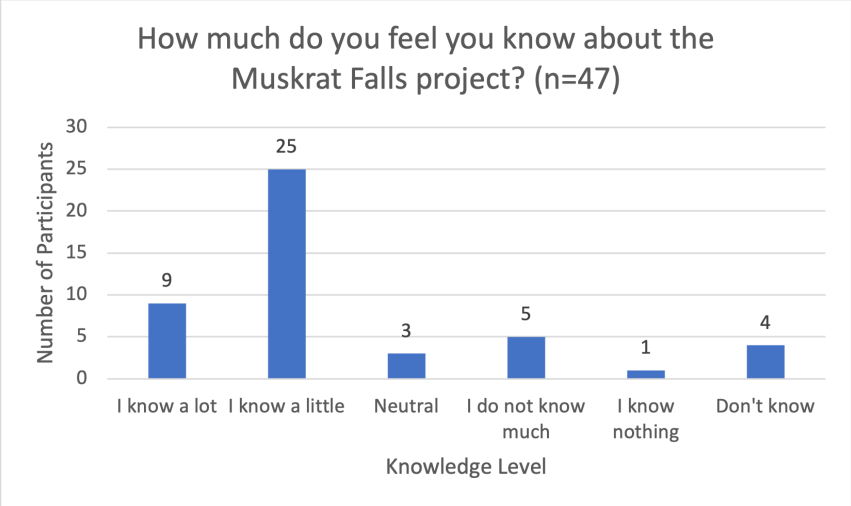
contexts inform risk and behavior. It is important to see risk as a standard part of social life and interaction, rather than a statistical calculation.

This study takes a different approach than the typical health risk communication one; instead of projecting statistical risks on people and assuming everyone understand risks in the same way, I asked Rigolet residents about *their own* risk perceptions. It is my belief that this approach, which also considers Inuit culture and worldviews, as well as the impacts of colonialism and historical issues on social marginalization, can encourage a more nuanced discussion of risk in the context of the MFP.

Knowledge of the Muskrat Falls Project

The first question here concerns what people currently know about the MFP, and where and how they get information. In the survey (n=47), the most selected response to the question, "How much do you feel you know about the Muskrat Falls project?" was 'I know a little' (25 responses), and only five people felt they knew 'a lot' about the project (see Fig. 16).

Figure 16. Survey results on knowledge levels related to the MFP.



This was also reflected in the interviews. Evidently, there is a real lack of information and knowledge surrounding the project, as one person stated, "I really think we don't, unless we go look for information we don't get it. There's not a regular flow of information." (Participant 5). However, there was a desire for more updates. As one participant put it, "Whatever place is able to give out that information, I'll take it!" (Participant 7). Essentially, people felt like the project is 'bad' or 'harmful' but did not know what exactly is going on or how it might physically or practically affect their lives. This is seen in two questions which ask about support for and perceived impacts of the MFP. When asked in

the survey (n=46), “Are you supportive of, or opposed to, to Muskrat Falls project?”, the most common responses were ‘Very Opposed’ (18 participants) and ‘Opposed’ (17 participants) (see Fig.17). In another survey question (n=47), participants were asked “Do you think the impacts of the Muskrat Falls project are likely to be beneficial or harmful?” (see Fig. 18). No participants responded that they thought the impacts would be ‘Very Beneficial’ or ‘Beneficial’. The majority of respondents, 26 people, felt the impacts would be ‘Very Harmful’, and 17 people felt they would be ‘Harmful’. Interestingly, even the respondents who were ‘Very Supportive’ and ‘Supportive’ of the MFP felt the impacts would be ‘Very Harmful’. The participant who was ‘Very Supportive’ also indicated that a benefit of the MFP could be “Jobs”, indicating a belief in the economic opportunities associated with the project. I will discuss these nuanced perspectives on beneficial and harmful impacts in more depth in the next chapter.

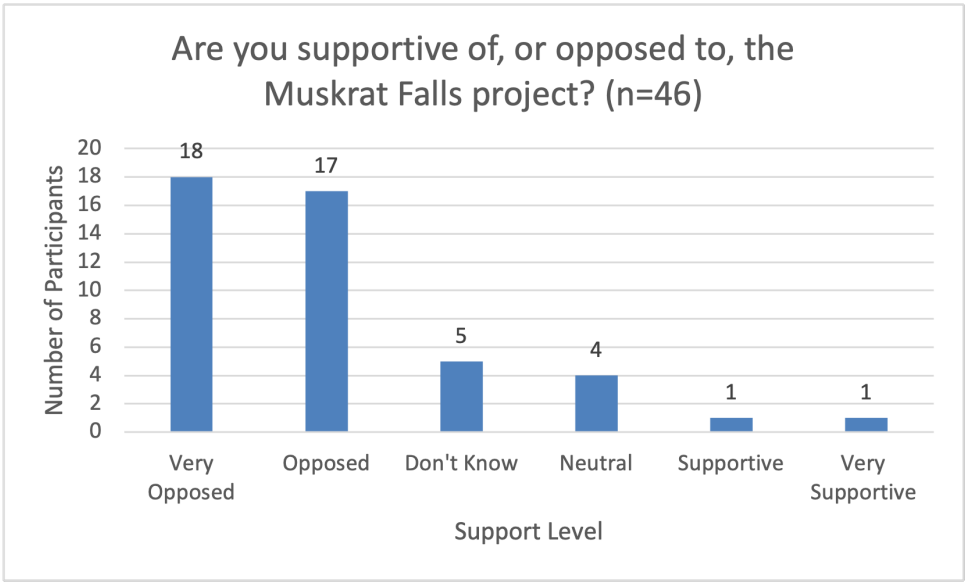


Figure 17. Survey results on support of the MFP.

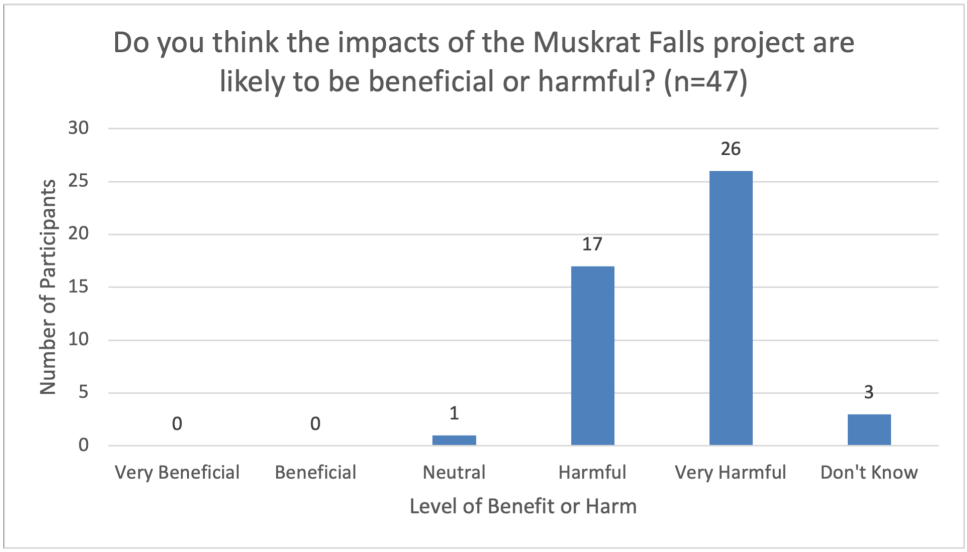


Figure 18. Survey results on the impacts of the MFP.

Uncertainty

The lack of knowledge shown in the survey was elaborated upon during interviews and the photography project. What emerged in those contexts was a general feeling of uncertainty and lack of clarity over what is happening with the MFP. Many people felt they did not know what was happening with the project's development, that they did not fully understand the impacts, or how methylmercury functions in humans and animals. Some people felt they had received unsatisfactory responses to questions when they have enquired about issues. One person explained their uncertainty:

> **Participant 4:** […] But I think my biggest problem was there's so many questions went unanswered. Not with the project itself, but with the effects the project could have. On like, you know there was a lot of negative stuff, I'd say, about methylmercury. But, you know, I asked a lot of questions about methylmercury, and nobody's been able to give me any answers. Because one of my main questions was, once an animal consumes methylmercury, does it affect the whole body of the fish or animal, or does it affect just organs? And I've got, one answer was "we don't really know", and another answer I got from a scientist who studied it and he told me, "No it's just certain organs of an animal or fish that are affected". So, there's a lot of unknowns, I think.

This uncertainty was also discussed in the photography project. One participant considered the wide-ranging changes to the environment that are being observed and wondered about the implications. Participant Lorraine Allen also asked questions around methylmercury monitoring and linked these concerns to traditional activities in the past and future:

> **Title: 3 am thoughts...The past will no longer live.**
> If I could paint a picture in your mind's eye, I would hope you could conjure up the feelings I have when practising traditional rituals. Being on the land, being one with nature...feeling the warm sun and the gentle breeze on the face during those long spring days seal hunting on the bay. Hearing the drone of skidoo's as other hunters pursue the same as me. Stopping and yarning with acquaintances, friends or family to talk about the hunt, the conditions the weather...to wish each other luck and move on. To travel routes that are as familiar as the back of my hand and being content knowing this is where I am meant to be...this is where I feel joy, excitement, anticipation and most of all peace. Doing what is in my blood...the past lives...but what now...what is left for future generations to embrace?

This photo conveys obscurity. The path ahead is no longer clear and nothing feels familiar...there are so many variables to consider- changes in the environment, some say due to climate change, I wonder if the bigger culprit is changes brought about by the damming of Muskrat Falls, it's plausible. The very crux of not being able to eat the food we crave because of methyl mercury contamination, who's so much as monitoring the levels? We can no longer practise our traditions. It is hard on the heart to realize that a way of life may very well be lost forever...

Figure 19. Photos by Lorraine Allen

The contrast in the description above, between an ideal past and present lifestyle and an unclear future is deeply evocative. It sparks emotions of sadness and fear, but also a sense of powerlessness in the questioning of what the impact of the MFP might be and who is involved in monitoring that impact. This powerlessness is indicative of the epistemological landscape which faces the community, region, and province more generally. Inuit in Rigolet are essentially kept in the dark about the science around methylmercury contamination, while only those involved in science and governance are privy to the information that is deeply desired by affected residents. This points to a larger power imbalance and stratification of knowledge, as seen in the frosty, half ice-covered window and ominous fog in the background.

Another participant, Rhoda Palliser, echoed this sense of uncertainty in their photograph with the following description:

> I choose this picture because I think we can all say everything is a little foggy. Almost like left in the dark. The unknown behind that fog is the same way for me towards Muskrat falls. Everything is unclear.

Figure 20. Photo by Rhoda Palliser.

The feelings described by participants invite a conversation about the ways information about the MFP has been dispersed by responsible parties. The GNL Department of Municipal Affairs and Environment (DMAE) is responsible for monitoring for methylmercury in the Muskrat Falls reservoir, Churchill River, and Lake Melville. The Methylmercury Monitoring Plan used by the DMAE outlines details for the collection and processing of water samples but does not include any guidance on reporting of results to communities (GNL 2022). The two consistently updated (monthly) documents available on the DMAE website include a 'Methylmercury Data Graph' (see Fig. 21) and 'Water and Sediment Analysis Spreadsheet' (see Fig. 22). These documents are almost unintelligible. The website and documents themselves contain no interpretation of the data which would be accessible to a someone without a background in statistics. The methylmercury data graphs do not even include a legend. The available information about methylmercury reflects a lack of commitment to sharing data in a meaningful way and the top-down approach which characterizes information sharing with regard to this issue.

The NG also does its own independent monitoring of contaminants. They have collected baseline data and anticipate being able to differentiate impacts from the MFP from other environmental factors such as climate change and other river inputs (Nunatsiavut Government, personal communications, 2022). To date, this information has not been widely shared with communities, and participants I spoke with seemed unaware of this monitoring activity. However, the NG, provincial government, and other interested parties are in the process of developing a Monitoring and Health Management Oversight Committee to better share information about health risks and contamination (Moore and Roberts, 2022).

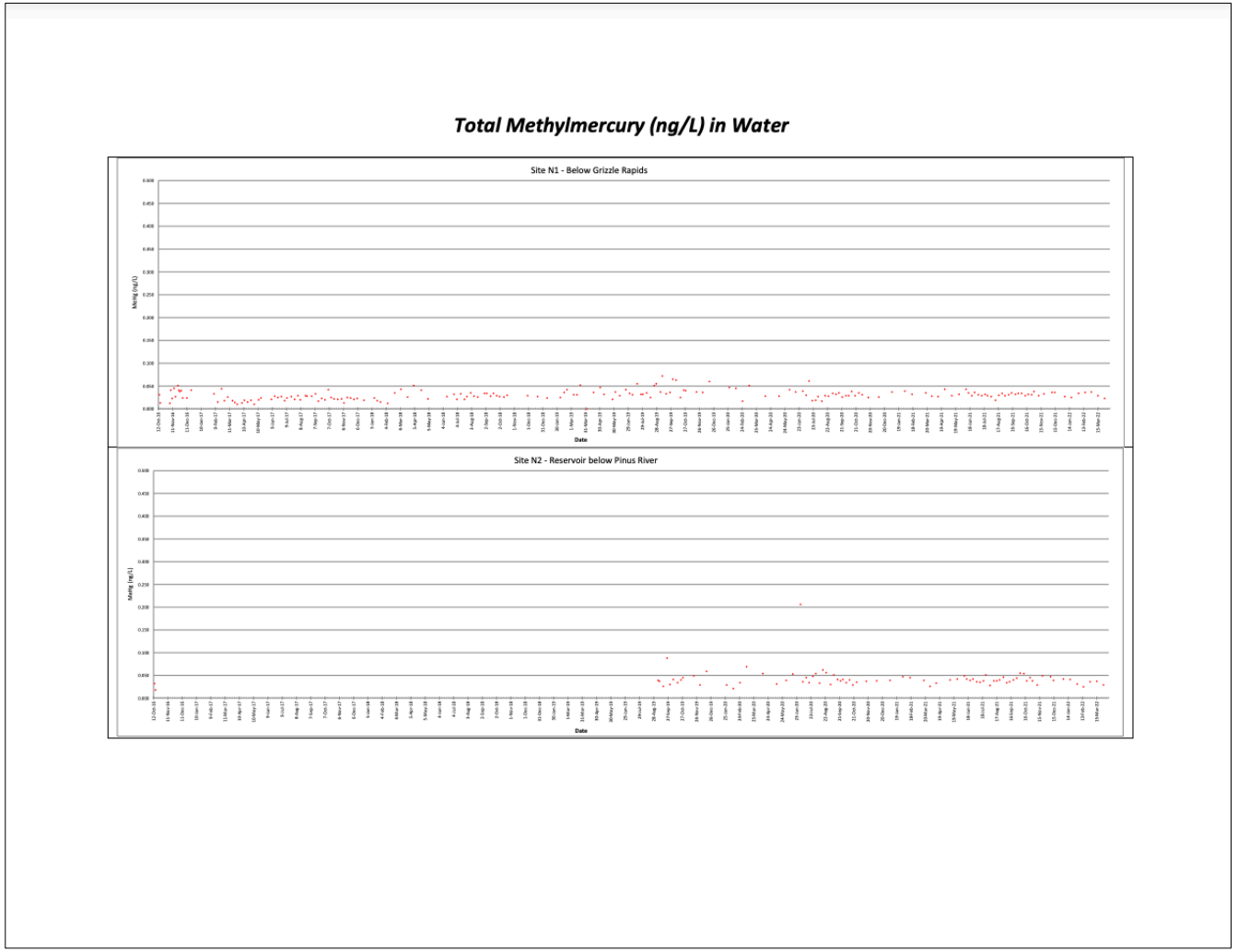
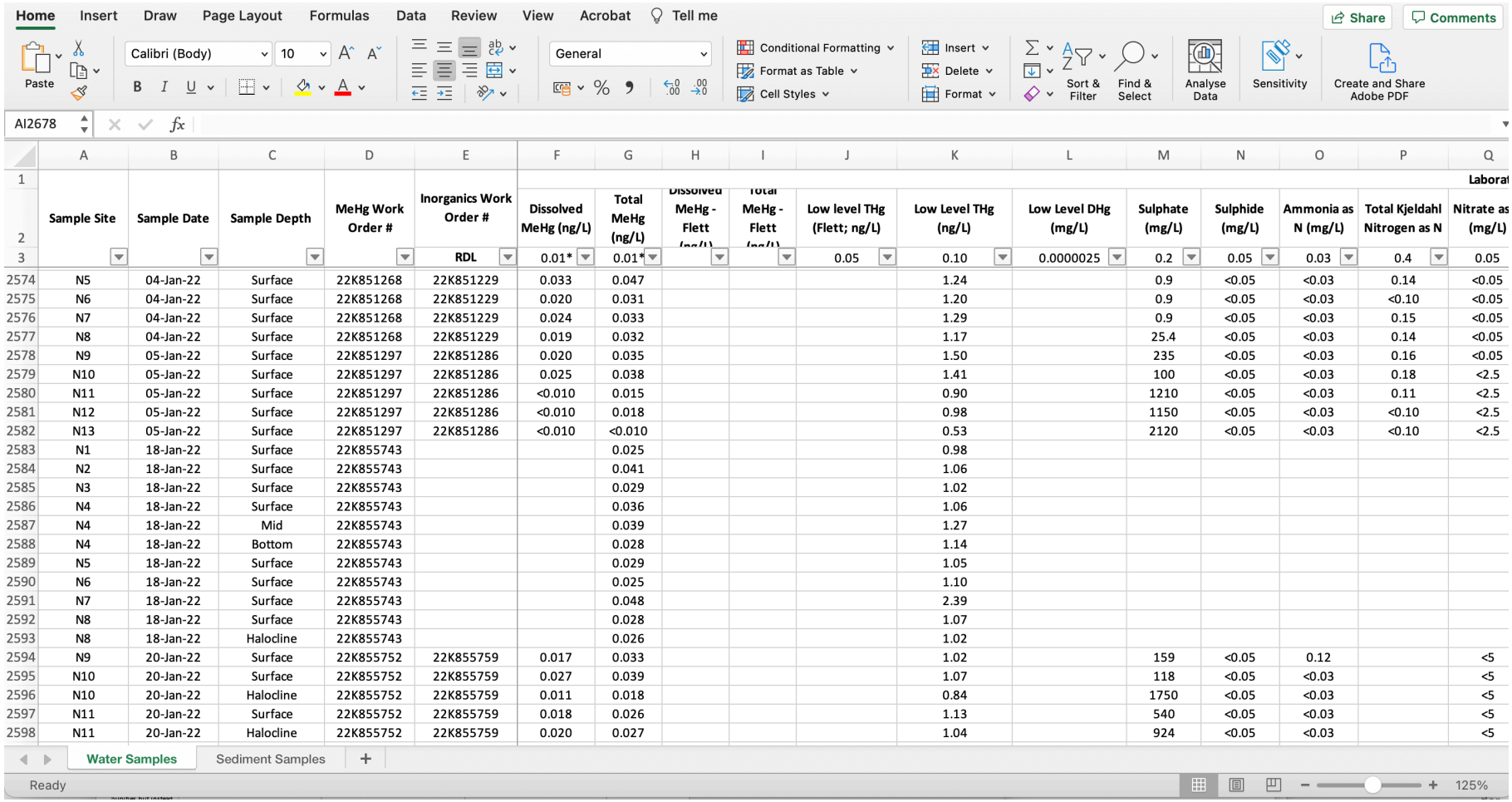


Figure 21. Screenshot from DMAE Methylmercury water graph data document.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	Laborat
2	Sample Site	Sample Date	Sample Depth	MeHg Work Order #	Inorganics Work Order #	Dissolved MeHg (ng/L)	Total MeHg (ng/L)	Dissolved MeHg - Flett	Total MeHg - Flett	Low level THg (Flett; ng/L)	Low Level THg (ng/L)	Low Level DHg (mg/L)	Sulphate (mg/L)	Sulphide (mg/L)	Ammonia as N (mg/L)	Total Kjeldahl Nitrogen as N	Nitrate as (mg/L)
3					RDL	0.01*	0.01*			0.05	0.10	0.0000025	0.2	0.05	0.03	0.4	0.05
2574	N5	04-Jan-22	Surface	22K851268	22K851229	0.033	0.047				1.24		0.9	<0.05	<0.03	0.14	<0.05
2575	N6	04-Jan-22	Surface	22K851268	22K851229	0.020	0.031				1.20		0.9	<0.05	<0.03	<0.10	<0.05
2576	N7	04-Jan-22	Surface	22K851268	22K851229	0.024	0.033				1.29		0.9	<0.05	<0.03	0.15	<0.05
2577	N8	04-Jan-22	Surface	22K851268	22K851229	0.019	0.032				1.17		25.4	<0.05	<0.03	0.14	<0.05
2578	N9	05-Jan-22	Surface	22K851297	22K851286	0.020	0.035				1.50		235	<0.05	<0.03	0.16	<0.05
2579	N10	05-Jan-22	Surface	22K851297	22K851286	0.025	0.038				1.41		100	<0.05	<0.03	0.18	<2.5
2580	N11	05-Jan-22	Surface	22K851297	22K851286	<0.010	0.015				0.90		1210	<0.05	<0.03	0.11	<2.5
2581	N12	05-Jan-22	Surface	22K851297	22K851286	<0.010	0.018				0.98		1150	<0.05	<0.03	<0.10	<2.5
2582	N13	05-Jan-22	Surface	22K851297	22K851286	<0.010	<0.010				0.53		2120	<0.05	<0.03	<0.10	<2.5
2583	N1	18-Jan-22	Surface	22K855743			0.025				0.98						
2584	N2	18-Jan-22	Surface	22K855743			0.041				1.06						
2585	N3	18-Jan-22	Surface	22K855743			0.029				1.02						
2586	N4	18-Jan-22	Surface	22K855743			0.036				1.06						
2587	N4	18-Jan-22	Mid	22K855743			0.039				1.27						
2588	N4	18-Jan-22	Bottom	22K855743			0.028				1.14						
2589	N5	18-Jan-22	Surface	22K855743			0.029				1.05						
2590	N6	18-Jan-22	Surface	22K855743			0.025				1.10						
2591	N7	18-Jan-22	Surface	22K855743			0.048				2.39						
2592	N8	18-Jan-22	Surface	22K855743			0.028				1.07						
2593	N8	18-Jan-22	Halocline	22K855743			0.026				1.02						
2594	N9	20-Jan-22	Surface	22K855752	22K855759	0.017	0.033				1.02		159	<0.05	0.12		<5
2595	N10	20-Jan-22	Surface	22K855752	22K855759	0.027	0.039				1.07		118	<0.05	<0.03		<5
2596	N10	20-Jan-22	Halocline	22K855752	22K855759	0.011	0.018				0.84		1750	<0.05	<0.03		<5
2597	N11	20-Jan-22	Surface	22K855752	22K855759	0.018	0.026				1.13		540	<0.05	<0.03		<5
2598	N11	20-Jan-22	Halocline	22K855752	22K855759	0.020	0.027				1.04		924	<0.05	<0.03		<5

Figure 22. Screenshot from Water and Sediment Analysis Spreadsheet available on DMAE website.

Overall, the uncertainty and lack of knowledge described by participants indicates deep flaws in health risk communications related to the Muskrat Falls project. In particular, it highlights a lack of speaking clearly and frequently, collaboration or co-ordination, and listening to the public's concerns (Covello and Allen, 1988, Krümmel and Gilman, 2016). In their review of Arctic contaminants communication literature, Krummel and Gilman (2016) highlight the importance of "Avoiding anxiety and fear by providing correct and clear information on contaminants in traditional foods and the benefits of these foods" (p. 9). Based on responses from participants which consistently bring up concerns about methylmercury contamination or 'poisoning', this approach has not yet been successfully implemented in Nunatsiavut. These relations are also central to knowledge as a form of power within the settler colonial context, as I will discuss later in this chapter and in Chapter 8. In the next section of this chapter, I discuss current information sharing patterns, community suggestions for changing this status quo, and analyze the role of power in these circumstances.

Information Sharing Patterns

The Role of Social Media

When asked where they currently get their information about the MFP and its possible effects, most people identified social media as their main information source, along with the news. In the survey, (n=47), the most top three common places people get information were: 1) social media (24); 2) offline news (21), and 3) online news (19). This shifted slightly when people were asked where they *want* to get information. The order shifted to: 1) social media (26), 2) governments (24); and 3) online news (22) (see Table 1). This highlights the important role of social media in current and desired information sharing patterns and makes a strong case for making information available on social media to reach as many people as possible. As one participant said, "Facebook is the most information that people get […] nowadays".

Table 1. Top Current and Desired Information Sources.

Current Information Sources	Number of participants who get their information from this source	*Desired* Information Sources	Number of participants who want to get their information from this source
Social Media	24	Social Media	26
Offline News	21	Governments	24
Online News	19	Online News	22

Social media plays a significant role in Inuit community life. Facebook has become the main platform for open discussion, sharing everyday life, political organizing, and even commerce. This is true amongst a wide range of age groups, from youth to Elders. Pages like 'Inuit Hunting Stories of the Day' bring together Inuit from all over Inuit Nunaat – the Inuit homelands – to share photos and stories of their harvesting activities. Sales groups allow seamstresses to reach national and international audiences to sell handcrafted parkas and other clothing. Other groups also become locations to organize protests, share petitions, and inform others about issues. This is true in the case of the MFP, as there are several Facebook groups where members have discussed resistance activities and continue to share updates and grievances about the project's implementation. Outside of open/closed groups and pages, other sites of information sharing on Facebook include people's personal pages. People can share a news article to their own page, making comments and discussing with friends. These are common sites of dialogue and public information sharing. It should be noted that Facebook's policies and reach also impact Inuit in concrete ways, as it is not allowed to sell animal products (such as fur) on the site. Some hunting photos have also been deemed 'inappropriate' by censorship policies which deem them 'violent' or 'gruesome'. Many Inuit have come up with strategies to avoid censorship, such as spelling out 's.e.a.l. s.k.i.n.' and 'f.u.r.' and the use of animal emojis to avoid language detection software. Therefore, while Facebook is an important space for Inuit information sharing, it can also be a space where Inuit ontologies are unwelcome and silenced.

In interviews, most participants discussed getting their information from Facebook. It is how they hear about Muskrat Falls updates and where they get their news more generally, as most news sites including CBC and NTV (popular local news sources), share their content online through Facebook pages. It can be a place to amplify local community members' voices, an accessible space to take back power for those without access to traditional information sharing structures. As one participant shared:

Jessica: Okay. And you mentioned Facebook. What do you think about the role of Facebook in the Muskrat Falls information sharing?

Participant 12: I think it's been a big eye opener for people. Because all of a sudden, we have a way to get on - not just a soapbox - but we've actually taken over a microphone somewhere. And started going, "This is our minute to tell you: here's what's really going on". And it's starting to spread right? Because people are going, "Wait what?". And they're turning their backs on the pretty show of "Oh let's have some money" and going "Wait, what is this going to cost though? How do you make that money? What is it going to cost somebody else?".

Jessica: So, it allows you to elevate your voices and share in ways that other people might not see that perspective otherwise?

Participant 12: Yeah.

This participant shares how social media can be an avenue through which to challenge narratives (such as the idea that the MFP will economically benefit the province) which are shared by more powerful actors, such as politicians, with established access to traditional media sources. It becomes a place for affected communities to educate others about what is happening from their perspective, on the ground. This reflects Krummel and Gilman's (2016) description of social media as a form of 'multi-way communication', unlike traditional top-down modalities of communication.

As shown, social media is an important site of resistance which can be used to harness citizen's power, but it is also problematic. It can be a site of misinformation, sharing inaccurate information which stokes fear and could impact behavior. This was discussed by several participants, and one person even expressed negative feelings associated with getting their information from Facebook – despite the lack of availability of information elsewhere. She said, "Well you won't hear too much on the media. I'm sad to say that a lot of my information comes from social media. From things that other people have put on. Then I will try to read it if they have articles on there. So, a lot of it comes from that." Some suggestions for managing the potentially negative aspects of Facebook were to turn off the ability to comment on posts. However, this could also be seen as a form of suppression of knowledge in that community members are unable to ask questions in an accessible manner. Overall, the role of social media in health risk communication about the MFP is a complex issue, but it is an emerging one which must not be shied away from as it is so central to information sharing in Rigolet and other Inuit communities.

Role of the News Media

The prominence of offline and online news being selected as places where people get information about the MFP highlights the necessity of a socially responsive press. For many people, the news was the first place they heard about the MFP, and is a major source of information to this day, although flawed and sometimes challenging to understand:

> **Participant 9**: I find it a bit hard to understand about what's been on the news when Muskrat Falls topic comes up. I still feel that it should not happen, it shouldn't be there. Although it's lots of jobs, I feel it's not benefitting Labrador. I mean, I really don't know how to explain it. Like the government is more thinking of dollar signs than our way of living - as Indigenous people in Labrador.

While news is clearly important and followed by community members, they offered significant critiques of the coverage they had seen and heard. There was a feeling that the news media primarily covered the financial issues related to the Muskrat Falls project, not enough emphasis was placed on the community's concerns, which are more related to the environmental and health impacts.

For example, the following community member commented on the fact that they had only heard about the Muskrat Falls project in the news (which was then shared on Facebook) recently because there was a workplace safety incident:

> **Jessica:** And then in terms of the information that you get, you say it's mainly through Facebook. What kind of information is it that you're hearing and getting?
> **Participant 11:** The only information that I am aware of these last few months or whatever, is there was an accident in there.

Another participant shared that they have only heard about financial issues:

> **Jessica:** Okay, and what kind of information is it that you're usually getting from those sources? So, what is it that you're kind of hearing, what comes up on the news or on social media?
> **Participant 9:** Usually, last time I heard about Muskrat Falls it was about like, about companies owing money and the bills wasn't paid. There was disagreement within the members, the union, the different, different I guess partnerships in the Muskrat Falls project?

They later elaborated:

> **Jessica:** What kind of information do you usually see shared?
> **Participant 9**: […] It's mostly, when it was on the news, it was mostly about money. About if this was going to be paid, or if there was deadlines going to be met. To me it was mostly about money, money, money.
> **Jessica**: Do you think that connects to what you were speaking about previously about the main concern being money?
> **Participant 9:** Yeah, when it was on the news it was more about money, not about the people. The communities.

The issues which are most important to the community are not frequently discussed at length in the news. Another participant criticized the media's reporting in the resistance efforts against the Muskrat Falls project:

> **Jessica**: And what do you think about the resistance that has occurred, like the protests?
> **Participant 12**: […] The protesters didn't hurt anybody. The protesters weren't hurting the land, they weren't hurting the sea. They didn't even hurt the bloody Muskrat Falls project itself. Nothing was blown up, nothing was chopped down with an axe. You know people weren't running in or driving their trucks through gates. And smashing windows. None of this happened. Yet they were still criminalized. And I think the media needs to smarten up and actually put the actual criminals on display. Not the people who are shining a light on it. They're doing the job for the media in a lot of ways. And I think the media needs to be less owned by politics and more owned by the people.

For many years, Indigenous peoples have critiqued the ways mainstream media has not reflected issues of importance in Indigenous communities, as well as the lack of Indigenous representation in journalism and biased coverage. The Truth and Reconciliation Commission of Canada (TRC) discusses the public importance of covering Indigenous stories in a non-discriminatory manner and with sufficient resources and highlights how biases against Indigenous peoples have been reflected in historical and contemporary journalism. Journalistic work, including editorial perspectives, often contain misinformation and include racist tropes which in turn influence public opinion on Indigenous issues (The Truth and Reconciliation Commission of Canada, 2015).

On the other hand, reporting on health risks and contamination is not an easy endeavor, as the results of scientific studies of contaminants in food sources can be challenging to understand and misconstrued in the media (Bruneau and Grondin, 1994). And while meeting the needs of the media is one of the 'Seven Cardinal Rules of Risk Communication' (Covello and Allen, 1988), as they are important in disseminating information and should be involved in risk communications by responsible bodies (i.e. governments), reporters in Newfoundland and Labrador have expressed the fact that they have faced challenges reporting on the issues related to the MFP (Fitzpatrick, 2021).

The work of the Glasgow Media Group can also help contextualize the role of media in upholding official narratives. Despite a frequent claim to being unbiased, much like research, news media also come from a specific viewpoint and social and cultural lens. As Eldridge (1993, p. 4) writes in relation to television news in Britain:

> Still we are reminded that however natural, actual, and immediate it all looks, television is a massive feat of social construction. Yet it is not reality that is constructed, but a semblance of it. And how could it be otherwise? Apart from the constraints of time, budget, and resources, there is, necessarily, selection, compression, and simplification in news stories.

A critical media landscape is necessary when it comes to issues such as the MFP, but it is also important to recognize the circumstances media work under, and the challenges of accessing information from governments.

Based on participants' perspectives of the media coverage of the issues surrounding the MFP, it can be argued that there is a role for more equitable reporting of community issues. The news is a major source of information for community members but is not addressing the questions which concern Rigolet community members. This is part of a longstanding relationship between Indigenous peoples, the media, and governments in Canada.

Role of Governments

As the results of the survey show, there is a role for the provision of increased information from governments. In interviews, there was a general sense that participants trust information shared by the Nunatsiavut Government (NG) more than that shared by the provincial government, which is a proponent of the MFP. As one participant stated:

> **Jessica**: Where would you like to get those updates from?

> **Participant 13**: It would be good if it would come from NG, but I know somebody would have to give them that information. The province I guess, if they were more, more open to... I shouldn't say more open because I don't know what their perspective is. But if the province held more news conferences or information sessions or something. And even like, I don't know what's happening in the background, I don't know if they're working with NG to show what's, like, information...Because I know when NG gets information, it's put out fairly quickly in a press release. So, I don't know if they're just not hearing anything either?

The provincial government is perceived as obscuring the science related to, and impacts of, the MFP not sharing it with NG or the affected communities.

People also expressed the desire to have consistent, reliable updates, even when there might not be any new information to share. There was the feeling that this would be reassuring, rather than the piecemeal, limited, and inaccessible information which is currently available. The participant below shared how they think the Nunatsiavut Government might improve communications:

> **Jessica:** How do you feel about the sources of information?
> **Participant 8:** I think they're lacking. I think they're…I don't think they're sufficient. I think that it's such a significant issue. Like I think there's huge opportunities for the Nunatsiavut Government to have like, a channel that comes out with regular updates on the project. Even if they're not updates at all. Like to say, "We're still working at exactly the same as we were last month but we'll update if something changes"… I think we're doing a disservice to the community because we're leaving people to either, one, make up what they don't know. Because one person mentions something, it's sort of a thought, then it becomes fact, and then the one down the road is already thinking it's true. Or you're leaving people to be really concerned about things that are being worked on that we don't know anything about.

This brings us to a discussion of the role of trust in health risk communications. The comments above reflect key values in health risk communications in the Arctic, including the need for "clear and consistent messages", and "communicating risk more frequently and for sustained periods" (Krümmel and Gilman, 2016, p. 10-11). Another participant highlighted possibilities that reflected more of Krummel and Gilman's (2016) optimal practices; that workshops, meetings, or conferences should be held with all stakeholders (including scientists, communicators, and locals):

> **Jessica**: And we have spoken about the ways the communication has not been done well. And how you would like to see it done. Can you give me an example of what might be a better way to give information?
> **Participant 12**: Definitely do more conferences. There's no reason why some of these conferences - I know we have COVID restrictions, but we also have zoom. We have...the ability to do white boards and record this stuff, do live recordings hopefully, rather than a re-recording. Because you never know what they're editing out right? And to come into the communities. You're vaccinated? You're not sick? Okay let's talk.

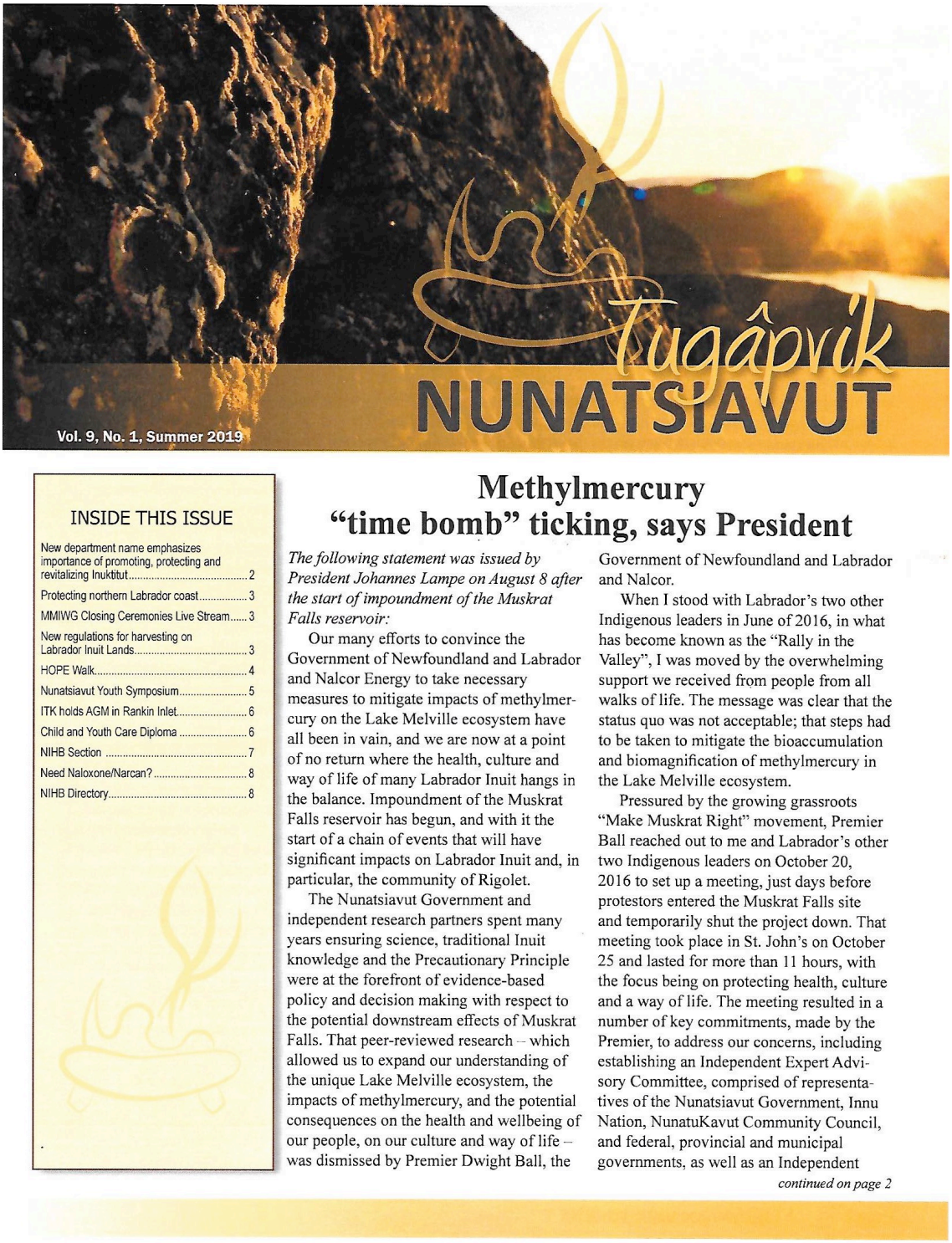
To date, I am not aware of any consistent updates delivered to the community in an accessible manner. As I discussed above, the monitoring information provided by DMAE is highly inaccessible and does not reach people in their preferred ways, as detailed in the survey data from this research. Further, considering the actions and roles of various actors and organizations highlights an important discussion about the primacy of trust and credibility in health risk communications. Previous research by Boyd and colleagues (2019) in Inuit communities has discussed factors which influence trust in individuals or organizations in relation to environmental and health risks. In interviews with 112 Inuit in Nunavik they found that key factors were: relationships (e.g. a longstanding connection with a family member or friend); previous experience (e.g. acting trustworthy in the past); general trust (e.g. the belief that most people are good and trustworthy); transparency (e.g. providing information transparently); value similarity (e.g. trusting other Inuit); and credibility (e.g. associated with professional status or perceived expertise) (Boyd et al., 2019). The NG reflects many of these key factors, as an organization whose aim is to promote the interests of Inuit and who have put extensive resources into understanding the MFP.

It is clear that trust and credibility are hugely important in risk communications, but these factors are also shaped by historical relationships. In research about the development and implementation of the Giant Mine Remediation Plan in the Northwest Territories, which aims to remediate residual arsenic trioxide contamination at a former gold mine, researchers found that the government's past treatment of Indigenous people greatly informed a continuing lack of social trust (Jardine et al., 2013). This is echoed by participants in this research, as the main party responsible for the MFP the Government of Newfoundland and Labrador (GNL), is perceived as untrustworthy and biased. This is based on their status as a proponent of the MFP, and also their historical role in the

oppression of Inuit and history of implementation of the UCFP in the 1960s and 1970s (Johnson-Castle and Penney, 2021). See Chapter 2 for more information on this relationship. My intention here is not at all to suggest that there are not issues with NG's risk communications, which have been minimal. Instead, it is my opinion based on the results of this research that Rigolet residents are more likely to feel that materials released by NG are mostly trustworthy and credible.

As an outlier, one person did indicate that they wanted information to come from scientists working with the provincial government. This is because, in their words, "[The Government of Newfoundland and Labrador] are, as far as I'm concerned, responsible for this now" (Participant 12). Therefore, they felt that the provincial government should take responsibility for the issues they created.

Overall, the perspectives of Rigolet residents largely reflect the existing best practice for health risk communications on contaminants, including existing literature focused on the Arctic. They also highlight the failure of multiple levels of government to share risk information in an accessible manner. On a wider conceptual level, the issues outlined here around access to knowledge raise the issue of risk communication being part of an epistemological landscape which has been shaped by the history of structural violence and inequality in the settler colonial state. The idea that the solution to improving knowledge sharing is a technical one based solely on the framing and communication of health messaging is only a partial solution. In addition, we must consider the importance of historically shaped social relations and ways that colonialism shapes trust and perpetuates a top-down approach to communication.



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INSIDE THIS ISSUE

Methylmercury "time bomb" ticking, says President

The following statement was issued by President Johannes Lampe on August 8 after the start of impoundment of the Muskrat Falls reservoir:

Our many efforts to convince the Government of Newfoundland and Labrador and Nalcor Energy to take necessary measures to mitigate impacts of methylmercury on the Lake Melville ecosystem have all been in vain, and we are now at a point of no return where the health, culture and way of life of many Labrador Inuit hangs in the balance. Impoundment of the Muskrat Falls reservoir has begun, and with it the start of a chain of events that will have significant impacts on Labrador Inuit and, in particular, the community of Rigolet.

The Nunatsiavut Government and independent research partners spent many years ensuring science, traditional Inuit knowledge and the Precautionary Principle were at the forefront of evidence-based policy and decision making with respect to the potential downstream effects of Muskrat Falls. That peer-reviewed research – which allowed us to expand our understanding of the unique Lake Melville ecosystem, the impacts of methylmercury, and the potential consequences on the health and wellbeing of our people, on our culture and way of life – was dismissed by Premier Dwight Ball, the Government of Newfoundland and Labrador and Nalcor.

When I stood with Labrador's two other Indigenous leaders in June of 2016, in what has become known as the "Rally in the Valley", I was moved by the overwhelming support we received from people from all walks of life. The message was clear that the status quo was not acceptable; that steps had to be taken to mitigate the bioaccumulation and biomagnification of methylmercury in the Lake Melville ecosystem.

Pressured by the growing grassroots "Make Muskrat Right" movement, Premier Ball reached out to me and Labrador's other two Indigenous leaders on October 20, 2016 to set up a meeting, just days before protestors entered the Muskrat Falls site and temporarily shut the project down. That meeting took place in St. John's on October 25 and lasted for more than 11 hours, with the focus being on protecting health, culture and a way of life. The meeting resulted in a number of key commitments, made by the Premier, to address our concerns, including establishing an Independent Expert Advisory Committee, comprised of representatives of the Nunatsiavut Government, Innu Nation, NunatuKavut Community Council, and federal, provincial and municipal governments, as well as an Independent

continued on page 2

Figure 23. Example of messaging from NG in their regular newsletter.

Community Suggestions for Health Risk Communications

A key part of this research project is to put forward solutions and suggestions from community members. While this may seem like a practical aim, rather than a theoretical one (and to an extent it is a policy-oriented goal), it is also rooted in a position of rejecting pain-centered research, as Tuck and Yang (2014) write, "Pain narratives are always incomplete" (p. 231). Building on Spivak's argument that intellectuals perform a sort of

ventriloquism of the sub-altern as part of a process of self-aggrandizing (Spivak 2010 cited by Tuck and Yang, 2014), Tuck asserts that social science research has largely been concerned with recording pain, even for benevolent purposes. This pain- or damage-centered research can be present even in community-based and participatory research, where it works on a theory of change that proving harm can help acquire reparations (Tuck and Yang, 2014). However, this reparative process is not possible under the settler colonial state, which relies on the oppression of Indigenous peoples for access to land.

Instead, I embrace the idea of desire-centered research as described by Tuck. Desire-based frameworks, "look to the past and the future to situate analyses" (Tuck and Yang, 2014, p. 231). They recognize the solutions, innovations, and knowledge held by communities. "Desire-centered research does not deny the experience of tragedy, trauma, and pain, but positions the knowing derived from such experiences as wise" (Tuck and Yang, 2014, p. 231). This is why I have chosen to highlight Rigolet community members' suggestions for health risk communications. While it is true that people have negative experiences and perceptions of the MFP, they also have the lived experience of the land, their generational histories of hydroelectric projects, and a desire to inform health messaging going forward.

Content Suggestions

When asked what they want to know about the MFP, participants had many suggestions. People want to know what the human health risks are, how various animals in the food web are being affected, if there are specific parts of the animal affected more than others. This informs perspectives on consumption, as described below:

> Yeah, there needs to be real answers, yeah. But, [community members] want to know that you […] know the facts. You don't want somebody to stick up there and say, "Well yeah, methylmercury's going to contaminate this, and contaminate that". But to what extent? Is it going to contaminate the whole fish or the animal, or just the liver? Or something like that. These are the things we want to know. And if there's contamination to a certain degree but still you can eat or stuff like that. How many times a week, or how many times a year. Like, how much can you eat. And I think once you let people know that kind of stuff, then they have to make up their minds of what they're going to do. (Participant 4)

This participant, an elderly man, wanted to know information beyond scientific statistics. He wanted to know nuanced information about methylmercury contamination that is

relevant to the lives of Rigolet residents, who can then make informed decisions about what precautions they might take. Such as only consuming certain parts of a fish occasionally. This reflects how health risk communication must be culturally and socially responsive (Krümmel and Gilman, 2016). Risk communication must also be 'translated' from technical information (such as the charts seen on the DMAE websites) to information which is useful to Inuit lives. As the participant above describes, people have very specific questions which are shaped by their lifestyles and worldviews and require health risk information to be conveyed in a manner which answers their concerns.

Another participant, a mother, emphasized that her primary concerns were for her children:

> **Jessica**: And what do you want to know about the Muskrat Falls project?
> **Participant 11**: What I would like to know is, the status of our fish, our seals, ducks, whatever kind of wildlife that comes out of our water. I would like to know if it's still fit to feed my children. If I feed my children, will they get too much of this, or will they get too much of that. Am I putting them in harm because I'm giving them fish? Or any kind of wild meat?

People also desire targeted information. For example, one participant suggested there be specific information available for people with chronic health conditions which are common in the community (e.g. diabetes), or for people who are pregnant. Many participants also want to know how methylmercury contamination might affect children and adults at various stages of their lives. The kind of abstract knowledge which is currently (somewhat) available, is not useful for people. This raises the issue of the underlying tension between two different kinds of epistemologies. The holistic Inuit epistemology which is concerned with holistic wellbeing and its relevance to lived experience, and a biomedical epistemology which conceptualizes the issue of contamination as a conceptual or theoretical issue.

Methods of Communication

Community members in Rigolet have many suggestions as to how to improve the current information sharing processes. As one participant put it, "I think we need to be informed more about what's going on in Muskrat Falls. Not just whenever they think there's something we should be aware of. We should be aware of what's going on up there all the time. Not just when they see fit". Common suggestions included regular (e.g. monthly, bimonthly, seasonal) updates through community information sessions, reports, and updates shared online.

> **Jessica:** And what about the kind of word of mouth within the community conversations, community meetings? Things like that. Is that a source of information for you?
> **Participant 12:** Yes, now since I've been home, we haven't had overly many [meetings] concerning Muskrat Falls. I think that's concerning. I think there should be information sessions done at least every couple of months. Updates, you know, the methylmercury should be done [and] presented into the community every few months. Especially going into our different seasons. Right now we're in a hunting season trying to stock up before the ice gets to set. If it gets to set this year. Do you know?

Another participant, when asked about frequency, stated: "I'd say monthly reports, especially on the fishery, food fishery, would be good" (Participant 11).

As previously mentioned, Facebook and social media have been highlighted as major sources of information. However, participants also stressed the importance of information being shared in a variety of ways. For example:

> **Jessica**: […] what do you think is the best way to share information about the Muskrat Falls project?
> **Participant 11**: To me it would be Facebook. But other people likes to see it on the news. And other people likes to hear it on the radio.
> **Jessica**: So from a variety of sources?
> **Participant 11**: Yes, yep.

These statements and requests for information also speak to the issue of authority over information. Those collecting and storing data (e.g. GNL, NG, scientists and government officials) are 'in charge' epistemologically, over the flow of information which is so crucial to Rigolet residents' lives. As the participant above mentions, information is only released "when they see fit", signifying that Inuit are not in the position of being able to access the information that they want and need on their own terms, but must wait for responsible bodies to share it.

Power Relations and Health Risk Communications

While health risk communication may seem as though it is primarily a policy, communications, or procedural issue, it is also deeply steeped in social life and power relations. O'Neil et al. (1997) connect the focus on the scientific study of contaminants in

Northern communities with bio-power, as people and animals become units of analysis intertwined with systems of knowledge which exercise power over discipline-specific topics. They assert that:

> risk communication discussions are based primarily on the problem of providing simplified scientific information to supposedly uninformed recipients. Risk communication strategies continue to ignore both the essential content of Inuit traditional knowledge about the risks and benefits of country food, as well as the political act of resistance that is generated when 'contaminant bio-power' is grounded solely in Western scientific knowledge (p. 39).

In other words, the scientific modes of inquiry about contaminants and means of communication about what is an 'acceptable' risk (as determined by scientists, not Inuit communities) are an exercise in power relations. This can be seen in the DMAE charts on methylmercury data which are solely reflective of Western scientific knowledge with no interpretation about what they mean for Inuit ways of life. Instead, the authors encourage engagement between the two discursive formations: Western scientific knowledge of contaminants and Inuit knowledge of human-animal-environmental relationships (O'Neil et al., 1997). This also reflects what participants in this research have requested. For example, people want scientific monitoring of methylmercury (and to be kept informed on monitoring processes), but they also want it to reflect Inuit food consumption patterns, priorities, and realities.

Another issue in health risk communication is the way communities have essentially been excluded from the conversation about their health and environment by the research field. Krummel and Gilman (2016) discuss how, "more effort has been invested in the identification, monitoring and assessment of effects of human exposure to environmental contaminants compared to learning how best to inform or influence public decision-making to protect health and culture in the Arctic" (p. 2). The focus of research on Arctic contaminants has been on the biological implications of PCBs and other contaminants, and not nearly enough on optimal practices for risk communication for those affected, leaving community members frightened, confused, or even in disbelief about contaminants. They provide advice for health messaging, suggesting the importance of evaluating measures for risk communication strategies in the Arctic, and prioritizing complex co-ordination between different actors and interest groups (Krümmel and Gilman, 2016). Overall, the knowledge of Northern communities about their own lives and environments has not been considered legitimate. This is also reflected in the case of the MFP in Rigolet. While Inuit

have been involved in the Nunatsiavut Government and Harvard University research on methylmercury (Durkalec et al., 2016, Calder et al., 2016), this study was largely in reaction to the prior dismissal of Inuit concerns regarding Nalcor's science which guides the MFP's implementation.

While the results of the original NG/Harvard research were delivered to communities (including a significant amount of attention through the Make Muskrat Right campaign), there has not been consistent follow up with the public over time. However, recently the GNL announced a new Muskrat Falls Monitoring and Health Management Oversight Committee, which as part of the IEAC recommendations in 2018. The Committee includes representatives from NG, Innu Nation, NCC, N.L. Hydro, Health Canada and the federal and provincial governments. The Chair of the Committee has stated that he does not yet know how the monitoring committee will share the information it finds (Moore and Roberts, 2022). Overall, up to now, the inclusion of Inuit in the discussions about their health, environment, and health risk communication strategies related to the MFP has remained limited and aligns with much of the literature about a lack of comprehensive, relevant communication about contaminants in Northern communities.

In addition to the focus on scientific study of contaminants and the risk they pose, the study of contaminants in Inuit communities must understand that risk perception is ultimately a social experience. Egan (1998) highlights how "Native perceptions of health risks – including those due to pollution – are culturally grounded in politics and economics" (p. 552). In her research with Inuit women about how they would feel if they could not eat Inuit food due to contamination or disappearance, all said they would miss it and it might impact their emotional and physical wellbeing. They also said it might create social problems and impact their sense of identity. Different ages of women discussed how they might make different choices. Older women said they would continue to eat Inuit foods even if advised not to do so. Younger women said they might not give it to their children or would hesitate to do so (I will discuss changes in consumption patterns in Rigolet in Chapter 7). Ultimately, risk perception is a social experience and political issue, as some people accept risks because they have limited choices or because of their social positioning. For example, they may choose to do so because they feel they are too old for contaminants to harm their remaining life, or because they have limited economic capital to purchase other food.

There are, in essence, two analytical conversations to be had here about risk perception. The first is how people respond to perceived health risks based on their social situation and

position. For example, the inability to avoid a “risky” food because of a lack of capital to purchase an alternative. Therefore, choices about health risks are shaped by social position. This links back to Inuit food insecurity and the high levels of people who have limited access to sufficient food. The second analytical theme is the way risks are deemed as such. A strictly ‘objective’ scientific view frames risk as a firmly biomedical matter of what is safe or not. For example, “X amount of methylmercury will be introduced into the human body with consumption of 1 fish”. In Rigolet, some participants conceptualized risk in this way, by asking what parts of the fish/animal they can consume or wanting information on what amounts are safe. However, perceived risk is not only experienced on this level, and is instead shaped by a much wider historical and social understanding of what is at stake within the context of broader conceptualizations of Inuit wellbeing. In essence, what is at risk when traditional foods are not consumed? Participants in this research highlight how culture, intergenerational knowledge, and healthy physical activity are all parts of Inuit food harvesting. Instead of conceptualizing methylmercury consumption as simply a case of Inuit eating seals from Lake Melville or substituting it with chicken from the Northern store, we must acknowledge the whole host of benefits which come from traditional food harvesting and consumption and incorporate these into risk analysis. While these are not generally incorporated into a biomedical model of health risks, they affirm the social construction of health and health risks.

The sociological study of risk also shows us that power, control, and capitalism are all inherently involved in the assessment of risk and (un)certainty. As an example, John Eldridge (2014) discusses the UK government’s messaging around risk related to ‘mad cow’ disease and how, despite a level of risk/danger to the public, governments insisted British beef was safe/not risky, undertaking a highly publicized media campaign to reassure the public and appease lobby groups. The role of the media in these processes can show how journalism is also involved in the mobilization of the language of risk to support or to oppose government or other institutions’ messaging. In the case of the MFP in Labrador, the provincial government/Nalcor has remained steadfast in its position that the hydroelectric project does not present a risk. However, this conceptualization of a lack of risk is not communicated in a way which meets the social and wellbeing understandings expressed by Inuit in this research, and instead communication is shaped by power relations which de-value Inuit concerns.

Diverse groups (e.g., governments, journalists, scientists) can use risk terminology in different ways and with distinctive meanings (Eldridge, 2014). Ambiguous categories like

"low risk" of methylmercury contamination means something different to a politician in the capital city of St. John's, NL, than it does to a Rigolet resident who relies upon (and/or enjoys) consuming traditional foods regularly. Finally, these perceptions of risk are informed by capitalist imperatives related to maintaining business practices, whether beef production or hydroelectricity. As Eldridge (2014) writes, "When it comes to risk, now you see it, now you don't" (p. 125). In the next section I will discuss how health risk information and its communication is intertwined with epistemic violence and informed by relations of settler colonialism.

(Lack of) Information as Epistemic Violence

Throughout discussions with participants and the community more widely, there was a sense that people do not speak about the MFP as frequently as they did in the past. Participants and other community members with whom I spoke shared that people are tired of speaking about their concerns because they have been doing so for years without any impact. This indicates a silencing effect of knowledge stratification and lack of available information. An interview participant described why this might be the case:

> **Jessica**: What about the kinds of conversations in the community? Like word of mouth, do people talk about it that way?
> **Participant 11**: Sometimes. Sometimes the subject gets brought up once in a while, not very often.
> **Jessica**: What do you think that is?
> **Participant 11**: Because I think people know they're fighting a battle that they're not going to win.

In this interaction it is expressed that people no longer discuss the issues of the Muskrat Falls project because they do not have the power to make change. I assert that the uncertainty and lack of effective health risk communication with the community of Rigolet is a form of epistemic violence (Spivak, 1988). More specifically, it is a form of silencing, which should be attended to. Gayatri Spivak (1988) argues that "Part of our 'unlearning' project is to articulate that ideological formation – by measuring *silences*, if necessary – into the *object* of the investigation" [original emphasis] (p. 296). Here, she argues that we should make silences an explicit focus of theoretical investigation.

Dotson (2011) aims to identify examples of practices of silencing, including "testimonial quieting" (p. 242). She claims that epistemic violence occurs when an audience does not communicatively reciprocate in an exchange due to pernicious ignorance (i.e., reliable

ignorance which harms another person). To understand this, context and power matters. Dotson gives the example of Patricia Hill Collins' argument that Black women's position as an objectified social group, stigmatized through 'controlling images' (i.e., negative stereotypes), leads to them being epistemically disadvantaged, in that they are not recognized as knowers by audiences. Dotson (2011) claims that "Epistemic violence does not require intention, nor does it require capacity. It does, however, require a failed communicative exchange owning to pernicious ignorance" (p. 240).

The audience (policymakers, politicians, civil servants who have the power to make changes and share information) and the speakers (community members) who have been expressing concerns about the MFP for years have a failed communicative exchange due to structural oppression and conflicts in ways of knowing which are informed by power relations. As Allard-Tremblay (Allard-Tremblay, 2021) describes, the Canadian state's rationalist political and social order dismisses Indigenous epistemologies, as "Anything that falls short of rationalism is superstition, pseudo-science and pseudo-knowledge and needs to be debunked by the light of reason" (p. 1032). There has been a conflicting discussion about whether the MFP is harmful (the opinion of the 'speakers'/communities) or not (the position of the audience). Ultimately, the result is that the audience does not listen to the concerns of the community and does not share information which the community desires (because it does not see this as important). This dismissive attitude, where Inuit concerns are downplayed, can be seen in Nalcor's decision not to do a thorough environmental assessment of the MFP's potential impacts downstream since they believed there would be no impact – despite Inuit knowing there had been impacts from the Upper Churchill Falls project (which is even further away up-river than the MFP). Another example is a statement made on Twitter by Nick Whalen, former Member of Parliament for St. John's East, who said that those concerned about methylmercury should just "eat less fish" (MacEachern and Barry, 2016). This flippant attitude is reflective of a lack of respect for Inuit knowledge and experiences.

An impact of this is that uncertainty and lack of information creates an environment in which people question what they have always known. There is a sense of existential questioning of themselves, their community, and environment. This was expressed in the photography project by Eldred Allen:

> As an image to represent the first question I captured this image on January 30. One of the main concerns of Rigolet residents is how Muskrat Falls will have a detrimental effect on our fish stocks and the safety to consume them. This image of a

trout nearly buried in snow and shrouded by the drifting snow represents how our fish are fading and are becoming obscure. We can still make out what they are, feel great excitement to see them but how long will they be there before they are completely gone?

Figure 24. Photo by Eldred Allen

Photography participant Katheline Pottle also expressed wonder about how environmental changes leads local people to question their identity (see photo on next page):

> It is because of our culture and traditions that we are who we are. We live on the land as much as possible. The land is much more [than] just land. It is a connection to the many generations before us, who lived and established homesteads. There was/is great pride in places we are connected to. I myself have connections to "up in the Bay", Double Mer and further connection to the North side of the Bay. Since marrying my husband I have connections to the South side of the Bay & Back Bay. In addition to this both of my parents were born out on the land.
> I say this because to me there is no "land Based" it's simply my/our way of life. I love fishing, hunting and gathering. I love the beauty of Nunatsiavut "Our beautiful land".
> Someday we will not be able to safely consume the bounties of our land, the thought saddens me. It begs the question Who am I? Who are we when that happens?

This epistemic violence through silencing also serves as an example of Wolfe's (2006) logic of elimination in action. By denying Inuit information about their lives and wellbeing, the settler colonial state reduces their capacity to resist the potential harms of the MFP. In an insidious multi-pronged approach, hydro projects like the MFP also function to separate Inuit from their culture, furthering a disappearance which solidifies the loss of claim to traditional territory

Figure 25. Photo by Katheline Pottle

Conclusion

Importantly, the information streams and knowledge gaps surrounding the MFP are reflective of structural relations in Newfoundland and Labrador. The public – and more specifically, Inuit in Rigolet – do not have access to information which is crucial to their lives. Instead, this information is held by the settler colonial state. The types of information that people have (and do not have) are also reflective of the wider implementation issues associated with the MFP. From the very beginning, there were denials and claims made about the environmental and health implications of the Muskrat Falls project and how Rigolet would be impacted. Independent science showed that, actually, there would likely be impacts on the community. Now, several years into the project, the same information gaps exist, with very little effort having been made to address them. There is a substantial need to respect Inuit as knowledgeable and capable of assessing risk and handling information, as "risk communication strategies continue to ignore both the essential content of Inuit traditional knowledge about the risks and benefits of country food, as well as the political act of resistance that is generated when 'contaminant bio-power' is grounded solely in Western scientific knowledge" (O'Neil et al., 1997, p. 39).

In the future, clear, consistent, and targeted information is essential. As one participant explained:

> And I find in our neck of the woods, we don't need the news to be positive, *we just need the news*. Like people still could be upset with it, but we still want to know. We don't want to arbitrarily not know because they'd rather not tell us. We'd rather know. It doesn't mean it's great for the ones telling us, but *we'd rather know*. (Participant 8) [emphasis added]

Additionally, evaluation of all risk communication efforts must be undertaken to continue to support improved initiatives, and to empower Inuit in making informed decisions about their country food consumption. Evaluation is a careful process and should occur before, during and after risk communication takes place (Covello and Allen, 1988, Bruneau and Grondin, 1994, Krümmel and Gilman, 2016). This also goes for research on contaminants, which should be in line with the National Inuit Strategy on Research (Inuit Tapiriit Kanatami, 2018).

Information should be delivered in a way which allows people to make informed decisions. In this research, participants have identified that this should take place regularly via main

communication mechanisms in the community (i.e., social media, the news, radio). This information can then be used on an individual level. As one participant shared:

> But I think people can sit and make decisions for themselves and they're responsible for their decisions because they knew it. Because some people say like, 'I could die of methylmercury poisoning because their levels are so high with the hair testing, but I'm going to choose that. I'm going to choose to maintain that'. And that's your choice, but they know and they can choose, versus just…like what if they thought they were fine? (Participant 8)

Rigolet residents have clearly expressed a desire for full inclusion in health risk communications. This chapter aims to consolidate the content and methods for improving this issue, while understanding that risk communications is informed and shaped by social and political relations.

Interlude 6

All aspects of the environment matter to me. It's like asking if I have a favorite child - there is no answer.

The major impact of Muskrat Falls to me specifically is on my culture and traditions through my food supply. All of the fish, animals and plants that will someday be inaccessible to me and my descendants. To take away a traditional food supply is to eradicate a culture, it has happened in the past with "first peoples" and its happening today. When you take away a person's ability to practice culture and traditions you begin to eliminate a nation. Our food - "true country food" not only nourishes our bodies but also nourishes our soul and provides us with a connection to our ancestors.

Katheline Pottle

Chapter 7: Community Concerns for Inuit Health

Introduction

This chapter focuses on concerns about social and wellbeing impacts described by participants, concentrating on their apprehensions related to possible methylmercury contamination, the potential physical risks of changes in ice conditions and harvesting practices, and additional consequences for food systems and Inuit culture. In addition, I stress the importance of taking seriously the real impact of perceived risks, as some participants discuss making lifestyle and diet changes based on present and future methylmercury worries. These issues conceptualized within an Social Determinants of Inuit Health (SDIH) framework, recognizing the holistic nature of Inuit health. As mentioned in Chapter 3, a social determinants of health perspective recognizes the social dynamics and mechanisms which can shape health outcomes, including education, housing, and family relationships (Marmot, 2006). This model has been adapted to Inuit-specific health by Inuit Tapiriit Kanatami (2014), who developed a model of 'Social Determinants of Inuit Health' (SDIH) (see Fig. 31). Within the SDIH report key challenges to the environment identified include contaminants and climate change. In this Chapter I will consider how the impacts of the MFP discussed by participants in this study fit into this model, and how the various interconnected issues combine to influence Inuit health. For example, how methylmercury relates to food security and early child neurodevelopment, how spending time on the land affects mental wellness, how ice conditions are necessary for safety and security, and how consuming country food is part of culture and livelihoods.

Intertwined Human, Animal and Environmental Wellness

Methylmercury

As discussed in previous chapters, methylmercury has been one of the central issues related to the Muskrat Falls project (MFP) since the Make Muskrat Right campaign was established by the Nunatsiavut Government (NG) in 2015. The campaign emerged out of findings from a research partnership titled *Lake Melville: Avativut, Kanuittailinnivut (Our Environment, Our Health)* between NG and several universities, which investigated the potential environmental and health impacts of the MFP (Durkalec et al., 2016), including whether methylmercury levels in Nunatsiavut Inuit food sources (e.g. seals, sea birds, and various fish species) might increase above recommended levels due to the MFP's reservoir creation process (Schartup et al., 2015). It is a known occurrence that the flooding of land for hydroelectric reservoirs can result in increased methylmercury in the ecosystem as

flooded materials break down (e.g. trees underneath the water) (Rosenberg et al., 1995, Mailman et al., 2006). The NG and Harvard research showed that this is likely to be the case for the Muskrat Falls project (Calder et al., 2016). After the research results were released, NG undertook a highly publicized campaign with videos, organized protests, and social media messaging which attracted extensive coverage locally and further afield. The Make Muskrat Right cause was also picked up by various other grassroots activists and civil society groups. While, ultimately, it did not result in changes to the construction of the MFP or mitigation of the risks associated with the reservoir (such as capping the wetlands[20]), the campaign was very effective at highlighting to the public the potential risks of an increase in methylmercury level within local food sources.

Due to the heightened awareness of the issue of methylmercury, it is unsurprising that the most common concern to arise during this research was that of contamination of Inuit food sources. This question was discussed by all participants in the interviews, was a main concern in the open-ended questions in the survey and was visualized and described in the photography project as well. Methylmercury contamination was expressed as a concern for human health on the part of participants themselves, their families (particularly children), and the wider community.

Methylmercury enters the food chain through bioaccumulation in smaller organisms, making its way up to fish, sea birds and seals. As humans consume these animals over time, methylmercury can accumulate in our bodies. It is also passed on through generations, and can impact neurodevelopment and cardiovascular, immune, and endocrine system health, amongst other health issues (National Research Council, 2000). In my research, Rigolet residents expressed safety concerns about whether it was safe to consume traditional foods or give it to their children. One participant, a mother, shared:

> **Participant 12**: Well for me, methylmercury is not a joke. I'm scared about the land and the animals, of course. You've got everything from small algae, right up into birds and fish and then you've got bears, fox, everything else eating it. And then we're going to go eat that. So then what's going to happen to not just us, but our DNA, our reproductions. How's that going to change, how's that going to be affected? And it really scares me because I'm introducing my children to this land, food, and seafood. And so is it going to affect them if they want to have children in

[20] Capping the wetlands was one of the mitigation options for reducing methylmercury in the MFP reservoir. I discussed this in more details in Chapter 2.

> the future? And if they have children, how is it going to affect them and their children and so on?

This statement strongly emphasizes not just individual, biomedical, physical health as conceptualized in the biomedical, Western sense. Instead, the participant situates the impact of the MFP within the wider network of relations between generations of the same family, and between humans, animals, and plants. These interactions of reproduction between people and the natural world are central to Inuit worldviews and ways of life (Tagalik, 2015). In addition to risks to human health, this participant – and others – also discussed the risks to animals and the wider environment in a way that emphasized that these phenomena have inherent value and should not be harmed, regardless of whether they would be eaten by Inuit. A healthy environment is important for Inuit food systems and cultural and social activities, but also valuable in and of itself. This is representative of Inuit relationality with the land and waters, a key determinant of Inuit health. As Tagalik (2015) writes when discussing the roles of harmony and balance in Inuit health, "Relationality and the rules that govern how one interacts, both with others and within the natural world, require a holistic perspective because no one thing can be separated from its other relational aspects…The interconnection of these concepts is an indicator for collective and personal well-being" (p. 25).

Another participant also drew on the importance of collective wellbeing when describing her concerns for pregnant women and future generations, and shared how she did her own research to further investigate the impact of methylmercury on humans:

> **Jessica**: So, you mentioned doing some other research as well. Did you kind of go out and search for other sources of information related to what could happen with methylmercury?
> **Participant 13**: I did, yep, because I was interested in the, like how would it affect the food supply and especially for pregnant women. I've heard the contaminants would be passed down to the baby if the mother ate it and it all depends how much she ingests would be passed on and if that would have any birth defects. And I was just really curious about what methylmercury would do to us. And how would it affect me compared to my cousin who might be pregnant. And their baby who was going to be grown up into it.

The research from the *Avativut, Kanuittailinnivut* partnership and other contaminants research (Debes, Weihe, and Grandjean 2016; Lohren et al. 2016 cited by Calder et al.,

2021, Boucher et al., 2012) shows that children and women of childbearing age are most at risk from methylmercury contamination, as they are most sensitive to neurodevelopmental impacts. Modelling predicted that "Following flooding of the Muskrat Falls reservoir, median MeHg [methylmercury] exposures are expected to at least double for the majority of the downstream Inuit population" (Calder et al., 2016, p. 13119), with the greatest increases in Rigolet, where it could be almost three times the baseline value. This is in part because residents of Rigolet consume more country foods than other communities due to the community's strong food harvesting practices and lack of alternative food sources (there is only one very expensive grocery store in Rigolet). As previously discussed in Chapter 2, methylmercury is a naturally occurring toxin present in wild foods, so it is expected and known that Inuit are exposed.

In the anonymous survey, participants were asked what impacts of the MFP could be beneficial or harmful. Nine participants out of 47 identified potentially positive impacts, mostly related to job creation and the economy (see Table 1 for more details). Many more participants identified potential harms. Thirty-eight participants answered the open-ended survey question, "What impacts do you think could be harmful (if any)?" (n=47). Most responses referred to environmental change and methylmercury contamination (see Table 3). In the quotes in the table below it is also possible to see the interrelated nature of methylmercury contamination, other environmental concerns, and cultural change.

Table 2. Responses to Open-ended Question: "What impacts do you think could be beneficial (if any)?" (n=9)

Benefit	Number of Participants who identified benefit	Example Quotes
Inexpensive energy	5	"Cheaper lighting bills?" "Cheaper power for some areas of the province but not ours in the long run" "If the electricity resulting from this project was provided to Labrador at an affordable rate"
"Clean" energy	2	"cheap, clean power for all of Labrador no just the Island" "Less greenhouse gasses"
Job creation	2	"Jobs" "Job creation…"
Other economic benefits	1	"It's beneficial for the province but not much coming back to Labrador where the project is situated. Resources of Labrador profits business and government of NFLD mainly in my opinion"
Scientific research produced	1	"…environmental study impact of fish and wildlife"

Table 3. Responses to Open-ended Question "What impacts do you think could be harmful (if any)?" (38 responses)

Harm	Number of Participants who identified harm	Example Quotes
Methylmercury contamination	32	"The biggest impact is we will not be able to harvest our food from the sea or even the land as it will effect all."
Other environmental (not specific to contamination)	9	"Environmental damage by changing our waters with in the big river. Effect of many ecosystems from the bottom of the river to the surface and on out to the sea. Many traditional hunting and trapping areas are flooded out never to be used again […]"
Cultural implications	6	"Mercury in wildlife, our culture is living off of the land. As in hunting and fishing." "Poisoning our food supply, loss of culture"
Financial implications (e.g. taxes, electricity rate increases)	4	"…Stress: worrying about heating your home using electricity, running hot water, using warm water for washing clothes, keeping electronics plugged in because of the fear your hydro bill will be too high to pay. Thus, not being able to afford other necessities."

In short, the evidence from my research clearly communicates that concerns about methylmercury concentrations were the single most significant issue raised by members of the community. In the next section I will elaborate how participants situated methylmercury within the context of harvesting, traditional food consumption, and cultural and mental wellness.

Methylmercury's Impact on Harvesting and Consumption Patterns

Connecting to the previous chapter about knowledge and awareness of health risks, there are complex understandings around methylmercury in the community. Some participants expressed concerns which showed misunderstandings about the biological functions of methylmercury (e.g., that it might affect one's DNA, or that it might 'poison the water'). Methylmercury is a neurotoxin, and the risk to human health is related to contamination of food sources, not to water consumption. However, these scientific misinterpretations should not be used to downplay concerns, and instead should highlight the lack of accessible information available about a health risk which is of significant concern to the community. The impacts of misinformation have been studied extensively in relation to the COVID-19 pandemic, with extensive recommendations for correcting the issue. While MFP misinformation is not at the same level as that of COVID-19, lessons around the importance of trust, understanding the audience's values, and being clear about uncertainties (Krause et al., 2020) are all important points which can transfer to risk communication in the context of the MFP.

As previously discussed, health risk perception is a social experience constrained by inequalities, and even the perception of harm due to a lack of reliable information can result in distress and changes in thoughts and actions related to diet. First, it may cause psychological stress and worry. One person described this in the survey, stating they have, "…a feeling of hopelessness because the politicians, police, court and huge corporations are against the people and their legitimate concerns." This was also discussed in the interviews and photography project. Another potential impact is through a reduction in the consumption of healthy, traditional foods due to uncertainty about methylmercury contamination. While the methylmercury monitoring data shown in Figures 21 and 22 is posted online by GNL monthly, it is presented crudely, in graphs without any explanations or discussion of what the results mean and is largely inaccessible for those without a scientific background. Due to a lack of information about what the methylmercury levels are and what they mean, it was common for participants to express the fact that they were considering if traditional Inuit foods such as seal, fish, and sea birds are still healthy, and whether they should eat them or feed them to their children. This uncertainty points to a larger epistemological and ontological disturbance, as Inuit knowledge is "embodied in a connection with the land and environment" (Healey, 2018, p. 271). As Healey (2018) writes, an Inuit epistemology in action, "arises from the relational perspective and is built on what was known, what is known, and what will come to be known in Inuit communities" (p. 273). The unknown impacts of the MFP interrupts this relationality and

knowledge framework, and the results of this research shows how some people are actively changing their traditional food decision making processes. For example, one participant reflected on her thoughts when fishing:

> **Participant 3:** Well the worry itself will affect your mental outlook. But then, you know, like…[hesitating] I know we didn't get as many salmon as we usually get. And like, I was thinking, "My goodness, you know, like one time that was one of the things that always we would eat". And I don't know if this was right, if it was in the back of my mind when it came to cooking it this year, I was a little bit more hesitant. And…cause maybe, I never knew that my methylmercury levels, what they were. Suddenly, it's still nagging there in the back of your mind.

Another participant discussed how he would not personally change his consumption of traditional foods but might be less likely to give it to his grandchildren, for fear of putting them at risk. Another said, "I don't even eat as much as I used to anymore because it's, I'm scared there might be something wrong with it that could affect my health". Overall, there was a spectrum of perspectives on changing food systems, from people worrying about future risks, to considering changing their consumption patterns, to those who have actively made changes.

This is extremely concerning from an Inuit health and food security perspective. According to ITK (2021a), there are three main streams to the Inuit food system: country food harvesting; commercial harvesting; and store-bought foods. The MFP is a direct threat to the first stream. According to the Inuit Nunangat Food Security Strategy (INFSS), "Inuit experience the highest documented prevalence of food insecurity of any Indigenous people living in a developed country" (Inuit Tapiriit Kanatami, 2021a, p. 4). Food insecurity also has very real impacts on other aspects of Inuit health. People experiencing food insecurity will sometimes compromise on nutritional quality and quantity in order to consume what they can. This can result in malnutrition, being overweight or developing diabetes (Inuit Tapiriit Kanatami, 2021a). This differs from the historical nutritional issues faced by Inuit, as during the pre-contact period, "The primary nutritional problem facing the Inuit was shortage of food, not nutritional deficiencies. When energy needs were met, nutritional adequacy was assured through the consumption of all animal parts" (Hanrahan, 2012, p. 125). Food insecurity also increases chronic health conditions (e.g. diabetes, heart disease and hypertension) and is associated with mental distress and developmental issues (Inuit Tapiriit Kanatami, 2021a). All of these issues put increased strain on the healthcare system,

which is a concern in Labrador and more generally in the province of NL, where the system is already strained (CBC News, 2022a).

The INFSS also identifies climate change and contaminants as one of the key drivers of food insecurity in Inuit Nunangat, alongside poverty, high living costs, and diminished Inuit self-determination (Inuit Tapiriit Kanatami, 2021a). Self-determination in relation to Inuit food insecurity refers to the impact of federal policies (such as relocation, settlement, and residential schooling) on harvesting capabilities (through interrupted knowledge and wildlife management regimes), a reliance on store-bought foods, and other forms of decreased control over the food system (Inuit Tapiriit Kanatami, 2021a). In an environment where food security is already precarious, any change to consumption patterns can have a significant impact on community health. An interview participant articulated the food security challenges associated with methylmercury consumption:

> **Jessica**: How do you think, if there were any harms that arise to the food, how do you think that might affect you?
> **Participant 9:** It would lose our, the way we live, the way we're eating. We wouldn't have, it wouldn't be valuable. We would just have to, just rely on store foods. And the store foods are expensive. And we only have one store, one main store, in Rigolet.

The change in diet to a reliance on store bought food is connected to a less nutritious diet, but also an increased cost, lack of variety and accessibility of food items.

Within the field of contamination studies in the Arctic, it is believed that there must be a balance between the risks of consuming contaminants, and the health, social, cultural, and economic benefits of country foods (Van Oostdam and Donaldson, 2005). This is because the overall health profile of traditional foods far exceeds store bought products, and a reduction in consumption of country foods is associated with fewer nutrients, and increased obesity, diabetes, and cardiovascular disease (Rosol et al., 2016, Van Oostdam et al., 2005). The harvesting of country foods, as well as food sharing, also plays a significant role in building relationships, maintaining bonds, and distributing foods to others (Condon et al., 1995). This has been recorded in research in Nunatsiavut as well, as research in the community of Nain found that country foods are seen as preferable to store-bought foods, perceived as healthier, and the act of hunting itself was seen as beneficial to mental and spiritual health (Pufall et al., 2011). Country foods are also linked to identity, as one participant in Pufall et al.'s (2011) study explained, "Labrador Inuit tie themselves to the land; they see that they are part of the land, so the food is part of who they are" (p. 245).

The existing knowledge around the importance of traditional foods to Inuit health and wellbeing, coupled with the evidence in this research that people are, or are considering, changing their diet due the MFP, presents a risk to health, wellbeing, and identity in Rigolet. It raises the issue of how, whether or not the MFP is affecting the environment is, essentially, only one part of a bigger picture. Within a situation of epistemological violence, where important health information is controlled by hierarchies of knowledge and informed by histories of exploitation, the *fears of likely or potential risk* are enough to change behavior, and thus health and wellbeing.

Cultural and Mental Health Impacts

Participants also discussed how they may make changes to the types of cultural activities they participate in due to methylmercury contamination. As previously discussed in literature and by participants in this research, the environment and land are central to Inuit culture and health. This also extends to mental health (Pufall et al., 2011, Petrasek MacDonald et al., 2015, Cunsolo and Ellis, 2018). A photography project participant, Rhoda Palliser, participant shared her thoughts about environmental change over time, and how it made her feel:

> The first picture I choose was a very clear picture of the view from my living room window. One I think can speak for what once was. How we fished and hunted out in that water for many many years. With no care that maybe one day we won't be able to or if we do there might be a chance that the fish we catch or the seal we shot can be poisonous to us. Which really makes me sad. Sad for myself, my husband, my children and later on the ones who would be affected the most my future grandchildren.

Figure 26. Photograph by Rhoda Palliser.

Some participants discussed how, if people could not consume their traditional foods, they would not harvest them at all in the first place. This is because it is a strong belief in Inuit culture that a person only hunts what they need or what they plan to consume or share with others. Therefore, participants conveyed that they believed fewer people might go out on the land and participate in their cultural traditions or pass them on to their children and grandchildren if they were contaminated. A reduction in engagement in land-based activities would impact harvesting, as described, but it is also connected to the loss of skills and cultural practices.

There was a real sense of loss conveyed by participants who felt their culture and livelihoods would be affected by these contamination issues. Including by the survey participant below:

> Thank you for caring about Rigolet and keeping this issue at the forefront. We may not see impacts now but for our future generations it will be a different Rigolet. I live in Rigolet because it keeps me connected to my culture and identity. I wouldn't stick around if I couldn't do the things I love. It's sad.

Like in the previous chapter, uncertainty also shapes understanding of the loss associated with methylmercury contamination, as people consider how long they might be able to participate in their cultural activities. Participant-photographer Katheline Pottle shared:

> My family and community are important to me.
> Since the Muskrat Falls project I now hear people comment more frequently (almost wondering out loud) "I guess it's not okay to eat the fish...probably for not much longer now" Conservation seems to have taken on a lesser meaning - due to the fact that safely consuming fish and other foods is now an unknown. I feel like we are running on a treadmill and the speed keeps increasing. Running faster and faster to keep up and unsure how much longer we have before we are thrown off - ending up God knows where and in what condition.

Figure 27. Photo by Katheline Pottle

In a group interview with two participants, they discussed some of these impacts from an intergenerational perspective:

> **Jessica:** So what do you think are the kind of impacts of those issues that you've raised? The kind of cultural and food and the impacts now if you think there are any, or in the future?
>
> **Participant 1:** Last summer when I was fishing with Dad, salmon fishing, we were talking about this Muskrat Falls thing, out in the boat and to our net, and Dad, he's like 71, and I was saying about how the fish and how it's going to be affected, and too much methylmercury in it.. and he said, "I'll never stop fishing it. And I'll never stop eating it". But like I said, he's 71. And it just kind of made me sad because I realized like, my son won't be able to do that. Like he might go fishing and stuff, but like he won't get the chance to live off of it like we have. Like when I was growing up, all we ate was country food. We stayed at our summer place all summer, while Dad salmon fished, and there wasn't a whole lot of store-bought stuff. Yeah, times have changed. Like I still go to my cabin and stuff and try to keep some of the traditions like that alive, but with the Muskrat Falls project, it kind of took some of that away. Like, I don't know how to explain it, it's quite sad.
>
> **Participant 2:** It's like a loss. But you can see, it's not completely gone but it's going and you know it.
>
> **Participant 1:** Yeah
>
> **Jessica:** And what about the kind of community impacts of that slow loss?
>
> **Participant 2:** I think too, on another level, like everyone in our community pretty much has like, their areas where their families have come from. Their homesteads, if you will. And thinking about changes, you know there's climate change too in addition to Muskrat Falls, but all of this rolling into one and maybe not being able to get out to where you're from and where your family is from because of changes from projects like this - like that can impact your total health. Especially your mental health, I think. Because it's your connection, your connections to your ancestors, to the land.
>
> **Participant 1:** Yeah

Other participants also shared how they worried for their community's health if they were unable or unwilling to participate in activities due to methylmercury contamination. This was expressed by a participant who works in the community health and social wellbeing field:

Jessica: So a big concern for you is the change in lifestyle for young people and their health?

Participant 13: Yes, because we're already seeing what the caribou, like the caribou ban is still on and the kids growing up now they don't know what it is. And it's going to happen eventually with the salmon and the food supply. So all our traditional food is at risk.

Jessica: …you mention the caribou ban and possibly other food sources. What does that mean for the community?

Participant 13: Well I think when we start seeing the effects of the methylmercury, people might not go off on the land so much. Because they're not going off to hunt. And not everyone has a cabin to go to so they might just go for the day, or go to somebody else's cabin or go with them. But that might, people might be stuck more to the community because if they can't practice their way of life, then they might just say, "What's the point of going off?" So then, you see in the community there's more risk of addictions and it's just going to snowball, snowball effect of negative impacts. The mental health component. Like mental health is going to be, it's going to be something to look out for.

This participant connected pre-existing traditional food issues, such as the ban on hunting caribou, with the potential future issue of methylmercury contamination. In this way, they saw a possible compounding effect for the availability of country foods and speculated about how it might result in less participation in cultural activities and increased mental health issues. In this way, contamination, conceptualized as a symptom within a wider set of structural and historical relations, is seen to erode the possibility of a longstanding way of life. It speaks to a wider point about how imperialism has rested upon a form of epistemological violence enacted through separation from land, as I will discuss further in the next chapter.

Another participant who described how she enjoys berry picking, hunting, and fishing, and who expressed that her main concern was the potential harm to food, shared similar concerns:

Jessica: And how do you think [methylmercury contamination] would affect the wider Rigolet community?

Participant 9: People wouldn't be able to go fishing, or go in their boats go fishing, or go on skidoo, or go hunting. They would be just, it would be just in the

> community and not going out on the land and that. It would be just, I think it would be, at some point it would be emotionally, affect us emotionally, like mentally.
>
> **Jessica**: So you think not being able to participate in the same activities could lead to some emotional impacts on the community?
>
> **Participant 9**: Yeah, because...yeah, like COVID, for instance, COVID it was, at times when it first started, the pandemic, it was for me it was depression. We couldn't go out, we couldn't go visit our families. We couldn't do anything, we just had to be home. And now, going out on the land, it's a good therapy for me. And I'm sure it's good therapy for most Rigolet members of the community. Going to their cabin.

There is strong evidence to support the idea that participating in cultural activities, such as hunting, fishing, and other activities which bring people together on the land, is beneficial for Inuit health. In research with Inuit women, Healey (2008) found that having a strong cultural identity (e.g., speaking Inuktitut and participating in traditional practices) was linked to wellbeing. This relationship has also been established in other research, as analysis of the APS shows that Inuit are more likely to self-report better health if they "are more connected to their culture through harvesting, consumption of country foods, participation in community-level activities and Inuit self-government" (Newell et al., 2020, p. 67). Based on the existing literature, as well as the narratives of participants in this research, it is important to recognize not only the potential risks to physical health of methylmercury, but also the mental health implications of a reduction in participation in cultural activities due to real and/or perceived risks.

As I discussed in Chapter 1, this research does not speak to the question of whether there are significant issues with contamination of traditional foods at the present time. Instead, my objective in raising this issue is to highlight the structural violence of the current situation, where there is a normalized lack of clarity around the impacts and levels of methylmercury. Further, the current situation is one in which powerful actors continue to take decisions which generate fear and uncertainty. The implications of the decision not to communicate health risks in an appropriate manner may result in changes to diet, with crucial effects on Inuit food security and cultural wellness.

Changing Waterways, Knowledge, and Physical Wellbeing

While methylmercury was the most common concern related to the MFP, and has received the most media and academic attention, the community of Rigolet has other environmental concerns which are intimately related to physical safety and Inuit wellbeing. Participants expressed concerns about changing waterways due to shifting salinity that might occur as a

result of the managed release of water at the hydroelectric project. There were concerns that this would impact ice formation, thus resulting in changes to traditional travel routes. These perspectives were shaped by experience of the Upper Churchill Falls project (UCFP) in the 1960s and 1970s. Participants, particularly older community members, discussed how after the UCFP was developed, the community of Rigolet noticed changes to water currents and fish stocks. Other participants shared how Elders were the first to warn the community against the MFP because of their memories of the UCFP.

The UCFP is thus an important historical backdrop for the concerns of Rigolet community members. Possibly due to the era, when there was little discussion or recognition of Indigenous or Inuit rights, the impacts on Rigolet have not been documented heavily and have received little academic attention. However, recent work using participatory mapping has identified how Rigolet residents emphasized how currents in the area have weakened after the UCFP was developed (Bishop et al., 2021). In my own research, several participants mentioned similar experiences. This included one participant who shared how he was young when the UCFP was built, but from what he saw and understood, Lake Melville was changed, including: the ways the seasons and areas of open water/ice freezing changed.

Changing waterways are a serious concern for Inuit. Changes in salinity and water currents can impact ice conditions which Inuit rely on to travel for harvesting, cultural activities, and for purchasing supplies in other communities (such as Happy Valley-Goose Bay). In winter, the only options for travel in and out of Rigolet are flights (which cost approximately £200 one way for a 30-minute flight to Happy Valley-Goose Bay) or travelling several hours by snowmobile. Considering the cost of food and other essentials, general lack of availability of many supplies, and extended shipping costs and waiting times, it is common for people to travel on the land and over the ice to get what they need. One photography participant, Paula McLean, shared what ice conditions and travel on the land mean to her in the following photo:

The pictures I choose was taken the morning of February 2, 2021.

Seeing the vapour on the water, representing a colder temperature than what we have been experiencing gave me a feeling of happiness and hope, that the colder temperatures have finally arrived. We have been having such a mild winter thus far, with not a lot of good solid ice forming for our Winter highway or Spring travel. The things that are vital to our community, for many reasons such as harvesting wildlife, gathering wood, good mental health and peace of mind to name a few.

So needless to say watching the vapour rise in the morning was a great way to start the day!

Figure 28. Photo by Paula McLean

Travel on the land requires expert navigational skill that is passed on generationally. The risk of falling through the ice is real and can result in fatal accidents. The idea that there could be an estrangement from this knowledge due to shifting ice conditions could have serious physical harm repercussions. One participant shared a story of how this happened to them in the past with the UCFP:

> The other thing that a lot of people noticed is the ice in Lake Melville. When I grew up here it was almost like a ritual for us kids to watch all of the ice coming out from Lake Melville, because it would break up and come out. And that hasn't happened for years and years now. And I think the first thing that really opened my eyes was, my mother had bowel cancer, she was in the hospital, and the doctor called for Dad to come up because he had to learn to do certain things with her. So it was in the Spring, I think it was late winter, early spring and he got the phone call and he said, "Well, let's go". He said, "I'm going on the skidoo and you're coming with me." So we left here on skidoo and he said "You drive". So we were driving up and when we got up here to Valley's Bight…Too bad you don't have a map, I could show you what I mean. And I was following the skidoo track, and when we got across to the other side of Valley's Bight, I stopped just to give him a break and he jumped off the skidoo and he looked at me and said "What the hell are you doing?!" And I said "What? I'm following the skidoo track." He said, "You know, there was a time that nobody ever crossed that. It was bad ice all year long. Dogs couldn't even walk on it." And then, from that on, I started questioning him about other parts of the bay. (Participant 4)

This story speaks powerfully to place-based knowledge and the ways that various forms of environmental change not only have practical effects in terms of diet or travel routes, but also how they have epistemological implications. They directly upend a form of knowledge which is situated in place and is embedded in a relational knowing of the world.

Some participants also connected poor ice conditions in winter 2021 to the Muskrat Falls project. While they also acknowledged that it was unclear whether the MFP was the main influence, it was felt that it might be. Another participant wondered about the cumulative impacts of the UCFP and MFP:

> **Participant 2:** It makes me wonder too, is it cumulative? Because like we've had the effect of the Upper Churchill for years, here. And I know, I've heard Elders talk about how the tides changed and how the ice made differently. And how some places

> that used to be safe for travel are not unsafe. And it makes me wonder, with this current project, and the upcoming project with Gull Island, how much more that's going to impact us with regards to travel and our lifestyle here. In addition to of course, the methylmercury. It's like it impacts on so many levels. And food is such an important part of culture. It makes me wonder how, like [x] was saying, her son's not going to be able to…well he'll be able to hunt, but he certainly probably wouldn't be able to prepare food from the land like you are now or like your father or grandfather did. So, yeah there's so much to consider I think. And I know that part of the protest, when it was going on, people were saying it's cultural genocide. And I think that's true. I think that's true and I think that because we are such a small population, and it makes me wonder if because we are Aboriginal, that it doesn't matter. You know what I mean? To the powers that be.

Overall, there is a sense that the MFP could replicate and even exacerbate some of the changes to ice conditions and fish availability seen in the community when the UCFP was constructed. Further, there was a concern that a third proposed hydroelectric project on the Churchill River at Gull Island, could add to these environmental changes even more. This is a frightening prospect, as it could be harmful to human life by affecting ice conditions and undermining knowledge in the community related to vital travel routes and social relations shaped by food harvesting and consumption.

Desbiens (2013) writes that, "Often represented strictly as a natural resource, water is actually a cultural artifact that is constructed through social relations" (p. 20). We can see how the MFP is a product of a particular set of settler colonial social relations within NL (to be discussed further in the next chapter), and we can also see how changes to water influence social relations. This co-constitutive relationship is recognized by participants in this research, who are clear about how water shapes their cultural life, and how that might change as water changes.

Climate Change and the Muskrat Falls Project

The impacts of climate change on Rigolet residents have been documented thoroughly, with research showing its negative effect on mental and emotional wellbeing. Cunsolo Willox et al. (2013) researched the affective relationship between climate change and health in Rigolet, finding widespread frustration. They also found a sense of anxiety linked to concern for a loss of culture and other practices which impact self-worth and self-value, due to climate change. As they (2013, p. 20) write:

> The land provides sustenance, ancestral linkages, and the opportunity to experience joy, pride, happiness, and wellness through participating in hunting, trapping, fishing, or foraging, or just from being away from the community at the cabin. Yet, within the context of a changing climate, ice formation and stability, wildlife and vegetation patterns, and weather patterns are transforming the amount and quality of time spent on the land, and in many cases, making it very difficult (if not impossible at times) to go out on the land at all.

In my own research, similar concerns were raised about the emotional impacts of environmental change due to the MFP, as well as shifting cultural practices.

Ostapchuk at al. (2015) also conducted a community health survey with seniors and Elders in Rigolet about the impacts of climatic and environmental health. They found participants were concerned about changes in ice formation patterns as a result of climate change, and also expressed concern over the level of physical activity of young people because of the increased inaccessibility of land based activities. The seniors and Elders in Ostapchuk et al.'s (2015) research also identified shifting nutritional patterns, with an increase in store bought foods being consumed, which was also seen to affect physical health. In addition, participants stressed the emotional impacts of not being able to go out on the land – including isolation, depression, and the use of alcohol and drugs as coping mechanisms (Ostapchuk et al., 2015).

In my own research, participants also discussed how climate change might interact with the MFP. Rigolet residents shared the fact that they were not sure whether some changes they had recently observed were related to climate change or to the effects of the MFP. This also connects back to the wider question of uncertainty. One participant, a hunter who is very familiar with the local environment, felt that it was too early to see the changes on Lake Melville, and whether it might affect seal hunting. However, he noted that winter 2021 was the "weirdest winter ever" for sea ice formation. He said others believe the change in ice conditions to be due to climate change, but he felt the MFP might also play a part.

Another participant in the photography project discussed the potentially compounding effects of the MFP and climate change in relation to ice formation:

> The picture I chose is newly formed ice. To me this indicates how the "outside world" is effecting our small corner of the world. It depicts the changes of increased saline in our water/ice affecting our culture and traditions. This I

believe is a direct result of Muskrat Falls, as well as the effect of global warming. In my experience February 1 would typically be colder, the ice would be thick and covered with snow. Today I took pictures with bare hands, not something one would normally do in the winter time. This photo is taken "up along the shore" We can only see clearly directly in front of us, things in the distance are unclear. We have an idea of what is there - however the future is blurry. Hopefully we will have a hand in focusing our future to the benefit of our people and beautiful land.

Katheline Pottle

Figure 29. Photo by Katheline Pottle

The lack of an ability to ascertain whether changes are due to climate change or the MFP was also brought up by multiple participants. Some felt the GNL might try to blame issues related to the MFP on climate change to avoid responsibility for any harms to Inuit health and culture which might emerge over time. It is clear from this research and others (Inuit Tapiriit Kanatami, 2021) that Inuit are observing massive changes to the land, waters, and animals in recent years and it is vital to consider climate change alongside the MFP. There are a whole range of potential external factors affecting local practices and knowledges in Rigolet. It appears that the unknown qualities of these impacts, shaped by a lack of attentiveness on behalf of those in power with the information, is dislocating for the community.

Inuit Health as Holistic and Socially Determined

Impacts on Social Determinants of Inuit Health

Throughout this research, participants expressed many changing conceptualizations and experiences of their health which demonstrate impacts on SDIH. The following quote succinctly raises many of the SDIH concerns related to the MFP:

> I think that there's more at stake here than just our health. Physical health, I think there's a lot to do with mental health and a lot to do with community ties and bonding. Because a lot of times you only see people when you're hunting. You see them in town, you wave, you say how's things going, but you go out [hunting] you're together for 3 days straight. So those bonds are built even if it's just there, then you go back into town and call it a day. So yeah, I think those, the things that could reverberate from that, I think we don't fully know but we anticipate will be quite hard. (Participant 8)

The land based cultural and social activities that make up many people's lifestyle in Rigolet is known to maintain physical and mental health, as well as community wellbeing and relationship building. However, these issues have been threatened for several years by climate change, and Rigolet residents are concerned that the MFP could contribute to these changes.

Following on from the SDIH model, the diagram below reflects the key concerns and protective features identified by participants. Inuit health in the context of the MFP requires:

- An attentiveness to intersecting climate change and other environmental issues;

- Safe ice conditions which facilitate activities crucial to physical and mental health;
- Access to healthy traditional food sources;
- Intergenerational knowledge sharing about the land, harvesting practices, and historical context of hydroelectric projects and their impacts;
- Accessible, tailored, culturally relevant health risk information about methylmercury and its impacts;
- Recognition of past harms and a proactive approach to hydroelectric development (and other projects) consultation which works with Inuit; and
- Mental health supports if environmental changes occur.

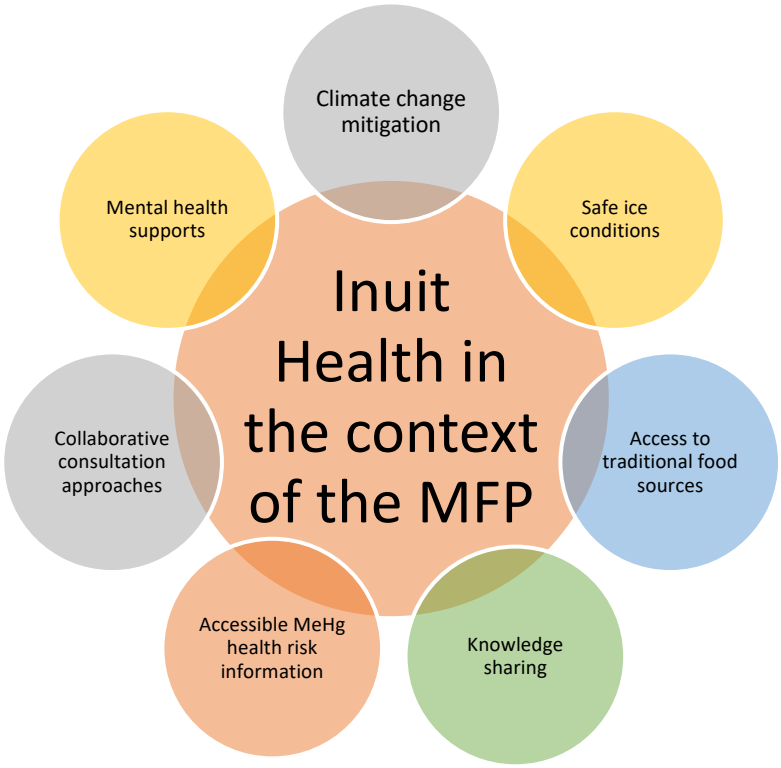

Figure 30. Visual representation of concerns identified by participants

Overall, it is possible to see in Figure 30, how the concerns and interests expressed by Rigolet community members are rooted in historical and contemporary understandings and practices of Inuit food systems and culture and align with a SDIH framework. Public health and health risk communication responses to the MFP should consider the specific information gaps identified by participants of this research, which are rooted in Inuit epistemologies and ontologies.

Public Health and Biomedical Epistemologies

In any discussion of public health in Indigenous and Inuit communities it is important to be critical of biomedical epistemologies, as they have played a role in historical and

contemporary colonization. Biomedicine plays a significant role in Western knowledge systems and is often considered neutral or objective. In fact, it asserts a biomedical cultural authority (Davis, 2016) over peoples' lives, and has justified and upheld oppression of Indigenous peoples, including Inuit. The process of medicalization, "in which a medical frame or definition is applied to understand or manage a problem" (Beck, 2007, p. 19) has also been applied to social life in Labrador as an unquestionable good. However, I assert biomedical authority and medicalization been weaponized to implement colonial practices and policies which have negative effects on many features of Inuit life, including food sovereignty.

In Labrador specifically, one of the main colonizing forces was the International Grenfell Association (IGA), often called the Grenfell Mission, developed by Sir Wilfred Grenfell. Grenfell was a "charismatic doctor-lawyer-preacher" (Fitzhugh, 1999, p. 48) who first visited Labrador in 1892 and was motivated to start the IGA and raise funds to develop projects to better the health of Labradorians. Over the decades, the IGA and Grenfell opened hospitals, operated a hospital ship, and ran a TB sanitorium. They also promoted industries and ventures to support the economic independence of Labradorians, and opened chapels, schools, and orphanages. Grenfell himself also amassed a great deal of social and political power, as he was designated magistrate for the coast of Labrador and travelled the world trying to bring attention to the 'plights' of Labrador (Fitzhugh, 1999).

While it may seem like Grenfell and the IGA had the best interests of Labrador at heart, and they certainly provided much needed healthcare, the intentions and legacy of the man and institutional legacy are more complicated. The approach was certainly paternalistic, and while lots of people speak positively about Grenfell, many Labradorians do not share the perspective that they required the level of outside intervention that the IGA delivered (Fitzhugh, 1999). In addition to the praise, there are also stories of exploitation. My Aunt described to me how she and her family and friends, who are expert craftspeople, were paid pitifully low wages by the IGA to produce laborious work, which was then certainly sold on for much more than the craftspeople received. In this research, one participant shared her own family's experience with Grenfell:

> To my family he's the boogey-man. I'll always remember stories from my grandfather, my grandfather HATED that man. He hated him beyond recognition. He remembered as a boy, about 7 or 8, they were down to Tickeraluk Point and one of his uncles had passed away, he had drowned. And his wife was at what we call our Upper Cabin, an old house he made with his dad. That area was where we mentioned

> he would make a house with his dad [in the future]. But that was the area that they had their little cabin and [unintelligible] the little boy [his cousin] was about 3ish. I think his name was Thomas, I can't remember. And grandpa said, all you saw was Dr. Grenfell's schooner come. It was a big schooner that came out the bay. And they thought he'd be coming in paying his respects [for the death of his uncle]. He came in and took the little boy. He told his aunt that now that her husband is dead, she couldn't raise him. He was doing the best thing for him, and he was going to take him to his orphanage in St. Anthony. And he'd give him a good education. And she begged him not to. She had barely, literally just lost her husband and buried the man within a day. And how he was saying she was going to lose her son. And grandpa remembers, he said he never stopped, in his darkest moments he could still hear her screams of agony as Dr. Grenfell took the baby, put him in his dory and rowed him out to the schooner, right? And [the mother] chased him, in his dory out to the schooner, and got caught in a tide and died. So literally within 24 hours his cousin had literally become an orphan. (Participant 12)

As discussed previously, Grenfell was known for sending so-called 'orphans' to various boarding schools outside of Labrador, even to the United States (Fitzhugh, 1999). As seen above, Inuit have been exploited and undergone extensive trauma under the guise of public health, biomedical authority, and social improvement. These histories must be contended with when developing future responses. In the next section I will analyze a common method of contemporary public health outreach, food consumption advisories.

Food consumption advisories are a common response to contamination issues (including methylmercury), but can have variable success and impact on food systems (Calder et al., 2021). They are also perceived differently depending on the scientific disciple, with environmental scientists being more supportive than public health professionals (Calder et al., 2021). A key concern is that advisories can lead to an overall reduction in consumption of traditional foods, instead inadvertently encouraging the consumption of store-bought foods which have a higher danger of cardiovascular and cancer risks (Calder et al., 2019). A strictly biomedical approach to contamination through advisories presents its own risk, and instead a holistic approach which considers the benefits of traditional foods must be considered, alongside consultation and communication with affected communities.

Based on the research from this project, as well as existing literature, it is important for food advisories (if they are the chosen route) or any other related risk information to be specific, clear, and culturally informed so as not to have negative unintended

consequences. Often, communities are treated largely as consumers of healthcare, rather than epistemological communities with knowledge of local places and experiences which can inform health outreach activities.

The role of colonialism in public health sparks a conversation on the interplay between different types of epistemologies. It is clear that there is not a neat dichotomy between Inuit epistemologies and scientific understanding – both are capable of interaction and working together, and both are valued by Inuit. While tensions can arise with biomedical approaches, it is clear throughout this research that Rigolet community members want more access to reliable scientific data. Overall, a key tension exists: the biomedical, public health approach sees health in an individualist, authoritative way, whereas Inuit epistemologies recognize health as a relational dynamic realized through personal, collective, and environmental wellbeing. Biomedical responses to the MFP must consider the strengths of different epistemological frameworks to address both biomedical science and culturally-specific information needs.

Resilience and Adaptability

When recognizing these risks, it is also important not to fall into a deficits-based approach, which portrays Inuit as victims, or helpless. This is common in health research about Indigenous peoples, which can result in stigmatization, stereotyping, and a lack of responsiveness which perpetuates inequalities (Hyett et al., 2019). Instead, it is important to recognize the resilience and adaptability of Inuit, and advocate for protective measures to ensure SDIH are maintained and strengthened over time.

It is also important to acknowledge community strengths and solutions. In this research, some participants brought up potential adaptations, including how people may have to change where they usually hunt and fish to areas where ice remains and where there may be less contamination. One participant discussed adaptation when describing how she might personally be affected by methylmercury contamination:

> But like, when, if the results are ever made public, or there already and you see like the levels rising, I...I probably will stop my consumption of wild food. Depending on what the levels are and how the levels will impact my health. But if, you know, the levels aren't bad, then I'll consume not as much, I guess. Like I want to try to keep it as long as I can. But when we're forced, when it comes to the point that we can't for our own safety, then we'll just have to get used to it again like without the caribou. It's just we're adaptive people, so we'll

> just adapt to it. Like Inuit adapt, like you know, you know! We adapt to many different situations and so... (Participant 13)

An older participant also compared what is happening with the MFP with changes they have seen in their lifetime, such as people moving into communities and shifting from travelling by dog team to travelling by snowmobiles. It is important to recognize that, even though Inuit should not have to face the risks of the MFP, that the community has agency and has ideas for solutions that could mitigate impacts.

Conclusion

Overall, participants in this research shared numerous concerns about the potential health and wellbeing impacts of the MFP. These mainly focused on risks of methylmercury contamination of food sources such as fish and seals. However, this was an incredibly nuanced discussion which considered, beyond the nutritional value of such foods, how harvesting might be impacted, and how a reduction in access to these food related practices might affect social relations and intergenerational knowledge sharing.

This research also shows how uncertainty and a lack of knowledge about the current health risks is actively shaping food systems in Rigolet, as some participants shared how they are already making changes to their food consumption habits. This is highly concerning from an Inuit health perspective, as we know Inuit foods are healthier than store-bought foods and provide cost saving measures. In addition to this, harvesting food is a cultural activity with irreplaceable health benefits which encourages physical activity, spending time with loved ones, and mental wellness. This should be considered by health policymakers as a priority, to respond to potential food security issues.

Finally, an analysis that considers the holistic nature of Inuit health and a SDIH approach provides direction for responding to the concerns of Rigolet community members. Any future policy responses should involve the community, to best understand the choices which people are making, their main concerns, and their ideas on how best to respond. Rigolet Inuit have been adapting to environmental changes for decades and have informed knowledge on the best solutions moving forward.

Interlude 7

Hi, my name is [withheld] and I am considered "an outsider" to Rigolet; however since arriving, I have felt a sense of belonging. I have been encaptivated by the beauty of the land, the people and the simplicity of life including the ability to live off the land. My heart aches however as I learn through the witness and stories of the Inuit people how their way of life is threatened by climate change and most recently The Muskrat Falls Project. I wanted to be a part of this project so that I could learn, as well as offer a perspective of someone who sees the change through the eyes of the people of my new home.

The picture that I chose shows the beauty of the sea. What I see now however, which I would never have seen before is how that beauty threatens the way of life of the people and how it represents the change which is also occurring as a result of Muskrat Falls.

The ice is late forming, making it dangerous for the people to cross the ice to hunt and fish. However even if the ice was formed, the fish are slowly being poisoned eventually making it dangerous for the people to depend on this harvest to feed their families.

Anonymous Participant

Chapter 8: (Hydro)Power Relations in Labrador

Introduction

Thus far, this research has shown how there is a vast landscape of knowledge and understanding about the Muskrat Falls Project (MFP) which is informed by Inuit epistemologies, ontologies, and historical events. In Chapter 6, participants highlighted their concerns about the risks and uncertainties associated with environmental change; particularly in relation to methylmercury, ice conditions, and fish species stocks. These issues highlight how the stratification of information related to health risk communications has led to a silencing of some community members. Still, participants were outspoken about their desires for communications moving forward. Chapter 7 focused on the community health concerns, and how a holistic perspective of human, animal, and environmental health is essential to understanding conceptualizations of Inuit health within the context of the MFP. I clearly identify the various components of Inuit health and social life which should be addressed to ensure community members wellbeing moving forward.

This chapter aims to further explore the power dynamics which shape the development, implementation, and perspectives on the MFP. It considers the historical context within NL which shape community viewpoints, as well as the political dynamics which allowed the project to proceed without sufficient community consultation and consent. The central analytical question considered is how the MFP fits within the settler colonial structure of the region. I will also consider how the project is wrapped in larger global issues and structures of capitalism through corporate exploitation of Labrador.

In the foreword to *Muskrat Falls: How a Mega Dam Became a Predatory Formation*, Warren Cariou invokes Andreas Malm's argument for "seeing power as power", recognizing how political and energetic power are intertwined, in relation to the MFP. He goes on to explain how "clean" energy within a settler colonial state is also rife with allusions to power strategies of control. As Cariou (2021, p. x) writes:

> Of course, fantasies of clean political power have long been ascendant in colonial regimes seeing to remove Indigenous people from the lands and resources that the colonizers covet. The rhetoric of "dirty" and "clean" have been deployed in these situations specifically to bolster settler claims to Indigenous territory. The dirty is meant to be left behind; the clean is associated with modernity, progress, and a high-minded, neo-liberal variety of profit – in other words, profit without consequences, without damage.

Justifying the MFP in terms of a global energy priority allows it to be socially acceptable as a common good, despite the negative impacts it might have on the few Indigenous people. Using the data from this research I will underscore how Rigolet community members' responses to the MFP and the multitude of environmental, social, and cultural issues associated with it are rooted in an ongoing settler colonial scheme which is typified by a lack of meaningful consultation, deficient decision-making processes, and dedication to exploitative capitalist gain.

Background and Political Relations in Central Labrador

To understand the power relations at play in relation to the MFP, it is important to consider where the project is located, and the social, cultural, and economic context. The MFP is being constructed about 30 kilometers outside of Happy Valley-Goose Bay (HVGB), Labrador, which is itself the mainland portion of the province of Newfoundland and Labrador (NL). HVGB is a major hub within Labrador, but particularly for the central region. Rigolet is about 158 kilometers northwest of HVGB, and only accessible by boat or airplane in the summer, and snowmobile or airplane in winter. In contrast, HVGB is connected to the Trans-Labrador Highway, which leads to a ferry terminal on the south coast and allows travel to the island of Newfoundland (see Fig 1 for map).

While Rigolet is one of five Nunatsiavut Inuit communities, HVGB is not located within the Nunatsiavut Inuit land claims area (for more information see Chapter 2), but has a significant population of Indigenous people. Inuit living in HVGB and neighboring North West River and Mud Lake (collectively known as the Upper Lake Melville region) are represented in the Nunatsiavut Assembly by two elected officials. While the main administrative and legislative hubs of Nunatsiavut are located in Nain and Hopedale respectively, some Nunatsiavut Government (NG) offices are also based in HVGB. It is a significant service hub for Labrador as a whole, including Nunatsiavut Inuit. People living in coastal communities in Labrador are often required to travel to HVGB for specialized medical care, dental appointments, essential or leisure shopping, education, or to visit friends and family. HVGB also has a military base, established in the 1950s, which resulted in a significant influx of people from other Labrador communities.

The fact that the MFP is located outside of the Labrador Inuit lands and settlement area shapes the way Inuit have been engaged on the topic, as well as the responsibilities the government has to consult and work with Inuit. Initially, as already explained, Nalcor, the crown corporation building the MFP, asserted that there would be no measurable downstream impacts from the project, including in the Rigolet area. Thus, they did not

carry out a detailed study of potential impacts. The independent Environmental Assessment (EA) (released in 2011) found this claim to be unsubstantiated and recommended further impact assessments, which were not implemented (I will discuss reasons why later). Despite this, the project was approved by the provincial government in late 2012 (Atlin and Stoddart, 2021, Durkalec et al., 2016) (see timeline in Fig. 3). To fill this knowledge gap, the NG worked with university researchers and communities to undertake a research project (with results published in 2016) to collect baseline information and develop models of potential impacts. Research done in the *Lake Melville: Avativut, Kanuittailinnivut (Our Environment, Our Health)* research project showed that there would likely be significant environmental impacts, including levels of methylmercury contamination, sedimentation and organic matter in Lake Melville, and with regard to physical lake processes such as water stratification and ice formation. The report also stressed the impact of climate change on Lake Melville and the importance of ice monitoring (Durkalec et al., 2016).

The military history of HVGB plays a significant role in the colonial context of Labrador. HVGB is home to an air base built in 1941 which was a strategic NATO base during the Cold War. While many Labradorians (including Indigenous people) have worked at 'the Base' (as it is known locally) over its lifetime, there has also been significant conflict in the region related to its environmental impacts. One such conflict is caused by historical protests conducted by Innu against military airplane exercises. Starting in 1979, Canada and its allies began a low-level flight training program at the HVGB air base. Innu felt the low-level flying to be disruptive to people (including children), as well as wildlife, and began a national and international campaign to protest these exercises (Penashue, 2019). This resulted in an occupation of the military base, a protest camp, and dozens of arrests (Alcantara, 2010).

Geographic proximity to the MFP also shapes environmental and wellbeing concerns. In my Master's research on the Project (Penney, 2021), during which I worked with the grassroots Labrador Land Protectors (LLP) to understand their concerns, they stressed many similar issues to Rigolet residents, but also some which differed. LLP members who lived in HVGB were more concerned about the stability of another portion of the MFP reservoir (Penney, 2021). This other area, North Spur, is a piece of land in the river which acts as a natural dam for part of the MFP reservoir. Local knowledge of the land and analysis by Bernander and Elfgren (2021) has identified issues with its stability, and many fear that it may fail and release water into the community of HVGB. Bernander and

Elfgren (2021) have written about their efforts to convey their analysis of the potential for landslides in various academic and bureaucratic forums, and ultimately they were dismissed or ignored by Nalcor and GNL. The latter maintain that the geotechnical analysis upon which the project relies is outdated (Bernander and Elfgren, 2021). While I do not address this issue in depth in this thesis, Rigolet residents spoke about concern for their family and friends who live in HVGB, but in general concern about stability was more localized to HVGB. In contrast, Rigolet residents spoke more consistently about changing ice conditions and water salinity. This shows how concerns about the MFP are situational and shaped by social life and daily activities.

Extractive industries are another crucial component of colonial life and power relations in Labrador. Labrador has been home to many forms of extractive industry, including mining, forestry, and hydroelectricity. In my previous research, participants succinctly characterized the experience of these extractives saying, “Labrador is a place where they pick our bones” (Penney, 2019a). This reference describes the extractive relationship between the corporations and government who have established industries in Labrador, and those who live there. In the same research project, another participant stated, “…You’re made to feel that you don’t count. That you’re inferior. That’s always been the situation with Labradorians anyways” (Penney, 2019c). The specific geographic and economic conditions of HVGB, with its historical and ongoing connections to the military, extractive industry, government administration, alongside its location close to – but not within – the land claims area, informs the social relations of the MFP. In essence, the presence of these dynamics in the region elucidates many issues related to wider structures of economic and political power and are contrasted with the experience of many people living locally, as I will continue to discuss.

In addition, the concerns about the instability of the North Spur can be extended to a larger structural ‘instability’. The MFP is created within a system in which the interplays between politics, environmental assessments, economics, and Indigenous worlds are brought together haphazardly for the benefit of private and crown corporations and the state. Where there was no legally binding mechanism to implement independent science recommendations (Calder et al., 2021). As Calder et al. (2021, p. 97) write:

> Indigenous Peoples are increasingly asserting their legal right to consultation and consent regarding projects that are likely to impact their traditional lands, their food systems, and their health. However, Muskrat Falls has demonstrated that numerous scientific and institutional barriers prevent proactive management of these risks.

A settler-colonial analysis allows us to understand that this is all by design. Indigenous peoples are not *meant* to be able to make change within a 'politics of recognition' (Coulthard, 2014). Instead, there is the illusion of involvement through the EA, IEAC and various other committees and boards. In reality, concerns are dismissed and deadlines are "missed", with detrimental consequences for Indigenous peoples. In essence, the instability of the natural world – with its changing waterways, risk of landslides, and unstable ice – is created and perpetuated by a social and political system in Canada, which relies upon information being molded according to those in power, and not necessarily in the interests of Inuit.

The MFP's proximity to HVGB also shapes the social relations of the town, as there is a significant influx of transient workers, primarily men from outside of the community and region, flying in and out. This is visually striking, as the trucks they drive in HVGB are all marked with orange flags and it is common to see them all over town. They form a visual reminder of the largely unseen project (since it is located outside of the city and inaccessible to the public). I happened to fly out of HVGB on a 'shift change' day during one of my trips and saw first-hand the huge line of workers getting ready to leave. One participant described how, when she used to live in HVGB, she perceived the MFP as beneficial, due to the way it was seen in the community as an economic opportunity for the town. However, when she moved back to Rigolet, she saw the project in a different light, and realized the impacts it could have, ultimately changing her mind on the project. It was salient to realize how the MFP is an economic opportunity to some, and a devastating, emotional, and disruptive experience for others.

While these impacts are likely localized to HVGB, they also affect residents of other communities as they travel to HVGB frequently. Another participant from Rigolet shared how she also had an encounter with transient workers at the airport:

> I was going on a trip for medical reasons and I had to go from Goose Bay to St. John's, and I got in this big long line up of people. They were coming in buses, we couldn't stop [the car], my husband had to put me out way down here, and I had to walk all the way […] Because all of these buses, it must have been a shift change. There was three big buses with all of these people. And of course, like, I couldn't go up there, he couldn't stop. So I had to get out on my own, and take the luggage and go up. And then I was in this long, long line up in the airport to go on my way. And I was thinking, "Wow, this is impacting us so much." And you know, I saw a couple of other people from Rigolet that were in the same situation with different airlines.

> There was just so many people and…you know. So even little things like that has an impact on you. Because your physical needs seem to be pushed to the back because Muskrat Falls is more important, and their workers. Do you understand what I'm saying? (Participant 3)

Research by Stienstra et al. (2018) with disabled women in HVGB found that residents have found many changes since the imposition of the MFP. This includes strains on the healthcare system, a rising cost of living, the decreasing quality and accessibility of public services, fewer transportation options (as taxi drivers shift to working at the MFP), and concerns for women's safety with a rise in solicitation of women for sex work. Overall, while the MFP presents economic opportunity for some, it also intensifies structural violence for those who are not the main (or intended) beneficiaries, such as disabled people, vulnerable women, and many Indigenous people. In the next section I aim to further elucidate the ways in which the MFP is representative of power relations in Labrador.

MFP as Representative of Existing Power Relations

Many participants expressed the view that the decision to build the MFP, along with the lack of consultation and consideration for Rigolet community member's concerns, has been reminiscent of the way the GNL has operated in Labrador and Inuit communities for many years. They felt that the MFP was one more occurrence in a long line of policy decisions and projects which did not prioritize Labradorians, particularly Indigenous people. Photography project participant Katheline Pottle described this in her photograph of a fly obscured in snow on a window, writing:

> I feel that the Muskrat Falls project is another example of the dismissive attitude that our provincial government has towards our community, our people and Labrador in general.
> We are like the fly on the window, the focus is everywhere else. We are nearly invisible.

Figure 31. Photo by Katheline Pottle

GNL and Inuit Relations

Despite Nalcor's portrayal of the MFP as a benign entity and an "incarnation of progress" (Samson, 2017), throughout this research, participants discussed how the Muskrat Falls project is representative of broader social relations between the Province and Indigenous peoples, including Inuit. One of the main references people made was to historical relations between Inuit and the provincial government. There is a sense that the environmental and social impacts of the Upper Churchill Falls project (UCFP) (e.g. changes to fish stocks, currents, and ice/travel routes) have not been adequately recorded or acknowledged by people outside of the community, and that there is little consideration of the harm that might be done to Rigolet community members if environmental conditions change due to the MFP. One participant shared:

> I think there was fear when we heard of [the MFP] first. I think there was automatically like, "what will that mean?". Because everybody knew what the Upper Churchill was at the time. And that wasn't really well documented and we weren't compensated in any sense or I don't think the impact was appreciated. So like, examples would be, like waterways that we used to travel on changed, and ice conditions and our water. Fish population changed, and where you could catch or not catch them because of the brackish tone to water. Where you could get fresh water when you were ice fishing changed. Like those types of things, that for us, depending on the day, could actually lead to fatalities, or could lead to a difference in cultural conduct. (Participant 8)

Intertwined with this is the way the UCFP shaped historical understanding and community expectations regarding the potential impacts of Muskrat Falls. Since elderly people remember more about the UCFP, participants felt they were more likely to be opposed to the MFP. One participant shared how this influenced her perspective:

> **Jessica**: And how do you feel about how the project has been put in place? Or like, how it was presented to the community?
> **Participant 11**: In this community? I remember they came here for a meeting once. And I'm not even sure where it was to. And everybody in the community was all against it. And well, we're only people. So we don't have the money or funds to put this in a halt. Not like Nalcor had.
> **Jessica**: So do you remember people saying at the time that it wasn't a good idea?
> **Participant 11**: A lot of the elders, I know my father [x], he was against it. And Aunt [x]. Like well, all the seniors.

Jessica: Yeah, I heard that the seniors really remember when Churchill Falls was put in place and they noticed changes then. So then there was some fear around Muskrat too.

Participant 11: Yes.

Jessica: And how do you feel about the way it was presented and that people didn't have, didn't seem like people's resistance or opinion mattered?

Participant 11: To me, like I said, we didn't have the resources here in this community to actually have a voice. And really, it didn't really matter anyways. Because they were going to do what they wanted to do. Because what really speaks there is the almighty dollar.

In this discussion, the participant refers both to her opposition due to what she's heard from the elders in her life (her father and aunt), but also the feeling of being unable to speak up or make meaningful change due to the inability to be heard. In contrast, Nalcor, the crown corporation developing the project had the resources of the state at its disposal to make its case publicly. The idea that people cannot or will not speak up due to their lack of resources or ability to be heard connects to the theme of epistemic violence as described in Chapter 6. Despite the silencing, there is still evidence of a transmission of critical knowledge over time, passed down through generations who learned about the impacts of the UCFP from their parents and grandparents. This transmission of knowledge and historical awareness of how current events relate to the past demonstrates the extent to which Rigolet residents have a sustained knowledge as to how power operates in NL.

In the case of the MFP, this is nuanced and perhaps shaped over time, as people did express their concerns to each other, the government, and the general public for years without change. In 2013-2014 when resistance efforts were the most intense there was extensive public discussion, social media posts, and protest activities. However, this has since reduced as there was little impact on the project, which largely went ahead as planned. The dynamics of power relations in NL in relation to MFP means that people are unheard and silenced on multiple levels.

Procter (2020) describes a 'politics of exclusion' within state-driven development in NL. She describes how governments in NL have attempted to contain Indigeneity in Labrador in order to facilitate extractive industry, and how in response, Indigenous peoples have tried to counter this approach. By analyzing the Muskrat Falls Inquiry, Proctor (2020) shows how provincial and federal governments attempt to contain indigeneity by putting limits on who can identify as Indigenous and creating boundaries via borders for land

claims agreements and through narratives about land ownership and nationalism (as I will discuss in more depth later). In the MFP Inquiry, Indigenous representatives were required to demonstrate their indigeneity in two ways: through describing how they participate in "traditional" activities, and by defining the location of their territories. Lawyers for the Inquiry consistently attempted to locate Indigenous peoples and their activities in the past (Procter, 2020). This approach of containment fits squarely within the settler colonial politics of elimination of the native, as previously discussed in the literature review. By downplaying Indigenous relationships to the land, the state attempts to moderate the ability to which Inuit can resist the MFP.

Lack of Consultation

Another topic of discussion which arose through interviews, particularly when participants were asked to recall the first time they heard about the MFP, was a lack of consultation and community discussion about the project before it was built.

> How do you feel about the Muskrat Falls Project?
> My Picture signifies that there is a great weight added due to the project. It creates a feeling of heaviness and a bowing down to outside forces.
>
> Lorraine Allen

Figure 32. Photo by Lorraine Allen.

The reference to "outside forces" emphasizes how participants saw the MFP as something done to them by outsiders. This is even though the provincial government – which is also the proponent of the MFP – is meant to represent their interests. There remains a significant disconnect between Inuit and the wider interests advanced by the government in its infrastructural and economic decisions.

Many participants discussed that they did not know about the MFP until it was "too late" (i.e., that until it had already been decided that the project would move forward), or people felt the decision had already been made by the time Nalcor consulted Rigolet. Participants recalled similar stories about the consultation process for the project, where there was very little actual consultation, and more of an informational approach, whereby proponents of the project were essentially informing Rigolet residents of what would be done. The following participant described this process:

> **Jessica:** Can you tell me about the first time you heard about The Muskrat Falls project?
> **Participant 8:** Hmm...well that would be…I don't even know when that would be, but that was years ago when they came in for consultations, when there was talk that this project could happen. And they wanted to get the community feedback. I know at that point I'm always interested that they come in with the consultation because it's something we demand, it's required. But there's always the question of what level of consultation is happening, right? So if I consult you for a cookie recipe, and I come and tell you what the cookies are and how I'm going to make them and you can help me, well you're not consulting me, versus, [asking], "I just need to know how to make a cookie recipe", and ask you for it. So when they came in it was really projected, from what I understand, at that time I was a bit younger, to what…it was projected to say that if the public is not interested in the project […] then the project won't really go through. So the town was really adamant about that, to say, "we're not sure this should go through as it's planned". So naively, some of us thought, well that meant what it was. But usually by the time that they're coming to consultation, because I mentioned I was a bit younger then, when they come for consultation it's because they've already given that much research and interest in that development, that they're already like, started the ball rolling. So this is part of that ball rolling. And we thought we were at the beginning of the ball, if you know what I mean? She'd already started rolling downhill. So it was really more of a consultation that if

this moves forward, what should it look like? Versus, should the project be or not be? That was already chosen. So that was when I first recall it being brought up.

Participant Eight's reference to consultation in comparison to a cookie recipe reflects the moral economies of everyday life in Rigolet. There is a standard for how people and institutions are expected to practice forms of reciprocity and care in interpersonal dealings – an expectation that is not being respected in the case of the MFP. The absence of these practices of reciprocity are responded to with shame and critique. Instead, people leverage the ethics of everyday life as a form of critical accountability.

Almost all interview participants recalled a singular consultation event in Rigolet that took place at the local school. There was a consensus amongst interview participants that the consultation event was not genuine and did not take engagement with the community seriously. One participant discussed how at the consultation "they put us in I think the smallest room in the school, but they had to move us to the gym because there were so many people.", demonstrating that there was significant community interest in the project from the beginning. Ultimately, even though there was interest, it was felt that the community actually had very little power to shape the project.

To better understand the long-term knowledge construction around the project, interview participants were also asked when they first heard about the MFP, what they thought at that time, and if their perspective has changed over time. This participant explained her introductory experience with regard to the MFP:

> **Participant 9:** The first time I heard, it was on the news. And I believe there were Muskrat Falls representatives that came to Rigolet I think. I think there was a meeting at the school. And then, it was on the news a lot. And that's how I first heard about it.
> **Jessica:** Okay, when representatives visited Rigolet at the school, did you, were you there? Was there a meeting?
> **Participant 9:** Yes, I attended, I was there, yes.
> **Jessica:** Okay, and how was that?
> **Participant 9:** It was...the information they were giving was…little bit, [I] couldn't understand it much. They were talking about like, environmental assessment. So that must have been about the land, and our land and that. And that was it. But other than that, that's all I can remember from back then. (Participant 9)

The same participant went on to discuss how she felt ignored in the consultation process:

> **Jessica**: …It sounds like you were kind of sceptical of it from the beginning. Why do you think you had those concerns?
> **Participant 9**: Because I know, with a big project...To me I find it more about the money and the jobs and what the project is going to gain for them. And at the same time, I find they were not really considerate about our side, like our way of what we wanted to say. What we was trying to voice. And the project just went ahead anyways.
> **Jessica:** So is there kind of a sense of not being listened to?
> **Participant 9**: Yeah, it was like we were, it was falling on deaf ears and they weren't really, really listening to us. They were like, they just came into the community, and said what they said. And that was it. And they just went on, ahead with what they were going to do. And now the project is up and running. (Participant 9)

The themes expressed by participants above (a lack of meaningful consultation and inability to shape massive infrastructure projects, including those which are publicly funded) is in line with findings from a significant amount of literature on 'development' in, around, and affecting Indigenous communities. Within Canada and outlined in the UNDRIP (UN General Assembly, 2007), there is also a duty to consult Indigenous peoples when actions or decisions might affect Aboriginal or Treaty rights. However, Moore et al. (2017) highlight how this has generally been a flawed practice whereby the duty to consult often becomes a 'checkbox' exercise, rather than a genuine consultation process. In a study of Indigenous consultation in Jasper National Park, Youdelis (2016) also critiques the "antipolitical" approach of co-management which continues to benefit government and industry while leaving colonial structures unquestioned.

Bachrach and Baratz (1970 cited by Lukes, 2005) discuss how power operates, not only in concrete decision making, but also by preventing the public airing of conflicts. It seems that, in the case of the MFP, by not adequately consulting or informing the public about the project, bureaucrats and politicians from GNL, Hydro NL, and Nalcor exerted their power by limiting political procedures which might give rise to resistance. The idea that those constructing the MFP may have tried to silence opposition is more than speculation and was established by the Commission of Inquiry Respecting the Muskrat Falls Project. The inquiry found that GNL was biased towards the project's construction, pre-determined that it would go ahead, continued with the plan even when it was shown it would be detrimental to the fiscal health of the province, and that Nalcor concealed information

about the project's costs, schedules and risks (LeBlanc, 2020). While the inquiry did not focus on environmental and Indigenous rights issues, it is clear that it is not outside of the realm of possibility that the involved parties suppressed social and political resistance.

Future Projects: Gull Island

Participants also expressed fear for future hydroelectric projects, including the Gull Island project which could also be built on the same river as the Churchill and Muskrat Falls projects. Gull Island is considered part of the same 'Lower Churchill' development as the MFP and has thus already received sanction and could be built with little additional procedural approvals. This is of significant concern to some participants, who do not want to see another project built, or would like to at least see what the impacts of the MFP are before another project is constructed. As one participant said:

> I hear now [that] Gull Island is pretty much a go-ahead project. Maybe now's the time people need to start talking. Because if Gull Island goes ahead right now, say within the next three years, we are not going to know the full impacts of Muskrat Falls at that time. […] Like, you know, the road is built there. The equipment is being moved in there. So like, we probably won't know the real effects of Muskrat Falls because there's another one happening so soon. And maybe that, Gull Island should be delayed until at least you can see what's happening. (Participant 4)

Despite a general feeling of exhaustion from the issues associated with the MFP, some participants expressed a desire to continue fighting against future projects, like Gull Island. Photography participant Lorraine Allen shared:

> Power To The People
>
> The development of the Muskrat Falls Project was shrouded in controversy from the beginning. Labradorians from all walks of life, young and old, were a part of the movement -Make Muskrat Right, an attempt to halt this project. Protests were held in Rigolet, Goose Bay and at the Nalcor gates, (the work camp for the project). The gates were stormed and a takeover ensued, becoming the focal point of this historic event. This movement forged positive relationships between the indigenous groups and other Labradorians alike. This one cause fused all of Labrador. It was the ultimate in relationships and continues to serve as a reminder to what 'the people' can accomplish when taking a stand together. Now with talks of the development of Gull Island I for one would be be incensed and proud to once again take up the cause, alongside fellow Labradorians. To do my part to try to put a stop to another mega hydro project from ruining this land God gave to Cain.

Figure 33. Photo by Lorraine Allen.

The ‘land God gave Cain’ refers to a quote by French explorer Jacques Cartier, who gave Labrador the title during a 1534 expedition. Since then, the phrase, believed to have been used by Cartier to express the inhospitable nature of Labrador, has been adapted in the region for various social purposes and meanings. *The Land God Gave to Cain* is also the title of a 1958 thriller novel by Hammond Innes about a plane crash in Labrador (Innes, 2016). It is also the title of a folk song written by Pat Byrne, Joe Byrne and Clyde Rose. The lyrics tell a story of Labrador in which Indigenous peoples live on and with the land. It goes on to explore resource extraction and colonialism in the region over time. First trappers and missionaries visit, then poor fisherman from Newfoundland, and finally corporate interests prevail, ultimately leading to the suffering of Indigenous peoples as “the land God gave to Cain” is continuously exploited (Traditional Music Library, 1997):

> The years went by, and as time passed
> The companies moved in
> For ore, and wood, and the hydro power
> The struggle it did begin
> And the working men on both sides
> Tried to live their lives the same
> And the native suffered silently
> In the land God gave to Cain

While there is undoubtedly an aspect of romanticization of Indigenous peoples in the song, and no mention of agency or resistance, the lyrics parallel a sentiment in Rigolet about how the MFP has been imposed upon the region as part of a long line of other exploitative actions within the settler colonial context. This song and its reference in the photo are examples of the ways in which local, critical epistemologies are sustained, translated, and shared through arts and cultural outputs. This parallels with other forms of critical knowledge shared through ballads and songs (DuBois, 1903).

Environmental Impact Assessment Processes & Decision-making

The environmental assessment (EA), sometimes called an environmental impact assessment (EIA) process is a point of contention for the MFP, as it was shaped by the epistemic perspective of Nalcor. EA processes generally include project scoping and screening, scientific research, project alternatives, and mitigation measures to address adverse impacts (Glasson and Therivel 2019 cited by Barnard-Chumik et al. 2022). It was generally felt that the environmental assessment process which took place for the MFP was insufficient:

> **Jessica:** So it seems like there was a really big effort from the community right from the beginning to say, you know, we are going to be affected.
> **Participant 5:** Absolutely, and when the Environmental Assessment came out, the panel said Rigolet was going to be affected and that there needed to be mitigation and that there needed to be consultation with Rigolet and all kinds of stuff like that. But it was all totally ignored. Like they just kind of went ahead and did the project, because the government was the proponent and regulator, and they could do that. So and then, yeah, so yeah go to your next question because I'll go on forever.

This reflects research on knowledge hierarchy in EIA processes. Barnard-Chumik et al. (2022) studied the MFP to examine how power and knowledge influenced the EIA. They found, "evidence of pluralism in knowledge production, which contrasted with a distinct knowledge hierarchy in the EIA" (p. 10) and felt that there was a mechanism of depoliticization which affected the assessment outcome. The authors identified two distinct epistemic communities: the "EIA practitioner-developer-settler government epistemic community" and the "local community-Indigenous government-academic epistemic community" (Barnard-Chumik et al., 2022, p. 10).

Barnard-Chumik et al. (2022) describe how, as the understanding of methylmercury contamination largely arose after the sanctioning of the MFP, it reached a state of "project inertia". This "occurs when a project builds a large amount of political will and historical momentum and therefore moves forward to completion largely unencumbered. This momentum does not change despite scientific evidence that, if presented earlier, could have impeded its approval" (p. 11). Knowledge hierarchy shapes project inertia, as there are divergent perspectives, but ultimately the EA practitioner-developer-settler epistemic community was able to shape the outcome by rendering the knowledge disputes as debatable "issues of science", and "the temporal and geographic boundaries of the methylmercury policy problem were drawn in such a way that could justify minimizing consultation with downstream communities" (Barnard-Chumik et al., 2022, p. 14) This is part of a process of "manufactured ignorance" where there is purposeful exclusion of particular questions in order to avoid certain barriers (e.g. budgetary, time, or regulatory) to advance the project (Barnard-Chumik et al. 2022).

Overall, it is clear that a knowledge hierarchy exists in the MFP approval process, which ultimately leads to those at the lower end of the hierarchy paying the price, as has been the case in the past. Participants had ideas for correcting these wrongs, as shown in the photography project by Katheline Pottle:

I hope that we have at least 2 if not 3 generations that can continue to safely practice our culture and traditions. I think someone somewhere dropped the ball by not doing an impacts and benefits assessment regarding the Muskrat Falls project. I would like to see some backtracking and follow through re: an impact and benefits agreement that recognizes the many losses we have incurred and continue to incur.

Maybe building a road to North West River is a place to start, so that we have access to more economical modes of transportation and greater access to cheaper food and cheaper electricity. We may as well get some benefit from the project.

Figure 34. Photo by Katheline Pottle

The references to potential resolutions such as a road to the nearest community is an evocative one. It presents the dilemma the community faces, and the necessity of creating liveable conditions within in the structures of the capitalist economy. Once again, we see Inuit being adaptable and focused on solutions, even within the context of demonstrable harms where their concerns are viewed as secondary to corporations.

Colonialism & Global Social Structures

The Muskrat Falls Project within a Settler Colonial Structure

Shiri Pasternak (2021) describes how, in Canada, "Hydroelectric development radically transformed the landscape and economies of Indigenous peoples with cascading effects through their social worlds" (p. 38). This transformation is present in Labrador and described by many of the participants in this research, as seen throughout the previous chapters. Participants made explicit references to colonialism as well as less explicit ones which instead referred to power dynamics which fit within a settler-colonial structure. For example, references to how the government keeps "taking" from Labrador, or oppressing Indigenous people:

> **Jessica**: You also mentioned you said it felt like people's concerns were being put to the side once again, what do you mean by that, like 'once again'?
> **Participant 13**: Well it's just, it seems like Labrador's always put on the backburner. Like, if there's issues, like I know with when there's protesting like different things, the people that are directly impacted or involved in the protesting, our government [NG] will go try to represent us as best as they can but the Newfoundland, Newfoundland, I wants to say government but I s'pose it's not because we're the same province, but that's how it feels. It's like, they uses the resources in Labrador but that's it. It's like we're just used for our resources and they don't take us people at face value for any concerns and things. If that makes sense?

Central to settler colonialism and the elimination of Indigenous peoples is dispossession for the purpose of access to land (Barker, 2014). As Wolfe (2006) writes, "…the primary motive for elimination is not race (or religion, ethnicity, grade of civilization, etc.) but access to territory. Territoriality is settler colonialism's specific, irreducible element" (p. 388).

Following on from this, the Muskrat Falls project is dispossession from Indigenous lands in more than merely the material sense of not being able to access the falls itself. With its lack of consultation and consent, destruction of land, and potential harm to waterways and

animals through methylmercury contamination, the project threatens Nuna as a practice of grounded normativity by potentially altering Inuit food systems and cultural activities downstream. Many Inuit cultural activities also revolve around hunting or harvesting with friends and family, and thus social relations could change if the Muskrat Falls project impacts waterways and marine life. Overall, it could distort how we relate to the environment, and thus how we relate to other humans and non-humans. Nuna is not just a matter of knowing, but of embodied and situated practices of being in the world, practices which are put directly at risk by forms of settler colonial dispossession such as this project.

Kauanui (2016) reminds us that we must also tend to indigeneity when discussing settler colonialism, as "indigenous peoples are still subject to that structure" (p. 4). In this research we see pertinent examples of this, as the MFP is part of a settler colonial system which separates people from the land, essentially severing their connections to each other and the environment. The purpose of this is, as described by the participant above, to access Labrador's resources. As Wolfe (2006) highlights, settler colonialism also entails a specific temporality through its perpetuation of a vision that Indigenous peoples are already disappearing. This speaks directly to the process of epistemological silencing in the case of the MFP, as this silencing is intended to further enact the disappearance of the Native. Silencing, through its alliance of knowledge and power, makes socially real the condition of anticipated disappearance.

Another participant spoke about the contradictions between various levels of government, especially in relation to their stated commitment to healing and truth and reconciliation. She explained how this commitment did not seem to be evident in practice:

> **Jessica**: And kind of similarly, how do you feel about how the project's been implemented so far? So how do you feel about how things have moved forward?
> **Participant 9**: I find it a bit hard to understand about what's been on the news when Muskrat Falls topic comes up. I still feel that it should not happen, it shouldn't be there. Although it's lots of jobs, I feel it's not benefitting Labrador. I mean, I really don't know how to explain it. Like the government is more thinking of dollar signs than our way of living. As Indigenous people in Labrador.
> **Jessica**: Could you kind of expand on what you mean about how it affects Indigenous people in Labrador? And ways of life?
> **Participant 9:** […] And it's, it don't feel right, and although there's a lot of positive talk about healing and that on the news and that...it's just, it feels like although we can talk, we can forward our concerns and everything else, but seems like what the

> government says goes. That's it. Although we've been trying to speak out, speak out, seems like it's just, we're not listened to as much. Although I don't understand very much, to me it's not right for the project to be, Muskrat Falls, it's just, I find it wrong, not right, not the right move.

The participant above makes an important point about the enduring nature of settler colonialism. Wolfe (2006, p. 402) writes about how settler colonialism is "relatively impervious to regime change". Despite the various governments who have been in power in NL, the different political parties who started and built the MFP, and the shifting narratives of reconciliation over the decades, the structure remains the same. Settler colonialism is ongoing in the region and operating in much the same manner.

One person shared a powerful anecdote about her life and the material conditions which ties together many different issues related to power and oppression within the settler colonial state:

> And now we're talking about the Muskrat Falls being dammed up. Well, okay, a lot of my friends are upset because their trap grounds that their fathers, and their grandfathers, their great-grandfathers and so-on back, it's flooded. It's no longer some place they can go and reconnect with their family. It is gone. Completely and utterly gone. Because somebody said, "you know, I want that". Were the people who live here consulted? Of course, we weren't. Because we don't matter. As Indigenous people, we do not matter as human beings in this country. I mean, if you don't believe me, go to any reserve, go to any Indigenous community. Here in Rigolet we can't drink our tap water. Our tap water is in fact brown. We have to use a water facility to collect water. I've got a bad back, I throw it out at a moment's notice, and I've got to use that water to clean after I've cleaned with the water from my tap because it stains everything brown. Now do you see [Justin] Trudeau going and spending his evenings going to a water station to fill up plastic jugs to get water? No. I'm thankful that we have fresh drinking water, but why should we break our backs? It's 2021. Why should we be poisoned by food that we have depended on for thousands of years because somebody in Nova Scotia or New Brunswick wants cheaper power? Where's our cheaper power? Just the other morning I was listening to Lela Evans, our [Member of the House of Assembly] for Torngats district, she was talking about how you know, the [Progressive Conservative] party have failed her as a member, and us, her people, because here we are paying 18.3, 5, 4 cents per unit for energy, but in Goose Bay they pay 3 cents. Why do we have almost 18 cents

> increase? It's not that far. That power technically comes from our land, so why can't we benefit? It's like Muskrat, we're not going to benefit. We're going to be jacked up in prices. (Participant 12)

The quote above provides several examples of colonialism and Inuit being separated from the land, both obvious, such as through the flooding of traplines for the MFP reservoir, and more inconspicuous, through the unaffordability of basic needs such as energy. She highlights how Inuit are not adequately represented in the political process, and how even Inuit politicians who have invested in the system feel it fails them. This quote also powerfully articulates the ways that colonialism influences a lived reality interspersed in seemingly banal facts (like the colour of drinking water), everyday tasks (like having to clean twice to remove stains from brown water), and economic injustices (like the cost of living). In 'Empire Is in the Details', Catherine Lutz (2006) considers the ways empire changes the practices of everyday life. In Rigolet, it is possible to see how empire and settler colonialism is a lived experience, even down to the affective experience of injuring oneself while having to fetch water from a centralized facility.

Resource Extraction and Corporate Exploitation

Stienstra (2015) advocates that we can use the example of resource extraction in Labrador as a way to understand to global crises of extraction, military power, and profit within a capitalist system. While many see the MFP as an economic opportunity, it is actually a crisis built on previous crises (such as low-level flying and dislocations from Indigenous lands) which "serves to perpetuate structural inequalities and negatively affects diverse groups of girls and women, including women with disabilities" (Stienstra, 2015, p. 631).

The MFP is a strategic development in the capitalist landscape of NL. The UCFP's agreement with the province of Quebec, which continues until 2041, generally sees much more profit go to Quebec than the NL. Therefore, the MFP was meant to be help the GNL become "master of its own resources" (Stienstra, 2015, p. 638) by shifting power (figuratively and literally) to ensure NL becomes the main beneficiary of natural resources in the province. However, Stienstra (2015) provides a potent reminder that women, particularly marginalized women, are largely excluded from the employment opportunities from the MPF as women are typically under-enrolled in the types of jobs at the site, and that there are few forms of social support available (such as childcare and low-cost housing). Despite this, resource extraction becomes incredibly challenging for communities to reject, "when communities are in a chronic state of crisis brought on by decades of displacement, exclusion, external military and economic interventions and

international relations that make acquiescence to resource extraction appear inevitable" (Stienstra, 2015, p. 645). During this research, several participants told me that they did not know of any Rigolet residents working at the MFP. Until February 2022, Nalcor posted monthly reports on their website, including employment information. At the time of the last report (for the month of December 2021) there were seven Nunatsiavut Inuit working at the MFP (out of a total of 207 employees) (NL Hydro, 2022).

Within settler colonialism, land is treated as a transactional resource and pollution is seen as being inevitable or acceptable for capitalist gain. Keske and colleagues (2018) discuss how military waste and legacies of contamination are connected to historical and ongoing colonialism in Labrador. They assert that "wastes and resources are inextricably linked" (Keske et al., 2018, p. 84). In Labrador, waste practices shifted with the imposition of the military, as contaminants were released into local waters and soils, and changes in populations affected local landfill sites. Specific to the MFP is waste in the form of trees cleared for the reservoir, as Nalcor estimated that the total volume of marketable timber from clearing for the MFP reservoir and transmission line was 2,172,300 m3. Keske and colleagues (2018) highlight how this timber has been underutilized, resulting in additional waste. Again, waste is intertwined with power relations and settler colonial extraction in Labrador.

In the photography project, the project partner/professional photographer Eldred Allen shared his perspective on the corporate exploitation of Labrador:

> Rigolet residents lead the protests in Goose Bay as we have so much to lose. The image below sums up the Muskrat Falls project and how a lot of us feel towards it. This image is a double exposure. It illustrates the next generation who have so much to lose, they were involved in the protests and they stand there looking at the waters which will be polluted. All the while the Corporate machine is transparent, not really present during all of this, they have their back turned to what protesters are looking to protect and they are turning a blind eye to the residents and their concerns.

Figure 35. Photo by Eldred Allen.

From the discussion above, we can see how consultation and the EIA process – which includes multi-stakeholder discussion, compromise, and mitigation of harm – are merely symbolic processes which provide the illusion of progress or inclusivity while, in practice, being dedicated to maintaining the status quo. Howlett and Lawrence (2019) discuss this in relation to the Australian context. Despite recognition of Indigenous rights, there is little change in resource management decisions. They write, "Our central contention is that a deeply seated colonial mentality remains institutionalized within states, particularly those nation-states that are heavily dependent upon resource extraction, and that these states remain deeply committed to prioritizing the facilitation of mineral development" (Howlett and Lawrence, 2019, p. 819). It stands that within a politics of recognition (Coulthard 2014 cited by Howlett and Lawrence, 2019) the logic of elimination remains (Howlett and Lawrence, 2019). We see this in Labrador in the case of the MFP, as those in power make strategic decisions to silence public opposition to the project and create and maintain an epistemic hierarchy which allows the continuation of a history of resource extraction.

The limited engagement of Inuit throughout the MFP planning, construction, and operation is in keeping with a policy of 'containment' that stems from the historical to the contemporary. Chapter 2 discusses colonization in Labrador and the policies of containment and management of Inuit movement through the Moravian missions, residential schools, and other state and church policies. Looking forward to today, Inuit have similarly been 'contained' when attempting to speak out about the MFP, in ways that include being excluded from consultation, arrested during resistance efforts, and then essentially excluded from the public inquiry. While there has been nominal inclusion of NG in some aspects of these processes, their requests have been rejected or ignored with no genuine democratic control over events. Resultingly, everyday Inuit feel and anticipate the emotional, physical, social, and cultural consequences of containment.

In addition to this, the reference to the 'corporate machine' (and other references to profit throughout discussions with participants) is reflective of the way modern day capitalism is a driver of government actions and environmental destruction. This relationship is seen in the private wealth accumulated during the construction and operation of the MFP. Stephen Crocker describes the MFP as a 'predatory formation' as theorized by Saskia Sassen (2015, 2017 cited by Crocker 2021), whereby public projects like hydro projects are handed over to private profiteers. He says, "The public to private transfer of wealth in projects like Muskrat Falls does not happen without the numerous agencies that prepare the terrain for this extraction by externalizing risk, stabilizing revenue, and anticipating and countering

whatever local forces impede completion agreements and reliable rates of return" (Crocker, 2021, p. 12). Ultimately, these mechanisms of capitalism and nationalist narratives of hydro have relied on the exclusion of Indigenous peoples who are directly affected by them. However, through this research we can see how Inuit in Rigolet are witnesses to these injustices and see them as the colonial practices they are.

Hoicka et al. (2021) outline how renewable energy can be a pathway for Indigenous reconciliation in Canada. They stress the importance of equity ownership and Indigenous control of renewable energy projects. However, it is important to consider how multiple Indigenous groups might be affected in different ways and have diverging perspectives on pathways for renewable energy in their respective territories. For example, the Innu Nation in Labrador generally supports the MFP and has received financial benefits from it. Meanwhile, Nunatsiavut Inuit are affected but have very little power over the implementation of the project. While there may certainly be space for renewable energy to be a location of Indigenous involvement and leadership, this has not been the case with the MFP.

Perceptions and representations of hydro are different based on social positioning and lived experience. For Newfoundlanders, hydro is a way to get ahead, to assert power and strength. It represents "not just economic development but cultural redemption" (Bannister, 2012, p. 212). As discussed in Chapter 3, hydroelectric projects represent a progressive, forward-thinking modernity (Bannister, 2012, Desbiens, 2013). However, for Labradorians, they entail an experience of oppression, exclusion and estrangement from the land. We can see that, over and over within Canada, Indigenous peoples are not included in this settler colonial modernity.

Conclusion

The MFP is another example of the exploitation of Indigenous lands and waters, and the 'elimination of the native' within a settler colonial structure (Wolfe, 2006). This has been clearly articulated by Rigolet community members, who have generations of experience within this structure. The power relations of the MFP are wide ranging, from daily life in HVGB to fears for future circumstances in Rigolet. They are reflected in the subdued consultation processes and manipulated EIA progression. However, Rigolet residents continue to be spirited and many feel the desire to speak up about the MFP (including through creative outputs) but are also willing to reconvene resistance efforts on the matter of Gull Island.

Interlude 8

The Muskrat Falls project makes me feel many different emotions. Primarily disappointment and anger over the lack of consultation and involvement of Rigolet residents, fear for the health of my family members, and uncertainty/confusion over not quite knowing what is happening.

I took this photo today, at a park near my apartment here in Scotland. It has been a very dark, dreary, rainy and windy day. This is a big greenhouse with exotic/tropical plants inside. The lack of clarity over what is happening with the Muskrat Falls project is represented by the steamy windows. I've included the ornate decoration outside the building as a reference to the colonialism and wealth that I think influences how the Muskrat Falls project has been implemented.

Jessica Penney

Chapter 9: Conclusion

Discussion

Overall, this research has made significant progress in understanding the nuances of how Rigolet community members understand the Muskrat Falls project (MFP) and its various health, social, and cultural impacts (current and anticipated). While the media attention has mostly focused on the impact of methylmercury on food or environmental concerns, Rigolet residents remind us that the project is actually situated within a much wider context of social and historical experiences related to hydroelectricity within the settler colonial context of Newfoundland and Labrador. It is a continuation of the harms that occurred from the Upper Churchill Falls Project (UCFP), and this history influences concerns and resistance efforts.

This is not to say that methylmercury is not a worry, however. Participants had significant uncertainty and fears about how Inuit health and wellbeing would be affected by contamination and its knock-on effects. This was conceptualized within a holistic framework reminiscent of the Social Determinants of Inuit Health (SDIH) framework, which recognizes the influence of the environment, and interconnected social factors (e.g. cultural activities, food security). In addition, Rigolet residents had concerns about water conditions, like currents, salinity changes which could affect ice conditions. These are central to the lifestyles of Inuit in Rigolet, who rely on ice for travel and cultural and social activities. These activities also strengthen community and family bonds, and overall wellness, and must be protected.

The ways health and wellbeing concerns were situated solidifies the concept of Nuna as grounded normativity. Participants stressed the essential nature of the land and water in shaping their entire lives, their social interactions, and essentials of life through food. A threat to the land and water completely upends this conceptualization, leaving people with a sense of uncertainty and fear about what is next for them and future generations. In essence, the MFP and the structural violence it enacts are reshaping Inuit ontologies of the land and their health in Labrador.

Addressing the health and social concerns identified by Rigolet residents requires an open and honest discussion about health risk communications in the context of the MFP, but also hydroelectricity in general. The issue is not limited to Labrador and will continue to grow since we know all future hydro projects slated for development are close to Indigenous land (Calder et al., 2016). In this research, participants have given specific

information about what types of health risk information they want. They demand specific, culturally responsive information about the risks of methylmercury which are tailored to the specific health profile of the community. They also want this information delivered in ways that reach the most people: through social media and the local news. Finally, this information must be relayed consistently, not in the current piecemeal, inaccessible model. See Table 4 below for a more comprehensive list of recommendations.

Table 4. Table of Policy Recommendations

Policy Recommendation	**Details**
Improve health risk communication messaging	• Specific, culturally responsive information about methylmercury risks tailored to the health profile of the community. • Appropriate delivery which meets community information sharing patterns, especially via social media, in-person meetings, and local news. • Consistent (e.g. monthly, seasonal) delivery of communications. • Messaging delivered by/in partnership with the Nunatsiavut Government.
Deliver clear scientific data	• Address existing gaps and respond to emerging questions. • Leave space for the community to ask questions, with appropriate follow-up responses. • A holistic approach incorporates human and animal health risks. • Provide data about methylmercury risks to specific populations (e.g., children, pregnant women). • Data should consider the intersection of climate change and the MFP. • Evaluate health risk communications to improve over time.
Facilitate access to healthy traditional food	• Any future food advisories should be specific, clear, and culturally informed. • Guidance on wild food consumption should include clarity about the benefits and risks of Inuit foods and information on the "safest" parts of different animals.

	• Ensure scientists are able to answer community questions about country foods, otherwise follow up promptly when answer is available.
Support safe ice and water travel	• Support intergenerational knowledge sharing about the land, ice, and water. • Monitor environmental change which might affect ice conditions. • Communicate changes over time clearly and consistently.
Improve consultation and environmental assessment processes	• Environmental impact assessment processes must incorporate Inuit knowledge and wishes in a pro-active, open manner with extensive, consistent communications. • Meaningful community consultation respects (and responds to) Inuit concerns. Be attentive to the historical impact of hydroelectric projects and their possible compounding effects. • Take into consideration the role of colonialism in resource extraction when developing new projects. • Contemplate not only economics, but history, social issues, family life, and culture when assessing project impacts and benefits.

Finally, an analysis of the MFP requires an attentiveness to power, both in methods and analysis. This research has attempted to address this issue by creating a research dynamic which does not perpetuate power imbalances, and through the use of open, ongoing communication. The attentiveness to power was completed through a use of Indigenous research methods and researcher connectivity to the place and people. Further, this was done through participatory photography, which allowed for an innovative strategy of inquiry in which participants could tell their own stories and share their perspectives in an engaging, visual way.

The MFP is reflective of GNL and Inuit relations over time, as another example in which decisions around 'development' of resource extraction are made without adequate consultation and consent of Indigenous peoples. While there have been investigations into the MFP development, these (e.g. the public inquiry) have largely shied away from addressing the issues outlined in this thesis – instead they have focused on the economic issues. Again, we see capitalism and resource extraction shaping Indigenous lands and

lives, leaving Inuit to face the material consequences of such priorities (through increased food insecurity and decreased physical safety on the ice and water).

The next section of this chapter will address some challenges and limitations to this work, as well as opportunities for future research.

Limitations and Future Research

There are several limitations to this work, some of which I hope to address in my own future research. One of these is the lack of engagement with young people and children. Young people, including children and those of childbearing age are arguably the most affected by environmental contaminants such as methylmercury. This is true health-wise, but also because youth will have to consider the choices they make about contaminants and food in the future. Youth perspectives on contaminants are not often discussed in environmental contaminants research. This is despite the importance of young people in upholding food systems and food security in Inuit communities. I was hoping to address this in this research project through arts-based workshops with high school students, however, this had to be cancelled due to the COVID-19 pandemic in 2020-2021 when schools were closed.

Future research should consider the concerns of young people, as well as youth-specific views on health risk communications, which may differ from older adults. It should also consider speaking to young people about their conceptualization of contaminants, particularly in relation to food sovereignty and different sources of environmental change (such as climate change). Different outreach and data collection methods could also be explored when working with youth, including participatory photography (as in this research), or other types of creative and social media based strategies. I anticipate drawing on these ideas during my upcoming postdoctoral fellowship in Canada.

Another demographic issue is the somewhat limited engagement with men in this research. I believe that my own positionality as a young woman may be in play when considering the involvement of men. Future research could consider engaging with men on research topics which are more in line with their roles and activities in the community such as, for example, in land-based activities or on hunting trips, as land-based learning is key to Inuit knowledge transmission (Obed, 2017). Land-based research is an area which has been explored in Inuit research communities and has provided promising results for organic and skills-based engagement on the topics of environmental monitoring and language preservation (Heath and Arragutainaq, 2019).

The scope of this work is also limited by its focus on only one community affected by the MFP. Communities in HVGB, North West River, and Mud Lake all have concerns and geographically-specific relationships with the project. Future research should consider engaging with multiple affected communities to inform health risk communications across a broader population. This would require a large-scale, comprehensively funded and coordinated effort.

The pandemic also limited my in-person engagement with the community of Rigolet. My original intention was to visit the community in each season, to understand how harvesting patterns affected people's concerns. This is because different species are harvested at different times of year, including those which are anticipated to be affected by the MFP/methylmercury contamination. For example, egging occurs in late spring, seabird harvesting in late fall and spring, and salmon is harvested in summer (Felt et al., 2012). I hypothesize that research in different seasons would allow for a more comprehensive picture of the community's priorities at that time. Unfortunately, due to the pandemic I was required to undertake remote research, and only visited the community in late spring/early summer and autumn. Future research could consider incorporating the Inuit calendar into data collection to analyze the role of harvesting on contamination perspectives more thoroughly (see Fig. 36).

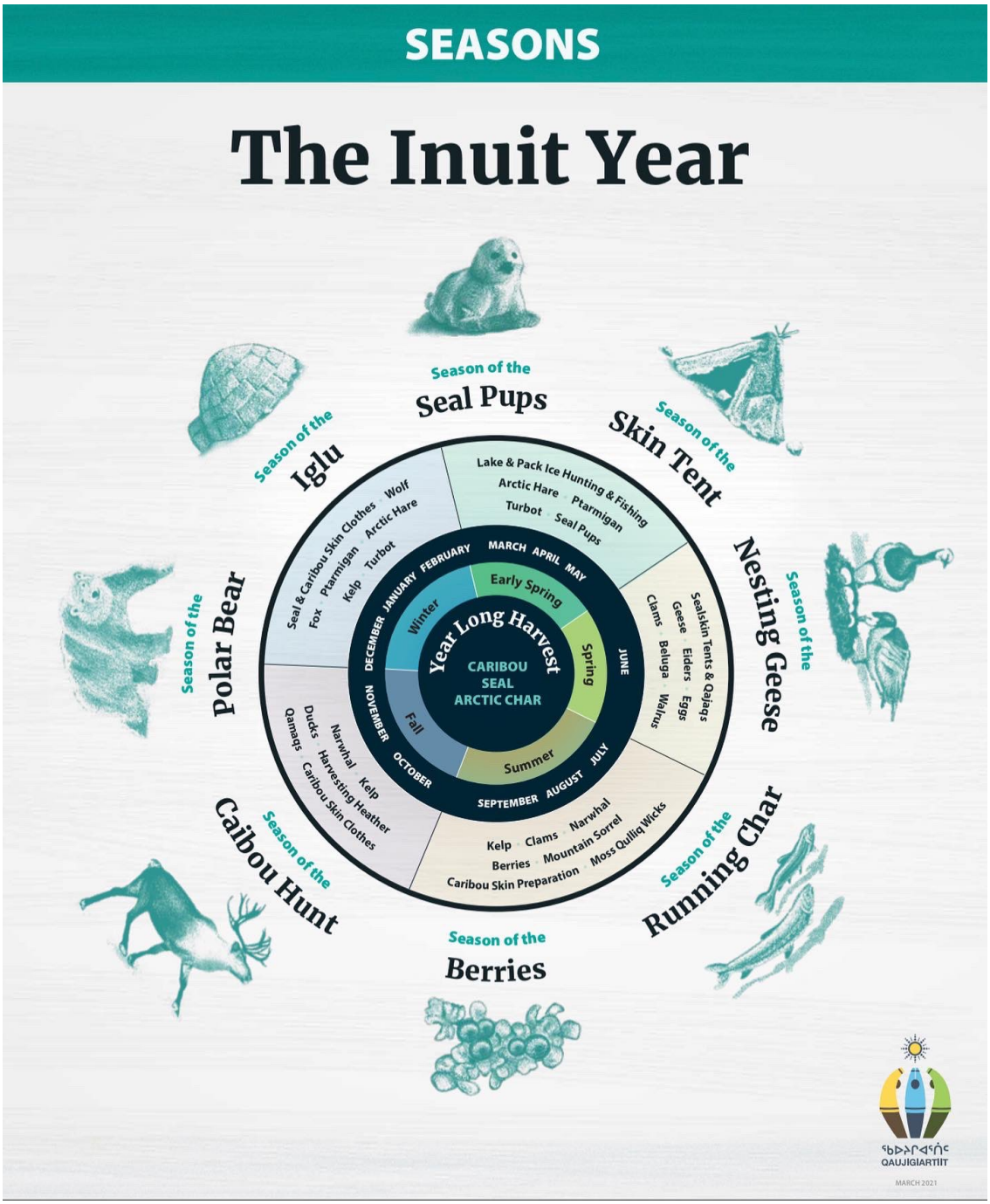

Figure 36. Visual representation of The Inuit Year, developed by Qaujigiartiit Health Research Centre (reproduced with permission from the Qaujigiartiit Health Research Centre 2021).

Infrastructure issues were another challenge in the remote methods section of this work. Inuit regions of Canada generally have poor telecommunications infrastructure, and very high costs for this sub-standard service. For this reason, shifting to Zoom (or other visual platforms like Skype) was not a practical option for conducting interviews or focus groups. While I did conduct four phone interviews, this was not an ideal method, as it separates the interviewer from visual and emotional cues which are more obvious in person. While I did ultimately decide to undertake the photography project online, this also came with

infrastructure challenges. During the time period at which I was facilitating this method, there were multiple instances where the internet and phones stopped working in Rigolet for up to a week at a time and people could only communicate for short periods of time with satellite phones.

While this represents a relatively minor inconvenience in research, it alludes to larger issues related to infrastructure issues in Northern and Inuit communities. A lack of internet and phone service perpetuates inequalities as business, distance education, and other health and social services are unable to function. I have advocated elsewhere (Penney and Johnson-Castle, 2020, Penney, 2021b) that researchers must highlight the infrastructural challenges in Inuit communities, as these are connected to legacies of colonialism as Inuit have been forced into communities with unacceptable levels of service provision (e.g. health care, education access, and poor housing) which influence wellbeing outcomes.

Key Contributions

This section aims to highlight the key analytical and methodological contributions of this research. In particular, I will discuss the following contributions:

- The community members' policy-oriented suggestions for concrete change to health risk communications;
- Clearly elucidating the power structure which has shaped the implementation of the MFP and been obscured in official investigations;
- The development of Nuna as 'grounded normativity'; and
- The impacts of the participatory photography project and opportunities for the future.

This research provides a clear discussion of Rigolet community member's concerns related to the MFP, as well as their perspectives and feedback for improving health risk communications and information sharing. Participants have identified gaps to be filled and envisioned potential pathways for improving the situation. This systematic inquiry into the issues at hand, as well as the power dynamics which shape them, can inform an effective policy response.

This research also shines a light on the power structure which has allowed the MFP to move forward in its current iteration. Government responses have, thus far, focused on piecemeal responses. For example, the NG focus on the environment, and the GNL inquiry focus on economics. Instead, this research takes a holistic approach, understanding that,

since the MFP impacts are holistic and interconnected in nature, so must be the analysis. The impacts of contaminants are not located in a vacuum; they are deeply intertwined with topics of history (e.g., narratives of settler colonialism), economics (e.g., food insecurity), social and family life (e.g., decision-making processes about food), and culture (e.g., harvesting activities). The policy and programming responses to the MFP must also include all of these components in a comprehensive manner. This research aims to inform this response.

Methodologically, the conceptualization of Nuna as grounded normativity provides another mechanism for understanding and communicating the power of the land and environment in Inuit life. Understanding Inuit relationality with Nuna as shaping Inuit life, world views, and instructive methods for valuing and protecting the land helps us to understand the physical and metaphysical impacts of the MFP. As photography project participant Katheline Pottle wrote, “When you take away a person's ability to practice culture and traditions you begin to eliminate a nation. Our food – ‘true country food’ not only nourishes our bodies but also nourishes our soul and provides us with a connection to our ancestors”. Nuna as grounded normativity shapes every aspect of life. In addition to an understanding of this worldview, grounded normativity is instructive (Coulthard and Simpson, 2016). Mobilizing Inuit relationships to land, water, ice, and the environment generally can provide a way forward to addressing the social issues faced by Inuit.

Further, the participatory photography portion of this research has provided rich data and room for growth in future research. The project research received positive feedback from the participants, who had ideas about how to display and share the photos and messages in the future. Policymakers and community leaders who viewed the photos described the impact of the photos as being more powerful than simply written data and spoke to their ability to convey emotions and passion. Similarly, the community responded positively to the photography project at the community open house project in autumn 2021. One community member spoke to me about how she knew the participants in the project but felt that she gained a new insight into their perspectives by viewing the photos. The self-expression was a positive experience for participants, but also has the potential to build community bonds.

As mentioned throughout this thesis, key to Indigenous methodologies is accountability and relationships with participants and community members. To ensure this work is brought back to the community and these values are practiced beyond this thesis, I will be

bringing the final results and analysis back to Rigolet in multiple forms. First, I will be developing a written research summary to be distributed in person and electronically. Further, I am in the process of developing a photography book with Bird's Eye Inc. to display the photos and accompanying texts. This work is being facilitated by funding from ArcticNet's Inuit Qaujisarnirmut Pilirijjutit program, an Inuit-led, governed, and directed research program. The photo descriptions will be translated into Inuktut and the book will be distributed to participants and community organizations. It is my hope that it can be used as a language learning resource. Additionally, I will be undertaking further research to evaluate the photography project and photo book as a method of research dissemination. This will be used to shape future research initiatives. I am strongly committed to continue drawing policymaker's attention to this research and ensuring I meet the needs and expectations of research participants and the community more widely.

Conclusion

In conclusion, this research has worked with Inuit in Rigolet, Nunatsiavut to reveal how global topics, such as hydroelectric development, settler colonialism, and capitalism, are experienced at the local level with the imposition of the Muskrat Falls project. Despite a significant history of oppression of Indigenous peoples in Newfoundland and Labrador, there exists a long legacy of resistance and outspokenness about the causes which matter to the community. Through interviews, surveys, and participatory photography, Rigolet residents have shared their main concerns, including:

- insufficient health risk communications;
- threats to their holistic conceptualization of health; and
- ongoing politics of settler colonialism in relation to 'development'.

This research has made headway on a number of topics, but there is still more potential for expansion in scope, by speaking to other communities, young people, and increasing the number of men who participate. Overall, despite significant silencing on behalf of those in power over many years, the people of Rigolet continue to advocate for their rights and relationship to Nuna. It is now time for those in power to listen and work on renewing relationships by putting community recommendations into practice.

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Appendix A: Interview Guide

Semi-Structured Interview Guide

Background

This project takes a semi-structured narrative interview approach. Therefore, these questions are guiding tools, rather than a strict structure like a questionnaire. Other topics may be explored as they arise.

The purpose of this narrative approach is to understand community member's perspectives on the Muskrat Falls project, as well as to understand knowledge creation and transfer in relation to the project. This can help create effective health risk communication strategies in the future.

Participants will read and sign a consent form before the interview begins. A copy of the consent form will be given to participants for their records, and the interviewer will retain the signed final page. The retained consent form outlines the study's rewards, risks, and the overall process.

With written consent, the interview will be audio-recorded, after which it will be transcribed verbatim for analysis. The transcription will not contain information that allows participants to be linked to their statements. Confidentiality will be preserved to the best of the researcher's ability.

It is expected that the interview will take 1-2 hours, to ensure the participant has enough time to express themselves fully. Interviews will take place in the participant's home, a community center, or other location of their choosing.

Interviewer Introduction

My name is Jessica Penney, and I'm working on a research study about what people think about the Muskrat Falls project, and what people want to know in the future. Hopefully this can help community organizations plan for any impacts, and help people living in affected communities feel safe and healthy.

I became involved in researching more about this topic because my family is from Rigolet, and I saw and heard that people were discussing the Muskrat Falls project and what it might mean for the community a lot. My background is in health research and health policy and I also worked with the Labrador Land Protectors a couple of years ago about their concerns too.

Do you have any questions about the consent form, or my research more generally? If any questions do come up, feel free to ask me now, or contact me via the information on the sheet.

I would like this interview to be more like a conversation, so if there's anything you are thinking about, or if you want to raise your own ideas related to the Muskrat Falls project, please feel free to do so. If you are uncomfortable at any time, we can skip a question, or stop the interview completely. This is not a problem for me at all.

Guiding Questions

1. Can you please tell me a little bit about yourself?
   - Probes:
     - Name, home community, age, gender, occupation, etc.
     - Have you always lived in Rigolet?

2. Can you tell me about the first time you heard about the Muskrat Falls project?
   - Probes:
     - Where did you hear about it?
     - From who?
     - What did you hear about it?
     - What did you think about it when you heard about it?

3. Can you tell me a bit about what you think about the Muskrat Falls project?
   - Probes:
     - Why do you feel like this?
     - How long have you felt this way?
     - Has your opinion changed from the first time you heard about it until now?
     - How do you feel about the project's implementation/presentation?
     - Have you been involved in any activities around the Muskrat Falls project? (e.g. employment, resistance)

4. Are you aware of any potential harms that could arise from the Muskrat Falls project?
   - Probes:
     - Do you know anything about the contamination of wild food?
       - How might this affect you or your community?
     - What do you think of the resistance that that has occurred in relation to methylmercury contamination for Nunatsiavut Inuit?
       - Were you involved? Why or why not? Temporal aspects (Has your perspective changed over time?).
         a. If so, what was this experience like? How did you get involved?

5. Where do you currently get information about the Muskrat Falls project?
   - Probes:
     - Social media? If so, what types?
     - News sources?
     - Academic sources?
     - Government(s)?
     - Word of mouth? (e.g. conversations with neighbors/community meetings)
     - What kinds of information do you get from your sources?
     - Can you give me an example of how you might hear or see something about the Muskrat Falls project?

6. How do you feel about your sources of information right now?
   - Probes:
     - Are you happy with what you know? If so, why? If not, why?
     - Do you want to know more? What do you want to know?
     - Could you give an example of what might be a better way to communicate information?

7. What do you think is the best way to share information about the Muskrat Falls project?
    - Probes:
        - Why is [their suggestion] the best? Could you expand on that?

8. Is there anything else you would like to share?
    - Probes:
        - Do you have any questions for me?

Additional storytelling probes: Can you tell me more? Would you expand on that? Could you give me an example?

Conclusion

Thank you so much for participating in this work. If you have consented to me contacting you in the future, I may be in touch with some follow up questions. If you have asked that I send you a final report about the results, I will do so when it is complete. Feel free to attend any of the open houses and presentations that I hold in the community. Your perspective has been very helpful and I'm thankful for you sharing your thoughts.

Participant will be given a gift at the end of the session.

Appendix B: Survey Questions

Impacts of the Muskrat Falls Project and Health Communication Strategies

Questionnaire Introduction

For Adult Residents of Rigolet Only

Before starting the questionnaire you must read this information and indicate consent.

Purpose

The purpose of this study is to learn about how Nunatsiavut Inuit in Rigolet feel about the Muskrat Falls Project and how people understand its potential impacts. This can inform good health policies and programs in response to issues identified by participants.

Process

If you fill out this questionnaire, you will answer questions about your understanding of the Muskrat Falls project and information around the project. It will take approximately 10-15 minutes. In exchange for your time and participation, you may choose enter a draw for one of four camping gift packs.

Anonymity

The questionnaire is anonymous. If you enter the prize draw or ask to participate in any future research, your name and contact information will be kept separate from your questionnaire responses and deleted after the draw.

Withdrawal

You may stop participating at any time by closing the questionnaire but I cannot withdraw your answers since it is anonymous.

Risks and Benefits

You should not experience any physical or financial risks by being in this study. As for benefits, the research will inform proposals by the researcher. Results may also be used by organizations to inform policies and programming. As an individual, you will be given the opportunity to contribute to the topic and express your views.

Confidentiality

Your identity will not be known by me or anyone else. I will be the only person with access to the questionnaires, which will be destroyed at the end of this project. If you enter the prize draw or ask to participate in any future research, your name and contact information will be kept separate from your questionnaire responses and deleted after the draw.

If you have any questions, please contact Jessica Penney at j.penney.1@research.gla.ac.uk.

If you would like to keep the study information for your records, please click here.

Would you like more information about this study?

- ○ Yes
- ○ No, I have enough information, take me to the questionnaire.

Study Information

Questionnaire Information Sheet

For Residents of Rigolet Only

I am pleased to invite you to participate in a research project called “Nunatsiavut Inuit Understandings of Health in Relation to the Muskrat Falls Project”. This form is part of the process of informed consent. It should give you a basic idea of what this project is about and what your participation will involve. To decide whether you wish to participate in this research project, you should understand enough about the potential risks and benefits. I can only use your answers in this project if you read this form and tick the consent box on the next page. Take time to read this carefully and to understand the information presented. Please contact the researcher before you agree to participate if you have any questions or if you want more information.

Introduction/ Background to the study

My name is Jessica Penney. I am an Inuk PhD student at the University of Glasgow. My family is originally from Labrador (Rigolet and Happy Valley-Goose Bay), and I was raised in Iqaluit, Nunavut.

Purpose of study

The purpose of this study is to learn about how Nunatsiavut Inuit in Rigolet feel about the Muskrat Falls Project and how people understand its potential impacts. This is important to inform good health policies and programs in response to issues identified by participants.

What you will do in this study

If you fill out this questionnaire, you will answer questions about your understanding of the Muskrat Falls project and information around the project. You will be asked what you think about the project and if you think the project may affect your life. The questionnaire asks where you get information about the Muskrat Falls project, and how you would like to get information in the future.

Length of time

The questionnaire will take approximately 10-15 minutes of your time.

Compensation

In exchange for your time and participation, you will be entered into a draw for one of four camping gift packs.

Withdrawal from the study

It is up to you to decide to take part, I will not be able to withdraw your data from the study once you have submitted your answers. This is because the survey is anonymous and there will be no way to differentiate your answers from anyone else's.

Possible benefits

Participating in this research will allow you to add to new information about the Muskrat Falls project and health in Labrador. The research will inform proposals by the researcher, allowing for greater community involvement in decisions affecting local communities. Results may also be used by organizations to inform policies and programming. As an individual, you will be given the opportunity to contribute to the topic and express your views.

Possible risks

You should not experience any physical or financial risks by being in this study.

Privacy and Confidentiality

Confidentiality is ensuring that identities of participants and information collected from participants are accessible only to those allowed to have access. In this case, your identity will not be known by me or anyone else. I will be the only person with access to the questionnaires, which will be destroyed at the end of this project. I take participant confidentiality seriously and will protect your data to the best of my ability. Every reasonable effort will be made to keep your information confidential, and you will not be identified in any reports or publications. If you enter the prize draw or ask to participate in any future research, your name and contact information will be kept separate from your questionnaire responses and will be deleted after the draw.

Storage of Data

Data for this study will be stored at the University of Glasgow. Only the researcher will have access. Electronic data will be stored on password protected devices. Data summaries and reports will also be shared with the Nunatsiavut Government for potential use in future projects or activities. Any future use of data will be in line with the original intent of this project. Information collected for this study will be kept for 10 years. It will then be destroyed by permanently deleting any electronic documents and shredding any paper.

Reporting of Results

The findings of this study will be reported in my PhD thesis and a shorter report will be written and distributed to community organizations. Parts of this thesis may be published in an academic journal or elsewhere in the future as part of new research into Inuit health and the Muskrat Falls project.

Sharing of Results with Participants

I will come back to Rigolet to share results at an event. Reports and publications will be publicly available and advertised on Facebook. You may also contact me via email or phone to request that I send you results.

Conflict of Interest

There are no conflicts of interest on the part of the researcher or the University of Glasgow.

Questions or Problems

If you have any questions about taking part in this study, you can contact the researcher in charge of this study.

Jessica Penney can be reached by email at j.penney.1@research.gla.ac.uk or by phone at

Supervisors:

Dr. Andrew Smith
Andrew.Smith.2@glasgow.ac.uk | Tel:

Dr. Alicia Davis
Alicia.Davis@glasgow.ac.uk | Tel:

You can also speak with someone who is not involved in the study but can advise you on your rights as a participant in this study. This person can be reached at: Dr. Muir Houston, University of Glasgow Ethics Officer: or by email at muir.houston@glasgow.ac.uk

If you participate, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

If you would like to keep this study information for your records, please click here.

Consent

Ticking the box on this sheet means that:

- You are a resident of Rigolet.
- You have read the information about the research.
- You understand what the study is about and what you will be doing.
- You understand that answers provided to this survey will be collected anonymously, but that the overall data collected from respondents as a whole will be retained by the researcher for use in the research study.

Consent

- ○ I agree to participate in this research project. I understand the risks and what I would be asked to do. I also know that my participation is voluntary.
- ○ I do not want to participate.

Age, Gender and Occupation

What is your age?

What is your gender?

If you would like to specify your gender, please feel free to do so:

What industry do you work in? If you work in more than one industry, please choose the main one.

If you selected Other, please specify:

Support or opposition

Are you supportive of, or opposed to, the Muskrat Falls project?

- Very supportive
- Supportive
- Neutral
- Opposed
- Very opposed
- Don't know

Knowledge

How much do you feel you know about the Muskrat Falls project, in general?

- I know a lot
- I know a little
- Neutral
- I do not know much
- I know nothing
- Don't know

Harms or benefits

Do you think the impacts of the Muskrat Falls project are likely to be beneficial or harmful?

- ○ Very beneficial
- ○ Beneficial
- ○ Neutral
- ○ Harmful
- ○ Very harmful
- ○ Don't know

What impacts do you think could be beneficial (if any)?

What impacts do you think could be harmful (if any)?

Information

Where do you currently get most of your information about the Muskrat Falls project? (select all that apply)

- ☐ Online social media (like Facebook or Twitter)
- ☐ Online news (like a news website)
- ☐ Offline news (like TV, radio, newspapers)
- ☐ Government (like Nunatsiavut Government, provincial government, federal government)
- ☐ Word of mouth (like neighbours, family, friends, community meetings)
- ☐ I do not get information about the Muskrat Falls project
- ☐ Don't know
- ☐ Other

If you selected Other, please specify:

Where do you **want** to get most of your information about the Muskrat Falls project? (select all that apply)

- ☐ Online social media (like Facebook or Twitter)
- ☐ Online news (like news websites)
- ☐ Offline news (like TV, radio, newspapers)
- ☐ Government (like Nunatsiavut Government, provincial government, federal government)

- [ ] Word of mouth (like neighbours, family, friends, community meetings)
- [ ] I do not get information about the Muskrat Falls project
- [ ] Don't know
- [ ] Other

If you selected Other, please specify:

If responsible people or organizations could provide you with more information about the Muskrat Falls project, what would you like to know?

Other

Is there anything else you would like to add?

Further participation

If you would like to participate in any further research activities, please indicate below and include your contact information. If you have any questions about what this includes, please email me at j.penney.1@research.gla.ac.uk.

If you selected that you would like to participate in other research, please leave your name and phone number here:

Which activities are you interested in learning more about? If you select an answer I will provide you with more information, but you do not need to take part.

- ☐ I would like to participate in an interview
- ☐ I would like to participate in a group discussion
- ☐ I would like to participate in a creative photography project

Prize draw

If you would like to be entered for the prize draws (one of four camping gear gift packs), please enter your name and contact phone number. This information will not be connected to your questionnaire answers and will be destroyed after the draw.

If you would like to enter the prize draw, please enter your name and phone number here:

Final page

Thank you for your participation!

If you have entered your contact information into the prize draw, I will be in touch if you are the winner. Feel free to get in touch with any questions or feedback at j.penney.1@research.gla.ac.uk.

If you would like to keep the study information for your records, please click here.

Key for selection options

4 - What is your gender?

- Man
- Woman
- Another gender

5 - What industry do you work in? If you work in more than one industry, please choose the main one.

- Unemployed
- Retired
- Agriculture, forestry, fishing and hunting
- Mining, quarrying, and oil and gas extraction
- Utilities
- Construction
- Manufacturing
- Wholesale trade
- Retail trade
- Transportation and warehousing
- Information and cultural industries
- Finance and insurance
- Real estate and rental and leasing
- Professional, scientific and technical services
- Management of companies and enterprises
- Administrative and support, waste management and remediation services
- Educational services
- Health and social assistance

Arts, entertainment and recreation
Accommodation and food services
Public administration
Other

15 - If you would like to participate in any further research activities, please indicate below and include your contact information. If you have any questions about what this includes, please email me at j.penney.1@research.gla.ac.uk.

I would not like to participate in anything else
I would like to participate in other research

16 - If you would like to be entered for the prize draws (one of four camping gear gift packs), please enter your name and contact phone number. This information will not be connected to your questionnaire answers and will be destroyed after the draw.

I do not want to enter the prize draw
I would like to enter the prize draw

Appendix C: Interview Information Sheet and Consent Form

Informed Consent Form for Qualitative and Community Based Research (Interview)

Jessica Penney
PhD Student
School of Social and Political Sciences
University of Glasgow
Glasgow, United Kingdom

Title:
Nunatsiavut Inuit Perspectives on the Muskrat Falls Project

Researcher:
Jessica Penney
j.penney.1@research.gla.ac.uk | Tel: (Canada) (UK)

Supervisors:
Dr. Andrew Smith
Andrew.Smith.2@glasgow.ac.uk | Tel:
Dr. Alicia Davis
Alicia.Davis@glasgow.ac.uk | Tel:

I am pleased to invite you to participate in a research project called "Nunatsiavut Inuit Understandings of Health in Relation to the Muskrat Falls Project".

This form is part of the process of informed consent. It should give you a basic idea of what this project is about and what your participation will involve. It also describes your right to withdraw from the project. To decide whether you wish to participate in this research project, you should understand enough about the potential risks and benefits.

Take time to read this carefully and to understand the information presented. Please contact the researcher before you agree to participate if you have any questions or if you want more information.

Introduction/ Background to the study
My name is Jessica Penney. I am an Inuk PhD student at the University of Glasgow. My family is originally from Labrador (Rigolet and Happy Valley-Goose Bay), and I was raised in Iqaluit, Nunavut.

Purpose of study
The purpose of this study is to learn about how Nunatsiavut Inuit feel about the Muskrat Falls Project and how people understand its potential impacts. This is important to inform good health policies and programs in response to issues identified by participants.

What you will do in this study
During the interview, you will be asked questions about your perspectives on the Muskrat Falls project. You will be asked what you think about the project and if you think the project may affect your life. I will ask about where you get information about the Muskrat Falls project, and how you would like to get information in the future. The interview will also be audio recorded if you give consent. No health records will be accessed and anything you reveal is completely up to you.

After the interview, I will provide you with a documenting the current status of the Muskrat Falls project and impacts to date.

Length of time
The interview will last for about 45 minutes to 1 hour. It can take place in your home or a location of your choosing.

Withdrawal from the study
It is up to you to decide if you want to take part in this research. It will not affect you if you choose not to take part or if you decide to withdraw after the research has started.

I can exclude anything you say if you want to withdraw from this study. You can contact me at any time using the contact information on the first page of this consent form if you decide you would like me to delete your data. There is no point after which some or all data cannot be withdrawn. Even after publishing has taken place, if you would like your individual responses to be excluded from future analysis, I will do so. While I cannot un-publish data, I can refrain from future publishing of your data.
If you would like me to withdraw your data, you will be asked to provide me with the ID number on your information sheet. I can then match it to my records and delete your information.

Possible benefits
Participating in this research will allow you to add to new information about the Muskrat Falls project and health in Labrador. As an individual, you will be given the opportunity to voice your opinions.

Possible risks
You should not experience any physical or financial risks by being in this study. If you become upset talking about anything, we can stop the interview completely or skip a question. I can also contact a friend or family member for you. You can also call the First Nations and Inuit Hope for Wellness Help Line at 1-855-242-3310 or the Newfoundland and Labrador Mental Health Crisis Line at 1-888-737-4668.

Privacy and Confidentiality
Confidentiality is ensuring that identities of participants and information collected from participants are accessible only to those allowed to have access. I will ensure confidentiality unless evidence of wrongdoing or potential harm is uncovered. If this is the case I may have to contact relevant legal bodies or agencies. I take participant confidentiality seriously and will protect your data to the best of my ability.

Every reasonable effort will be made to keep your information confidential, and you will not be identified in any reports or publications without your explicit permission on the consent form.
After our conversation, data will be de-identified, meaning I will only be able to access your name or contact details by matching it to your unique ID number, which only I will be able to access in a locked file. In any publications, you will be given a false name so the reader does not know who you are.

Storage of Data
Your personal information will be kept secure. It will not be shared without your permission. Data for this study will be stored at the University of Glasgow. Electronic data will be stored on password protected devices.
Data summaries and reports will also be shared with the Nunatsiavut Government for potential use in future projects or activities. Any future use of data will be in line with the original intent of this project.

Information collected for this study will be kept for 10 years. It will then be destroyed by permanently deleting any electronic documents and shredding any paper.

Reporting of Results
The findings of this study will be reported in my PhD thesis and a shorter report will be written and distributed to community organizations. Parts of this thesis may be published in an academic journal or elsewhere in the future as part of new research into Inuit health and the Muskrat Falls project. Direct quotes may be used. The use of this data in the future for purposes other than the PhD thesis (such as journal articles and presentations) is optional.

Sharing of Results with Participants
I will come back to your community to share results at an event when the project is finished. Reports and publications will be publicly available and advertised on Facebook. You may also contact me via email or phone to request that I send you results. If you agree, I may also contact you with follow up questions or for clarification.

Conflict of Interest
There are no conflicts of interest on the part of the researcher or the University of Glasgow.

Questions or Problems
If you have any questions about taking part in this study, you can contact the researcher in charge of this study. Jessica Penney can be reached at:

You can also speak with someone who is not involved in the study but can advise you on your rights as a participant in this study.

This person can be reached at:
Dr. Muir Houston, University of Glasgow Ethics Officer
or by email at muir.houston@glasgow.ac.uk

If you sign this form, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

A copy of this Informed Consent Form will be given to you for your records.

Signature Page

Your signature on this form means that:

- You have read the information about the research.
- You have been able to ask questions about your involvement in this study.
- You are comfortable with the answers to all your questions.
- You understand what the study is about and what you will be doing.
- You understand that you are free to leave the study at any time, without penalty.
- You understand that any data collected from you up to the point of your withdrawal will be retained by the researcher for use in the research study.

Your signature:

[ ] I have read what this study is about, understood the risks and benefits, and had enough time to think about taking part. I have had the opportunity to ask questions and my questions have been answered.

[ ] I agree to participate in this research project. I understand the risks and what I would be asked to do. I also know that my participation is voluntary, and that I may stop participating at any time.

[ ] I agree that my data can be used in future research.

[ ] I agree to be audio-recorded during the interview.

[ ] A copy of this Informed Consent Form has been given to me for my records.

[ ] I agree that my data can be shared with the Nunatsiavut Government (no names or identifying information will be included).

[ ] I agree to be contacted with any follow up questions.

If you would like a copy of the final report sent to you, please provide email/mailing address below:

_____

Signature of Participant Date (DD-MM-YYYY)

Researcher's Signature:

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of Principal Investigator Date (DD-MM-YYYY)

Signature of person authorized as *Name printed* Date (DD-MM-YYYY)

Substitute decision maker, if applicable

Appendix D: Photography Project Questions

Introduction

1. Opening: Introduction photo and why are you interested in this project?
2. How do you feel about the Muskrat Falls Project?

Environment and Land-Based Activities

3. Environmental impacts
    - What aspects of the environment matter to you?
    - Which environmental impacts of the Muskrat Falls are important to you? Why do you feel this way?
4. Land-based activities
    - What land-based activities do you like to do? How might the Muskrat Falls project impact your participation in land-based activities? How does this make you feel?

Culture and Relationships

5. Cultural/identity impacts
    - What aspects of cultural identity matter to you?
    - What cultural impacts do you think the Muskrat Falls project may have on Inuit/Labradorians? What do you think about this?
6. Intergenerational relationships
    - What relationships are important to you? Does the Muskrat Falls project potentially impact the way you interact with others? With children, youth, adults, or Elders? How do you feel about this?

Looking forward

7. How do you feel the Muskrat Falls project fit into history or society in Labrador?