MÉTIS KNOWLEDGES AND CLIMATE CHANGE: TOWARDS ADAPTATION IN SOUTHEASTERN MANITOBA MICHIF COMMUNITIES

By

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Table of Contents

List of Figures

Abbreviations

AFN	Assembly of First Nations
CBPR	Community-based participatory research
CCAF	Climate Change Action Fund
CBR	Community-based research
CCI	Canadian Climate Institute
CCIAP	Climate Change Impacts and Adaptation Program
COP	Conference of Parties
CWD	Chronic Wasting Disease
FPIC	Free, prior, and informed consent
FTHPP	First Time Home Purchase Program
GBA+	Gender-Based Analysis Plus
GHG	Greenhouse Gases
HEHE	Healthy Environment and Healthy Economy Plan
ICA	Indigenous Climate Action
IISD	International Institute of Sustainable Development
IKs	Indigenous knowledges
IRM	Indigenous research methodologies
ITK	Inuit Tapiriit Kanatami
MMCREP	Manitoba Métis Community Research Ethics Protocol
MMF	Manitoba Métis Federation
NAHO	National Aboriginal Health Organization
NAS	National Adaptation Strategy
OCAP	Ownership, Control, Access, Possession
PAR	Participatory action research
PCF	Pan-Canadian Framework
PR	Participatory research
RCAP	Royal Commission on Aboriginal Peoples
RM	Rural Municipality
TCPS2	Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans
TEK	Traditional Ecological Knowledge
TK	Traditional Knowledge
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNFCCC	United Nations Framework Convention on Climate Change

Abstract

Climate change poses a global existential threat, with Indigenous knowledges gaining momentous recognition for their critical role in addressing this challenge. Manitoba, experiencing rapid warming, faces ecological, social, and economic challenges, particularly negatively impacting Indigenous communities. This research, guided by my epistemological position as a Red River Métis woman, explores the contribution of Métis knowledges for climate change adaptation in the Homeland of the Red River Métis. The main objective of this thesis is to characterize Métis knowledges in Michif communities in Southeastern Manitoba to understand the linkages between colonization, land use, and climate change risks to develop adaptation approaches based on Métis knowledges. Crucially, this thesis will also aid in advocating for the inclusion of Métis ways of knowing in climate change adaptation policies. Grounded in relationships, experiential knowledge, and kinship, this research follows Indigenous Research Methodologies, fostering respect, relevance, responsibility, and reciprocity. This research is also based on Farrell Racette's Métis Kitchen Table Theory (Farrell Racette, 2004) a community-centred, anti-patriarchal, and anti-colonial approach that aligns with a more holistic approach to information exchange based on Métis culture and traditions. This research has the potential to foster effective climate adaptation planning and policy recommendations for Indigenous communities, with a specific focus on Métis knowledges and Métis communities. It addresses the challenges and opportunities faced by these communities to respond to climate change while fore fronting reconciliation and returning sovereignty to these communities. By bringing Métis knowledges into the climate change adaptation policy discourse, this research aims to increase Métis-led cultural and environmental security and sustainability in so-called Canada, initiating a crucial dialogue around including Métis knowledges at policy tables.

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Chapter 1: Introduction

> I want my research to uphold my culture; it is purposeful, and I have been given the space to do this. I am thankful. And though I have known days when the emotional work of being an Indigenous researcher has tempered my gratitude, I know that purpose has kept me going when my spirits have been low. (Kovach, 2021, p. 136)

1.1 Situating Myself

As a way to decolonize research by transitioning away from extractive research, it is important that I explain my connection to the research area and my connection to this topic, as well as explaining my identity as a Michif woman. In the context of race shifting and increasing Pretendianism[1], it is crucial that I establish my Red River Métis roots. This is also an important Métis way of grounding ourselves and making familial connections with one another, which resonates profoundly for many of us by fostering a sense of belonging and kinship. As Kovach (2021) states, "introducing ourselves shows respect to the ancestors and allows community to locate us through cues such as name, kinship, culture, and territory" (p. 146).

My name is Annie Martel, I am a Red River Michif woman, and I am a citizen of the Manitoba Métis Federation. I grew up in St-Pierre-Jolys in southeastern Manitoba, and I was privileged to grow up knowing I was Métis. My mother always asserted our Métis identity, even though I did not always know what that meant. I am also a harvester and have spent many summers and winters fishing with family across various parts of southeastern Manitoba, and about five years ago I also started hunting. My Métis roots in the Rat River stem from Mélanie

[1] People falsely claiming Indigenous identity.

Nault and Louis Larivière, who left the Red River Settlement in 1872 and settled in the Rat River. This move was driven by the need to protect themselves and their Métis rights from what is coined *The Dark Period* in Métis history, where the Métis faced mass dispossession and discrimination (Logan, 2015). Although my family's Métis values have remained strong, our stories were often hidden or not talked about. We do not know a lot about Louis Larivière and Mélanie Nault, and so I am on my own personal journey of discovering and reclaiming this history and their stories.

In terms of my educational background, I left my community when I was 16 to sail for a year because I wanted to experience something outside of my small, rural community. The following years, I went to school in British Columbia for two years and then finally to Mount Allison University in New Brunswick, where I completed my Bachelor of Arts in Environmental Studies (Hons.). During these years, I was extremely homesick and I constantly missed my family and my community. However, at that time, I believed that the only way I could become "successful" was to leave my community, something which was constantly reinforced by some of my Canadian peers.

Furthermore, as I studied in the environmental field, I was always interested in my physical environment in southeastern Manitoba where I have personally experienced the impacts of climate change and various environmental challenges, stemming from my connection to this land. I also resonate with what Yvonne Poitras-Pratt (2020) says, in which "as an Indigenous scholar of Métis ancestry, I believe I bear a responsibility to 'give back' to my home community through the privilege of my education" (p. 44). For me, this translates into combining my own personal interests of researching the impacts of climate change to Indigenous peoples while also reciprocating the kindness, generosity, and resilience of my family and my community, who have

been instrumental in my life. I am thus viewing this new academic journey of completing my master's as a call to give back to those in my community and my family who have experienced profound losses – loss of land, language, knowledges, and for many, pride in being Michif.

As I am writing this chapter, I am privileged to re-settle my roots in St-Pierre after being away for several years. I am happy to once again be surrounded by my family and my community and continue to strengthen my connection to this land while reclaiming our history and our stories. As I delved into this research, I recognized that I am deeply connected to this research, both metaphorically and literally. It is crucial that I acknowledge and state that my approach to this research is influenced by my own ways of knowing and values which are rooted in the research area. As an Indigenous researcher conducting research within Indigenous communities, I recognize that complete objectivity may not always be attainable. However, I argue that inherent subjectivity is not a flaw, but rather an asset of Indigenous-led research within Indigenous communities, serving as a vital step towards decolonizing academia.

1.2 Research Background

As climate change represents an existential threat to humanity and ecosystems, Indigenous knowledges are increasingly recognized for their critical contributions towards planetary sustainability (UN, 2021). In Canada, climate change is becoming increasingly evident, marked by recent droughts in the Prairies, widespread forest fires in the spring and summer of 2023, the deadliest heat waves in Canadian history, and recent record-breaking floods in the Red River Valley in the spring of 2022. In Manitoba, climate change continues to threaten ecological, social, and economic systems as the province is projected to warm at a faster rate than the global average (Prairie Climate Centre, 2019).

Indigenous peoples are often the first to experience the negative impacts of climate change due to their dependence and intimate relationship arising from intergenerational knowledge of the land (ILO, 2017). Consequently, Indigenous peoples are increasingly and disproportionately affected by climate change (McGregor et al., 2021) resulting from the degradation of Mother Earth stemming from Western nations' past and present view of nature as a commodity (Kimmerer, 2018). Indigenous peoples have a deep connection to their physical environment and colonialism has systemically disrupted this connection (Corntassel, 2012). Manitoba's Climate Action Team stated in its 2021 report *Manitoba's Road to Resilience* the need to "understand climate change and impacts in the context of the histories and ongoing institutions of colonialism" (Hull et al., 2021). Furthermore, with the Federal Government's recent climate change plans, including its National Adaptation Strategy, the passing of Bill C-15, along with its continued commitments towards reconciliation, there needs to be an increased recognition of the interconnection between healing the land and healing relationships between Indigenous and non-Indigenous peoples (Rasevych and Parsons, 2022).

Since 2007, the IPCC reports have identified that Indigenous peoples are not only victims of the impacts of climate change, but also that their knowledge is "an invaluable basis for developing adaptation and natural resource management strategies in response to environmental and other forms of change" (IPCC, 2007, p. 673). In recent years, there has been increasing acknowledgement of the importance of Indigenous knowledges for climate change adaptation, stemming from the recognition that Indigenous knowledges have proven to be effective in fostering adaptability and resilience within communities. Despite the increasing recognition of the vital role that Indigenous peoples and their knowledges play in climate change adaptation,

there remains a notable gap in the representation of Red River Métis knowledges within the climate change adaptation discourse.

A Quick Note on Terminology

For the purpose of this thesis, I will be using the term "Red River Métis," which is now more commonly used to differentiate between the historic Métis Nation (born out of the Red River Valley) and those who falsely claim to be Métis through a very distant Indigenous relative with no connection to the historic Red River Settlement. I will use the terms Métis and Red River Métis interchangeably; however, throughout this thesis, I am always referring to the historic Métis Nation, unless I am discussing false claims to Métis identity, such as in Chapter 3.

1.3 Research Purpose

While the scientific impacts of climate change are widely researched, this research will increase knowledge of effective climate adaptation planning and policy recommendations in Indigenous communities, notably Métis communities. Fore-fronting Indigenous knowledges in the analysis and returning sovereignty to Indigenous communities through surfacing truths about Métis experiences is a key part of reconciliation. This approach enables assessment of the climate adaptation challenges and opportunities Métis communities face. This research brings Métis knowledges into the climate change adaptation discourses, whether it be communal, municipal, provincial, and/or federal, while increasing Indigenous-led cultural and environmental security and sustainability in Canada. Throughout this thesis I explore how Métis knowledges can contribute to adapting to climate change to enhance resilience across the Métis homelands. I seek to uplift Métis knowledges and strengthen Métis histories, identity, stories, and connection to the land, specifically in southeastern Manitoba. This research aims to effectively initiate the

dialogue around including Métis knowledges in climate change adaptation discourses and policy tables, beginning with conversations at the kitchen table.

1.4 Research Questions and Objectives

This thesis characterizes Métis knowledges across three Michif communities in southeastern Manitoba, including St-Pierre-Jolys, St-Malo, and Otterburne. For the purpose of this thesis, I will be referring to these three communities collectively as the Rat River area. As I grew up in St-Pierre, this research is thus grounded in relationships, experiential knowledge, and kinship. Furthermore, by characterizing Métis knowledges, this thesis endeavours to understand the risks and opportunities to respond to climate change in a holistic and culturally appropriate manner. The research is framed by two central questions that are vital in understanding the intersection between Métis knowledges and climate change adaptation in southeastern Manitoba. These questions are:

- What are the impacts of colonization and land-use changes on Métis knowledges, histories, identity, and connection to land, and how have these factors influenced the capacity of Métis individuals and communities to respond to climate change in southeastern Manitoba?
- How can Métis knowledges be effectively utilized to inform climate change adaptation planning and policy recommendations tailored to address the unique challenges and opportunities of Métis communities in southeastern Manitoba?

Furthermore, this research is guided by six research objectives, which include:

1. Reclaim and document Métis identity and history in the Rat River area;
2. Reclaim and document Métis knowledges and connection to the land in the Rat River area;

3. Document and examine climate change impacts in the region along with land-use changes over time;
4. Develop a nuanced and holistic understanding of current adaptation efforts at the individual, communal, and local political level;
5. Develop constructive, holistic, and culturally relevant recommendations for adaptation actions that are tailored to the specific needs and priorities of Métis communities in the Rat River area; and,
6. Bring Métis knowledges into the climate change adaptation discourse.

1.5 Research Context

Contextualizing the research area gives readers important background understanding to set the stage for the next chapters. It also starts the conversation of reclaiming the Métis history of this area. This section is not a comprehensive narrative of the story, but rather, a starting point to continue reclaiming this history and to start conversations about our collective history in the Rat River. Much of the history of this area that I had learned growing up was heavily influenced by Catholicism, framing the narrative around the arrival of the first priest in the Rat River Settlement. Although this history is important to understand, it is imperative to recognize that the roots of the Rat River extend far deeper. If I was not bound to time constraints of writing this thesis, I would have delved more into the history of this area. However, uncovering and reclaiming this history goes beyond this thesis – it is a lifelong commitment in which I hope to continue through ongoing conversations with my family and with community members.

As the Métis history of the area is not extremely well documented (in Western written formats), there are a few key books that helped shape this next chapter, notably Marcien Ferland's book *Au Temps de la Prairie* which follows the stories of Auguste Vermette, who was

born and raised in St-Pierre/Otterburne. Additionally, the book *Pages de Souvenirs et d'Histoire* written by J.-M. Jolys (former priest of St-Pierre) and J.-H. Côté (former member of the clergy) includes some Métis history of the area. As the latter was written in a religious context, it is essential to acknowledge its influence on the community's historical narrative. Nevertheless, it provides a comprehensive starting point for understanding the history of the Rat River Settlement. Other community history parish books from St-Pierre, St-Malo, and Otterburne were consulted. Furthermore, several participants in this research also discussed the Métis history of this area, which is included in Chapter 4.

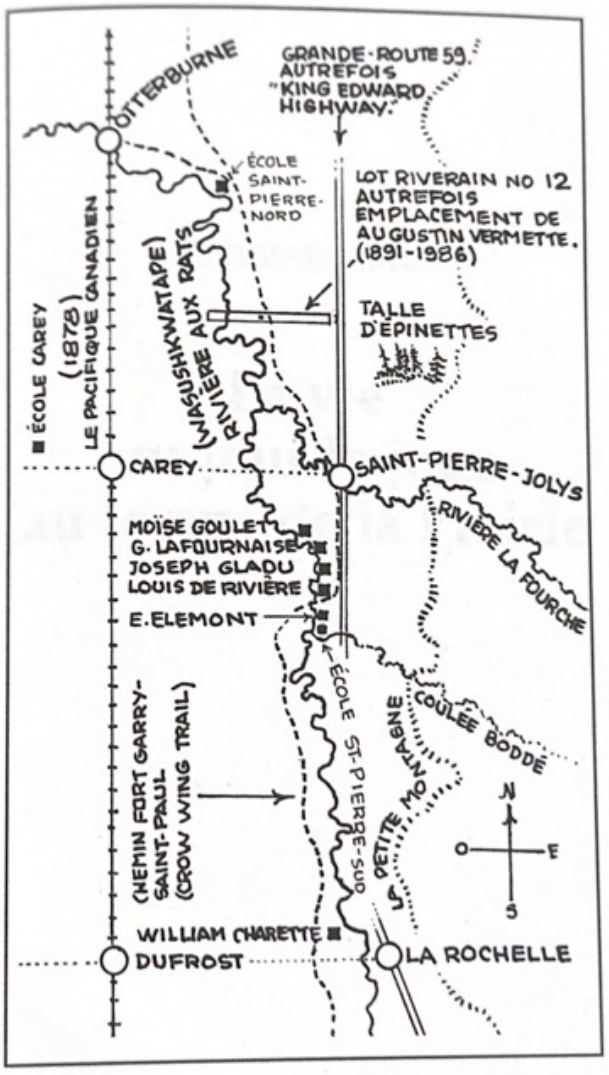
As mentioned, this research focuses on three predominantly Métis communities in southeastern Manitoba, including Otterburne, St-Pierre-Jolys, and St-Malo, which are all located on the Rat River. Otterburne and St-Pierre-Jolys were initially settled by the Métis, which formed the Rat River Settlement located along the Rat River. St-Malo was settled by French settlers; however, many Métis families from the Rat River Settlement had intermarried with these new settlers and moved to the newly established St-Malo Settlement. Hence, although St-Malo was not historically part of the Rat River Settlement, there are many strong familial connections between these three communities. LaRochelle also falls under this area; however, as it has become increasingly less populated, for this thesis, I will only be focusing on St-Malo, St-Pierre, and Otterburne. The following paragraphs will describe the history and cultural landscape of these two interconnected settlements.

Many years before Métis families had settled in the Rat River in 1872, the Rat River Settlement was traditionally a wintering site where many Métis families would trade with First Nations and settlers, bundling hay, building red river carts out of the abundant maple trees in the area, as well as trapping various animals, notably the muskrat, hence the name Rat River, or

Wasushk Watapa in Michif (Ferland, 2006; Barkwell, 2018). The Crow Wing Trail, an important Métis trading route, also went through the Rat River Settlement (see Figure 1).

Figure 1

Map of the Rat River Settlement, 1921



Note. This map is in French, but it highlights some family river lots, rivers and waterbodies, towns, place names, the railroad, schools, and the Crow Wing Trail. The St-Malo Settlement is located to the south of La Rochelle. From Ferland, 2006, created by Réal Bérard.

This wintering site became a permanent Métis settlement in 1872 when eight Métis families from St-Norbert and St-Vital moved to the area due to increasing pressure of encroaching surveyors on Métis lands in Winnipeg (Jolys & Côté, 1974). Father Ritchot, who was a comrade to the Métis and was sympathetic of the Métis cause, was the one who had encouraged these families to move to their permanent wintering site as he knew that the surveyors would come soon (Jolys & Côté, 1974; Ferland, 2006). According to Auguste Vermette, Father Ritchot was the only priest that sympathized truly, deeply, and sincerely with the Métis (Ferland, 2006). Father Ritchot told the Métis that there are nice lands in their traditional wintering site on the Rat River, and that they needed to claim this land tomorrow (Beaudoin et al., 1987). The next day, on July 3, 1870, Father Ritchot received permission from the Government of Manitoba for the Métis to claim the land to make space for a permanent settlement (Beaudoin et al., 1987). According to Jolys and Côté (1974), in 1870, 30 men had prepared the land in the traditional Rat River wintering area for families to settle in. The eight Métis families that settled in 1872 include the families Roy, Gladu, Lafournaise, Larivière (sometimes written Desrivières), Elemond, Nault, Vermette, and Tourond (Jolys & Côté, 1974). Several other Métis families, including the families Goulet, Le Scioux, Bruneau, and Parisien, had settled in the Rat River the following years (Beaudoin et al., 1987). Then, in 1877, Bishop Taché erected the Mission of St-Pierre (Jolys & Côté, 1974). Once the Mission was created, 13 Settler-Francophone families had settled in the Rat River Settlement, many of whom came from manufacturing centres in New-England (Beaudoin et al., 1987).

Furthermore, the St-Malo settlement was first “founded” in 1892 by Louis Malo, a pioneer who came from Québec (Jolys Regional Library, n.d.). Due to its close proximity to St-Pierre and Otterburne, many Métis families including the families Bourgeois, Bruneau, Carrière,

Charrette, DeBlois, Desrosiers, Forest, Gladu, Gobeil, Hérie, Lafournaise, Larivière, LaRoche, Nault, and Perreault, had formed unions with the newly established families in St-Malo. These unions and alliances are what formed the first Métis families in St-Malo, which remains a vibrant Métis community today (St-Malo MMF Local, Personal Communication, June 6, 2023).

Moreover, the creation of the Mennonite East Reserve in 1873 had attracted multiple Mennonite settlers who settled in this area in 1874 and consequently created 37 villages in southeastern Manitoba (Ledohowski, 2003). The Canadian Government attracted these settlers to come to Manitoba by granting them exemption from military service, religious freedoms, as well as granting them large parcels of land, which includes the East Reserve (Ledohowski, 2003). Hence, the cultural landscape around the Rat River area was changing with an influx of both French and Mennonite settlers.

The Métis in this area did not like this new settler culture and felt alienated by its imposition (Ferland, 2006). Instead, the Métis wanted to preserve their traditional way of life – a simple life with an abundance of open land, where hunting and practicing their culture was integral (Ferland, 2006). The establishment of new school systems further exacerbated the sense of alienation amongst Métis children within their own communities, as the history of the Métis and of Riel was often portrayed negatively (Ferland, 2006). Auguste Vermette said that that the other (non-Métis) children at school treated the Métis children like they were manure and called them “des mangeux de galette” (translated in English this means Bannock eaters) (Ferland, 2006). Some Métis families in the area were fortunate to keep their land, while others were dispossessed of their land or had sold their Scrips without knowing the repercussions of this action (Ferland, 2006).

While this section offers only a glimpse into the history and cultural landscape of the Rat River area rather than an exhaustive narrative, the goal of this section is to provide a starting point to continue reclaiming our history. By contextualizing the history of the Rat River area, this section sets the groundwork for the subsequent discussions in this thesis. This thesis endeavours to honour the legacy of the Métis in this area and contribute to ongoing conversations of reclaiming Métis history, knowledges, connection to the land, and identity that are rooted in the Rat River.

1.6 Organization of Thesis

This thesis is organized into five chapters. Chapter 1 outlines my relationship to this topic, the research background, the purpose of this thesis, the research questions and objectives, and finally, the research context. Chapter 2 situates the research in relevant literature while describing climate change in the Prairies and its disproportionate impacts on Indigenous peoples. It also explores the relationship between land-use changes and policies in Manitoba and how this may exacerbate climate change impacts. Moreover, Chapter 2 explores the role of Indigenous knowledges, including Métis knowledges, in climate change adaptation. Additionally, this chapter evaluates adaptation policies in Canada from 1998 to the present day and evaluates the extent of the inclusion of Indigenous peoples and their knowledges in these policies, along with discussing Indigenous-led adaptation actions in Canada. Chapter 3 describes the Métis-specific Kitchen Table Methodology used in this research*, Lii Taab di Michif*, while also describing the research design. Chapter 4 presents the participants' stories and knowledges from the kitchen table conversations, using four theoretical sash threads to provide a holistic and comprehensive overview. Chapter 5 provides multiple recommendations for Métis citizens, MMF (Manitoba Métis Federation) Locals, the (MMF), municipalities, and the Manitoba Government (while also

being applicable to the federal government), which are based on the kitchen table conversations and the literature review. This chapter also summarizes the major findings of this research, delving into their implications, avenues for future research, knowledge dissemination, and final reflections.

Chapter 2: Literature Review

This chapter describes the impacts of climate change in the Prairies, with a focus on Manitoba, while also considering the disproportionate impacts on Indigenous peoples. Additionally, it explores the intricate relationship between land-use changes and policies in Manitoba to understand how these changes may exacerbate climate change. Central to this chapter is the exploration of Indigenous knowledges, including Métis knowledges, laying the groundwork for their vital role in climate change adaptation. Through a review of climate change adaptation policies in Canada from 1998 to the present day, this chapter evaluates the extent of inclusion or lack thereof of Indigenous knowledges in these policies. The chapter concludes by discussing Indigenous-led adaptation actions in Canada, emphasizing the critical importance of Métis knowledges for future climate change adaptation endeavours outlined in subsequent chapters.

2.1 Climate Change in the Prairies

The Prairies (Alberta, Saskatchewan, and Manitoba) span from the Rocky Mountains to the Hudson Bay, and thus are comprised of several major watersheds, biogeographic zones, and climatic zones (Sauchyn & Kulshreshtha, 2008). Although named “the Prairies,” only about 30% of the region falls within the Prairie Ecozone, along with other ecozones and landscapes including the Boreal Forest, Cordilleran Forest, Aspen Parkland, Semi-Arid Interior Plains, the Hudson Bay Lowlands, the Subarctic Shield, and the Montane Cordillera (Sauchyn et al., 2020). Moreover, the Prairies comprise more than 80% of Canada’s agricultural land and the majority of Canada’s irrigated agriculture (Sauchyn et al., 2020). The Prairies have had the most warming to date across southern Canada, especially evident in the winter months (Sauchyn et al., 2020). According to Laforge et al. (2021) “the Prairies are warming more quickly than any other region

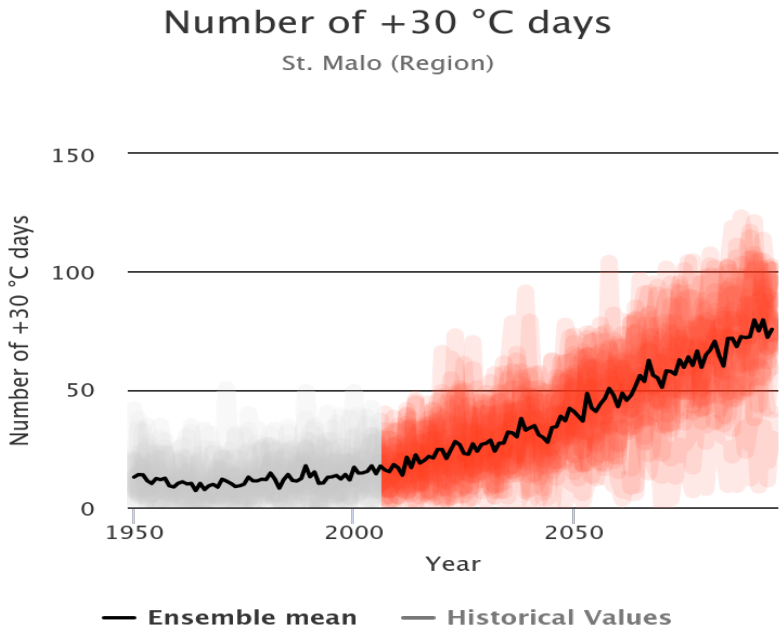
outside the Arctic" (p. iv). Under a high-emission scenario, temperatures in the Prairies are projected to increase by a median of 6.5°C by 2081-2100 and by 1.9°C under a low-emission scenario (Laforge et al., 2021). The Prairies have already experienced an increase of 3.1°C in average winter temperatures between 1948 and 2016 (Laforge et al., 2021).

Furthermore, when examining Manitoba in particular, its distinctive continental geography and northern latitude position the province to warm much faster than the global average (Prairie Climate Centre, 2019). According to the Climate Atlas of Canada (2024), southern Manitoba is projected to see an increase in very hot days (over 30°C). Under a low emissions scenario (RCP4.5), the average number of these days is expected to rise from 14 days (1976-2005) to 28 days (2021-2050)[2]. Under a high emissions scenario (RCP8.5), this number is projected to increase to 31 days (2021-2050); for the 2051-2080 period the numbers of these hot days is projected to be 39 with low emissions and 53 with high emissions (Climate Atlas of Canada, 2024). In the research area under the St-Malo small grid area in the Climate Atlas, the number of very hot days is projected to rise from an average of 13.0 days in the 1976-2005 time period to 52.4 days under the high emissions scenario in the 2051-2080 time period (see Figure 2) (Climate Atlas of Canada, 2024). These projected warming temperatures can have serious negative impacts on Manitoba's social, economic, and ecological systems (Prairie Climate Centre, 2019).

[2] These numbers are based off the Winnipeg region large grid square on the Climate Atlas of Canada.

Figure 2

Increase in Number of +30℃ days in St-Malo



Note. This graph demonstrates the projected increase in very hot days (+30°C) for the St-Malo region under a high emissions scenario up to the year 2095. From Climate Atlas of Canada, version 2 (July 10, 2019), using BCCAQv2 climate model data.

A major focus regarding climate change in Manitoba and in the Prairies is flooding and droughts. It is not unusual for Manitoba to experience droughts and floods; however, under the projected warming scenarios, the frequency and intensity of these events are predicted to increase (Prairie Climate Centre, 2019). Precipitation is projected to increase, mostly in the winter and spring (Zhang et al., 2019), however, summers may see a decline in precipitation (Prairie Climate Centre, 2019). Although this may not seem significant, some communities in southern Manitoba are projected to see a tripling or even quadrupling of very hot days (+30°C), such as in the St-Malo region described above. Thus, increases in temperatures coupled with less precipitation due to increased evaporation and transpiration could create ideal drought conditions (Sauchyn, et al., 2020). Some communities may also experience both flooding and droughts in

the same year due to altered precipitation patterns (Prairie Climate Centre, 2019). Similarly, parts of the province could experience flooding while another is experiencing forest fires (Szeto et al., 2014). These paradoxical climatic events possibly (and some already) occurring at the same time demonstrates the complexity of climate change impacts.

Other interconnected impacts are also predicted to occur due to a warming climate in the Prairies. One impact is both the increase of non-native species and the loss of species that cannot adapt to the rate of warming (Sauchyn et al., 2020). Increasing temperatures and warmer winters could increase northward shifts in both diseases and pests, including deer ticks and cereal rusts (Laforge et al., 2021). Ecosystem shifts are also predicted to occur in the Prairies, where large regions of the Boreal Forest can transition into Grassland Ecosystems and Aspen Parkland (Sauchyn et al., 2020). This can severely impact social and economic activities in Manitoba, including harvesting practices and agriculture. Although there are many other impacts in Manitoba, such as permafrost thaw in the northern parts of the province, much of the attention in the southern part of the province is focused on warming temperatures, increases and decreases in precipitation, flooding and droughts, and changing species. However, it is crucial to consider that some communities will be (and already are) disproportionately impacted by these impacts across the province.

2.1.1 Disproportionate Impacts on Indigenous Communities

Not only are many Indigenous peoples already burdened with the negative impacts of resource extraction on their lands and territories, but they also face disproportionate impacts of climate change while contributing very little to the problem (Cameron et al., 2021; Donatuto et al., 2014; Green and Minchin, 2014; Vinyeta et al., 2015). Climate change threatens Indigenous peoples' constitutionally protected rights and way of life due to climate change impacts on

harvesting, traditional lifestyles, ceremonies, transportation, and access to essential services (Indigenous Climate Hub, 2022). Climate change disproportionately impacts Indigenous Peoples because both capitalism and colonialism have shaped their socio-economic conditions, where they live, and how they interact with Mother Earth (Whyte, 2018). For example, between 1980-2021, 16 First Nations communities were evacuated more than five times, and of those 16 communities, 14 were First Nations reserves (Sinclair, 2023). Indigenous Peoples in Canada are also at risk of mental health impacts from climate change, ranging from ecological grief to stress of displacement from climatic events (National Collaborating Centre for Indigenous Health, 2022). These examples serve as a harsh reminder of the interconnections between environmental racism and ecological disasters (Brockie & Han, 2023).

In the Prairies, higher rates of unemployment, poverty, and lack of access can also make adapting to climate change more challenging in comparison to non-Indigenous communities (Sauchyn et al., 2020). For example, the 2013 flood in the Siksika First Nation in Alberta had more severe impacts than in other communities (Patrick, 2018), and in Manitoba, Lake St-Martin First Nation experienced severe flooding in 2011, in which there was a lack of warning to evacuate community members and the recovery efforts were inadequate (Thompson, 2015). It is also essential to recognize that many Indigenous communities across Manitoba are very remote, and thus, climate change adaptation can be much more difficult due to lack of access to resources.

It is also important to acknowledge that climate change will disproportionately impact Indigenous women due to their relational responsibilities (Williams et al., 2018) while also worsening existing gender inequities (Cohen, 2014). Indigenous women's voices and expertise are often sidelined when it comes to climate change research and policies in Canada, which is a

reflection of the dominant Western and patriarchal "power-knowledge relations" (Williams et al., 2018, p. 21). Indigenous women have actively resisted and spoken up against climate change, yet their knowledges remain at the margins (Williams et al., 2018).

While there has been growing awareness and literature on the disproportionate impacts of climate change on Indigenous peoples, there remains a gap in Western written research on the possible connections between climate change, colonialism and land dispossession (Yellow Old Woman-Munro et al., 2021). A comprehensive exploration of possible connections merits its own thesis, but that is outside of the scope of this thesis. However, the following section aims to lay the groundwork by offering contextual insights into land dispossession in the Rat River area. Understanding the context is crucial to understanding the subsequent chapters that delve into the impacts of climate change and responses within the study area.

2.1.2 Land-Use Changes

The checkerboard pattern that is noticeable in aerial views of southern Manitoba is a stark departure of what once stood. As a calculated way to reshape the land both physically and socially, this checkerboard landscape emerged as a strategic element in a game of dispossession – opening areas for newcomers to farm in the recently created province of Manitoba. Today, agriculture remains an essential pillar of Manitoba's economy, directly contributing to 8% of the provincial gross domestic product (GDP) (Government of Manitoba, 2023b) and continues to be a big part of the Prairies' identity. As the past helps us understand the present, it is vital to understand how the landscape in Manitoba has changed, the motives behind these changes, and how this has negatively impacted Indigenous peoples, including the Métis.

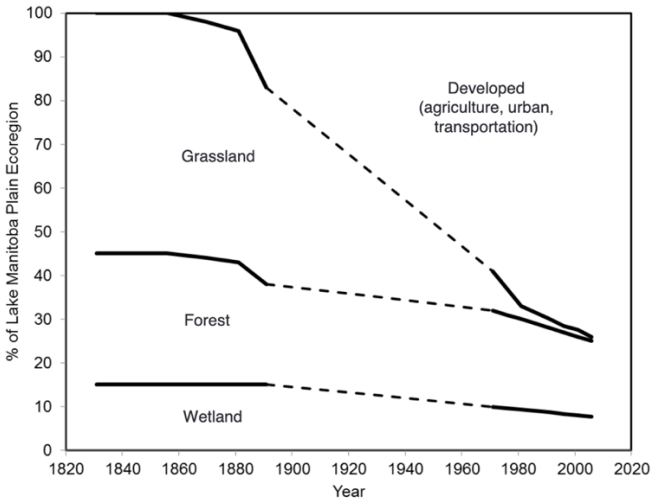
Before European settlement and subsequent land use changes, the Prairies were abundant in native grasslands and wetlands, along with millions of bison roaming these lands (Laforge et

al., 2021). Indigenous peoples in the area followed a hunting lifestyle, along with low-impact agriculture, which, due to its lack of resemblance to European agriculture, was not always viewed as "agriculture" (Daschuk, 2019; Herriot, 2016; Laforge et al., 2021). Thus, the southern part of Manitoba endured a rapid shift from abundant native grasslands and wetlands, which is often termed "wet Prairie" to agricultural fields to favour "permanent and prosperous agricultural settlement" (Bower, 2011, p. 2). To achieve this goal, it thus became necessary to clear grasslands and drain wetlands, as the land, although fertile, was not conducive to agriculture due to surface water problems (Bower, 2011, p. 19).

According to Painter et al. (2021), over 85% of the Red River Valley in southeastern Manitoba was transformed from wetlands and wet Prairie to cropland between the early 1800s initial European settlement and intensive agriculture of the 20th century. A study from the United States Geological Survey estimated that Manitoba has lost 99.9% of its native grasslands (USGS, 1998; Gunn et al., 2018). Thus, the Red River Valley and other parts of Manitoba experienced extreme changes in land cover (See Figure 3 and Figure 4). Policies and treaties were put in place in Manitoba to dispossess Indigenous peoples' land to align with European agricultural practices, which were deemed to be a more productive use of the land (Laforge et al., 2021). This next section will look at two specific policies, the *Dominion Lands Act* and the *Drainage Act,* to illustrate how these acts impacted land-use and land cover in the study area.

Figure 3

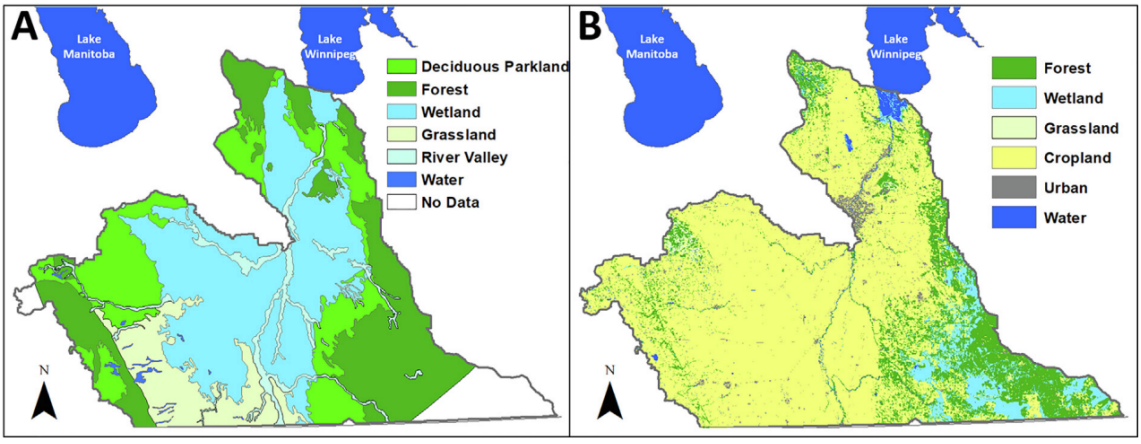
Estimated change in proportional cover of grassland, forest, wetland, and developed land in the Red River Valley from 1830-2006.



Note. From Henderson, D., & Koper, N. (2012, January 1). *Historic Distribution and Ecology of Tall-Grass Prairie in Western Canada*.

Figure 4

Changes in land cover in the Red River Valley from pre-settlement conditions (A) to present day (B)



Note. From "An ecological causal assessment of tributaries draining the Red River Valley, Manitoba," by Painter, K. J., Brua, R. B., Chambers, P. A., Culp, J. M., Chesworth, C. T., Cormier, S. N., Tyrrell, C. D., & Yates, A. G., 2021, *Journal of Great Lakes Research*, *47*(3), 773–787.(https://doi.org/10.1016/j.jglr.2020.05.004) Copyright 2021 by Elsevier B.V.

Dominion Lands Act, 1872. Unfortunately, words such as dispossession and displacement are commonly used to describe the Métis post-1870 (Kermoal, 2016). As the Métis grew concerned about the Hudson's Bay Company land transfer to the Canadian government without any consultation with Indigenous peoples, the Métis created a provisional government, led by Louis Riel, in an attempt to negotiate terms to enter confederation to protect Métis rights (Logan, 2015). Section 31 of the newly created Manitoba Act in 1870 promised 1.4 million acres of land to the children of Métis families to be redeemed through land scrips or cash equivalent (Kermoal, 2016). However, through both "lawless administration" and white speculators who engaged in fraudulent practices to acquire scrips from the Métis, the Métis lost the majority of the land given to them in the span of 50 years (Kermoal, 2016; Logan, 2015). Two years after the Manitoba Act, the Dominion Lands Act was put into place, which, coupled with the Scrip system, led to further dispossession and displacement – a complete disregard of the promises made to the Métis in 1870 (Robinson & Filice, 2019).

The Act Respecting the Public Lands of the Dominion, more commonly known as the *Dominion Lands Act*, modelled after the *United States' Homestead Act* of 1862, was a federal statute enacted in 1872 to encourage settlement in the newly created province along with preventing encroachment from the United States (Yarhi et al., 2023). This Act stipulated that the Dominion government claimed title to the lands of the northwest, with complete disregard of whether Indigenous peoples had extinguished their land title (Choquette, 2019). The overarching goal of the Act was to entice newcomers to the West in hopes of experiencing the "land rush" that was experienced in the United States at the time (Bower, 2011). However, the underlying goal of this Act was colonial in nature – dispossessing and displacing Indigenous peoples to promote private property for white settlers (Choquette, 2019).

The Act allocated 64 hectares of surveyed land available to purchase at a fee of $10 (equivalent to approximately $142 today, adjusted for inflation) to any head of household or single man older than 21 years old (Bower, 2011; Choquette, 2019; Yarhi et al., 2023). To qualify, individuals were required to build a permanent house on the land and cultivate at least part of it (Bower, 2011; Choquette, 2019; Yarhi et al., 2023). In 1873, the age of eligibility was dropped to 18 years old in an attempt to make settlement more appealing to younger families (Yarhi et al., 2023). Then, in 1876, women over 18 who were the sole head of a household also became eligible to expand the reach of eligibility to entice more settlers (Choquette, 2019; Yarhi et al., 2023). The settlers received permanent ownership of the land once it was deemed that they had made progress on the land (i.e. land was being used for agricultural purposes) and a house was built on the land (Choquette, 2019). If it was deemed that the land had not been improved, ownership could be taken back by the government (Yarhi et al., 2023). However, large corporations were exempt from this requirement, such as the HBC, which owned large parcels of land that were not used for agricultural purposes (Choquette, 2019). This exemption is a sharp contrast from how the government viewed Indigenous peoples' land utilization as wasteful as they were not engaging in larger-scale agriculture (Choquette, 2019).

The Métis were only included in the Act when amendments were issued in 1879 (Robinson and Filice, 2019), which appears to have been more symbolic than substantial. The continued exclusion of the Métis in the Act, coupled with the Scrip system, perpetuated the dispossession of the Métis, who were also experiencing the increasing encroachment of white settlers on their land. By 1883, over 70% of the land that the Métis once occupied were patented to others (Mailhot & Sprague, 1985; Vermette, 2021), all while white settlers were altering the

land – a key requirement of the Act. As Kermoal (2016) powerfully states, “after 1870, the Métis were made to feel strangers in their own lands” (p.116).

The Drainage Act and the Land Drainage Act. The Drainage Act of 1880 was another critical piece of legislation which altered the land in the Red River Valley and other parts of the province. The Drainage Act paved the way to survey wetlands and drained nine large wetlands, including “the marshes southwest of the Rat River” (Bower, 2011, p. 26). This Act also set aside money for future drainage endeavours to be undertaken by Public Works Manitoba (Venema et al., 2010). Then, in 1885, the Land Drainage Act was passed with the goal of creating drainage districts to address flooding issues affecting certain areas across the province (Bower, 2007). The primary reason for the province’s aggressive stance on draining remaining wetlands was due to the fear that settlers would move further west to Saskatchewan and Alberta, or south to the United States as the land in the Red River Valley was too wet for agriculture (Venema et al., 2010). By 1935 there were 23 drainage districts conducting drainage endeavours covering 8,498 km^2 (Warkentin, 2010). Consequently, the value of the land post-drainage often tripled and, in some cases, increased tenfold. Hence, the Drainage Act helped to realize the goal of making Manitoba and its land more attractive for settlement.

These pieces of legislation are essential to understanding how land-use patterns have changed in Manitoba, along with how Métis families have been excluded and neglected in these policies, which has led to widespread dispossession and displacement. While these Acts intended to attract settlers to the West and expand agriculture, which was successful, the process dispossessed Indigenous peoples of their land, culture, and livelihoods. In essence, these legislative policies have further contributed to systemic dispossession impacting Indigenous

peoples, including the Métis. The Acts were not only pivotal in physically altering land-use patterns, but they also altered the socio-economic and cultural history of the Red River Valley.

Legacy of Broken Promises: Métis Land Dispossession. After Manitoba had entered Confederation, there were unfortunately numerous examples of the Canadian government giving land to settlers while simultaneously dispossessing the Métis of their land. Although the intent of Riel and his provisional government entering Confederation was to secure a land-base for the Métis to thrive despite the influx of settlers, the Royal Commission on Aboriginal Peoples (RCAP) (1996) concluded that "the promises made to the Métis population in the creation of the new province in 1870 were violated or ignored (or their implementation delayed) on a massive scale" (p. 342). Two prominent examples of Métis displacement and land dispossession are Rooster Town and the Métis town of Ste-Madeleine. These examples demonstrate the legacy of broken promises and systemic dispossession for the Métis. The narrative then extends to the Rat River area, telling the story of a lesser-known example of Métis land dispossession.

After 1870, some Métis families had left the Red River and settled in Ste-Madeleine, located in southwestern Manitoba (Sammons, 2013). After the 1885 Resistance, more Métis families from Saskatchewan and Alberta had then settled in this Métis community (Sammons, 2013). This community was a thriving Métis community until 1935, when the Canadian government had enacted the Prairie Farm Rehabilitation Act, created as a response to the prolonged drought and economic hardships that led many people to abandon their farms in the 1930s (Barkwell, 2016). The Act was created to convert non-arable land, such as the sandy soil in Ste-Madeleine, into community pastures (Sammons, 2013). Because many Métis at this time were facing dire economic hardships, many had not paid their taxes (Sammons, 2013). This, coupled with the newly enacted Act, had led to the Métis being forced to relocate once again as

their houses were burned to the ground and their dogs were shot, ultimately clearing the way for the transformation of this once vibrant Métis community into pastureland (Barkwell, 2016). Today, many Red River Métis gather at this historical site in July to remember those who once lived there, surrounded by grazing cattle and no trespassing signs (Ridgen, 2023).

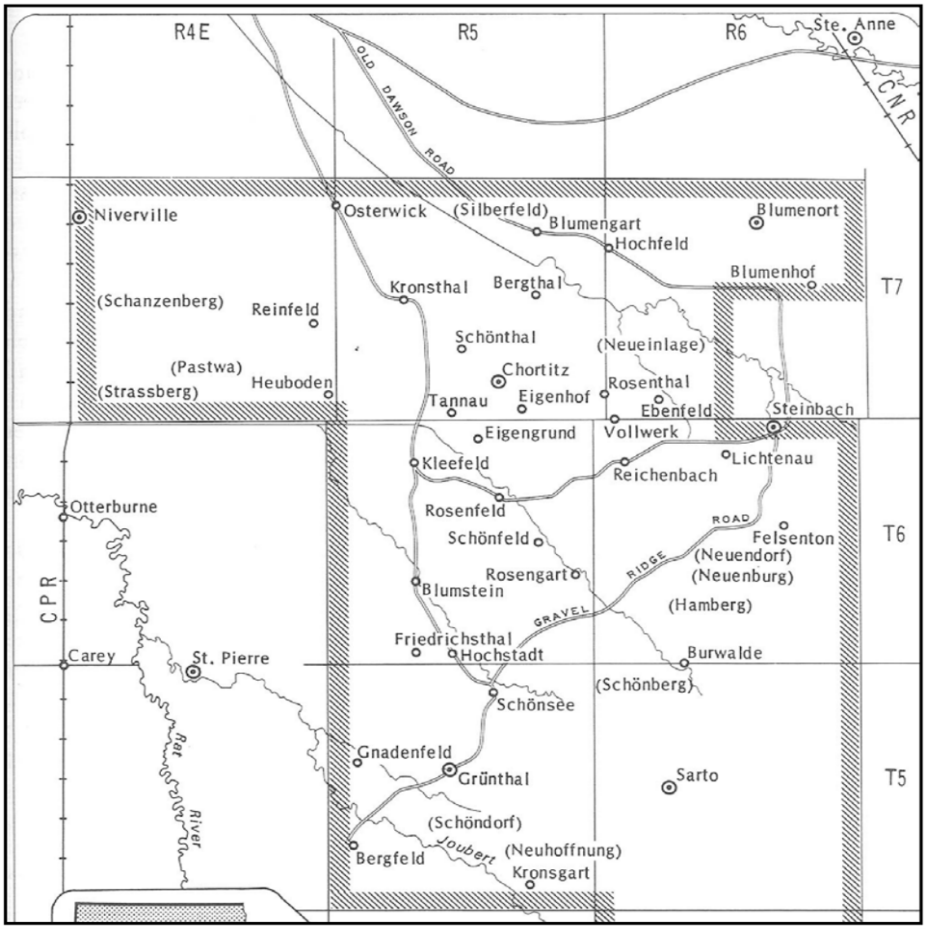
A similar story of dispossessing the Métis to make way for settlers occurred in Rooster Town, a Métis road allowance community in Winnipeg that is now occupied by the Grant Park Mall and the Grant Park School (Barkwell, 2016). During the depression in the 1930s, many homeless Métis families facing financial hardships had "illegally" built small shacks on the Canadian National Railway Property, which eventually became known as Rooster Town (Barkwell, 2016). In the 1950s, many reporters went into Rooster Town to write about the community and take photos of the living conditions in this area, socially and economically distancing this community from the predominant middle-class citizens who would read the articles (Peters et al., 2022). As the city of Winnipeg was starting to expand due to the government's promotion of settler colonialism and the construction of the transcontinental railway, Métis-occupied land in the city was seen as an obstacle to developers' goals of creating new housing and commercial areas (Burley, 2014). The land in this area was seen as being too "valuable" to be left for Métis "squatters," and thus, the city had agreed to offer cash payments to Rooster Town families (Peters et al., 2022). If the families did not accept the money and relocate, they faced evictions, followed by their shacks to be burned (Burley, 2014). The tragic (and fairly recent) story of Rooster Town serves as a poignant reminder of the systemic dispossession that the Métis faced at the hands of settler colonialism.

In the southeast, including the Rat River area, Canada had promised Mennonite immigrants religious freedom if they would settle the land (Logan, 2015). Starting in 1874, the Canadian government welcomed about 7,000 Mennonites, most of whom were allotted land in what came to be known as East Reserve (see Figure 5) (Giesbrecht, 2001). However, the Métis had claimed this land four years earlier (Giesbrecht, 2001). In 1874, a group of Métis in the area approached Roger Goulet, a surveyor sent to locate the Mennonites on their land reserve (Giesbrecht, 2001). They expressed that they wanted their land rights to be respected (Giesbrecht, 2001). However, these claims were denied, and the land was subsequently given to Mennonite settlers, who slowly encroached beside the Rat River area (Giesbrecht, 2001).

With continued frustration, some Métis in the area created a petition sent to the Department of the Interior office asking for their land back (Giesbrecht, 2001). However, this petition was not addressed until 13 years later when A.A.C. LaRiviere, who was the MP for Provencher at the time, brought these claims back to the table (Giesbrecht, 2001). However, the land claim was dismissed due to three main reasons: 1) the Métis did not demonstrate "continuous occupation" as many Métis thought that initially putting stakes in the land was sufficient to claim land; 2) they were not a part of the Hudson's Bay Company survey that was mandated in 1876; and finally, 3) the Métis did not show the "truly valuable improvements" of the land that were required, meaning the Métis were not cultivating the land like the settlers were for agricultural purposes (Giesbrecht, 2001, p. 107). Hence, it becomes clear that these promises made to the Mennonites by the Government of Canada were more important than those made to the Métis (Logan, 2015). Moreover, this prompts a critical question: would the Métis have secured these land titles if they had fulfilled the three requirements?

Figure 5

Map of Mennonite East Reserve in 1880



Note. Map of the Manitoba East Reserve showing major villages and settlement trails in 1880. From Epp, F. H. (1974). *Mennonites in Canada, 1786-1920: The History of a Separate People*. Macmillan of Canada.

Land dispossession and land-use changes were extremely important for Canada to achieve the colonial agenda by expanding West and rendering Indigenous peoples, including the Métis, invisible. Understanding the past and various government policies is essential to understand the current social, political, and environmental context, including how land-use changes may exacerbate climate change impacts. However, it is imperative to note that land dispossession also led to the loss of language, culture, and traditional knowledge (Gregory et al.,

2020; Ninomiya et al., 2023), possibly eroding adaptive capacity. Land is vital to Métis identity, and the disruption and dispossession of land use impacts the intergenerational transmission of knowledge. The narratives of Ste-Madeleine, Rooster Town, and the Rat River area shed light on the systemic dispossession that the Métis have faced due to settler colonialism and government policies that have favoured settlers instead of the Métis. These stories underscore a sobering reality: that cattle, urban developments, and agricultural land were prioritized over the rights of the Métis. However, despite the dark history of displacement, Métis people have retained a deep connection and knowledge of their homeland, the Northwest.

2.2 Indigenous Knowledges and Climate Change Adaptation

As there are an estimated 476 million Indigenous peoples across the world (UN, n.d.), the terms that relate to Indigenous peoples are vast. Although no agreed-upon definition of Indigenous knowledge exists, it can be defined as "a cumulative body of knowledge, practice and belief evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes, 2018, p. 8). For the purpose of this thesis, I will use 'Indigenous knowledges' (IKs) to represent different Indigenous ways of knowing that are inclusive of languages, epistemologies, and worldviews. Referring to Indigenous knowledges in plural form also helps move away from looking at these knowledge sets as homogenous entities and helps describe the diversity of ways of knowing across different Indigenous groups, nations, and even within communities. It is also imperative to recognize that Indigenous knowledges are not only "knowledges," but that they represent a way of life; something that must be lived (McGregor, 2021).

Other terms are similar and/or related to Indigenous knowledges, which include Traditional Ecological Knowledge (TEK), traditional knowledge (TK), and Indigenous Knowledge Systems. The usage and meaning of these terms may vary, are sometimes used interchangeably, their usage may have evolved over time, or it may even vary by discipline (Whyte, 2013). Moreover, some scholars advocate for dropping the word "traditional" in TEK and opting for different terms, such as IK, as the word traditional may imply a static knowledge system (Sidorova & Ferguson, 2023). This is not an exhaustive list but represents the diversity of terms that relate to or describe Indigenous knowledges.

2.2.1 Métis Knowledges

For the purpose of this thesis, I am referring to the knowledge that Métis people hold as Métis knowledges. Again, I am using the plural form of knowledge to accommodate the diversity of ways of knowing amongst the Métis, including diversity in communities, and even individuals to avoid homogenizing Métis ways of knowing. I am also omitting the word "environmental" when referring to this plural knowledge system as, although the environment is a major component, other interconnected components are important to recognize in this diverse knowledge system, such as language and culture. Prior to 2016, there was very little research or conceptualization of Métis knowledges, as highlighted by Hodgson-Smith and Kermoal (2016). Additionally, Métis knowledges have often been subject to pan-Indigenization, leading to amalgamation and homogenization with other Indigenous knowledges without taking into account how Métis knowledges are unique to Métis culture, history, language, and land-base. However, a recent shift has emerged where there has been an upsurge in academic literature exploring and characterizing Métis knowledges while moving away from pan-Indigenization, which has been spearheaded by numerous Michif academics (see Ferland, 2022; Fiola, 2021;

Flaminio et al., 2020; Forsythe & Markides, 2024; Gaudet, 2020; Gaudet, 2023; Gaudet et al., 2020; Kanngieser & Todd, 2020; Oster and Lizee, 2021; Todd, 2018).

The Métis have long-standing cultural and environmental knowledge about changes happening across their homeland due to their intimate connection to the land (Teillet, 2019). Hodgson-Smith and Kermoal (2016) echo this sentiment by stating that the Métis have a "long history of sustainable entrepreneurial economies based on knowledge systems closely tied to their traditional territories" (p.139). One of the most prominent (and one of the very few) definitions of Métis knowledges is by Vizina (2010), who refers to Métis Knowledges as Métis Traditional Environmental Knowledge (note, this was from the year 2010, when Indigenous knowledges were more commonly referred to as TEK, hence Métis TEK). Vizina (2010) states that Métis Traditional Environmental Knowledge:

> is built from community practices which form the foundation for understanding the natural world, building skills and behaviour adaptable and applicable to other facets of Métis life, maximizing use and benefit of natural resources within community accepted ethical boundaries, and contributing to personal and community spiritual, physical, intellectual and emotional health and development" (p.13).

Further, Vizina (2010) emphasizes that Métis knowledge systems are not static and continue to innovate. Vizina (2013) states that Métis knowledges are "intended for adaptation and use in everyday life" (p. 13). Nathalie Kermoal also emphasizes the adaptive nature of Métis women's knowledges, saying that "the land-based practices and activities of these women were adapted to an ever-changing environment, just as stories are constantly retold, and new interpretations layered onto old ones" (2016, p. 129).

Although the Métis were historically a matriarchal society, Métis women's knowledge has been neglected, in line with broader Western and patriarchal trends that have erased or undervalued women's knowledges and their connection to the land (Adese, 2014; Ferland, 2022; Fiola, 2021; Gaudet, 2019; Hodgson-Smith & Kermoal, 2016; Laliberte, 2013). Because strict gender roles were imposed onto the Métis, Métis women's roles and knowledges were thus seen as subordinate to those of men. The historical participation of Métis women in land-based practices, such as hunting and trapping, has often been overlooked in Métis narratives, with the understanding and documentation of these practices primarily attributed to Métis men (Ferland, 2022).

However, Métis women continue to practice land-based activities and continue to transmit knowledges that the Métis Nation depends and thrives upon. Not only were Métis women "political and economic powerhouses in the nascent Métis Nation" (Ferland, 2022), but Métis women have also importantly contributed to the resiliency and adaptability of the Métis Nation (Adese, 2014). Adese (2014) states that: "Métis women helped to ensure ways of knowing remained vibrant, adaptable, and responsive to new ecological contexts allowed Métis peoples, as peoples, to survive" (p. 58). Despite attempts to erase Métis women's knowledges and render Métis women to domestic spaces, many Métis women today continue to have a strong relationship to the land and possess invaluable and vital knowledges. With our changing environment, it is crucial that we listen to and uplift Métis women's knowledges and voices.

2.2.2 The Importance of Indigenous Knowledges for Adaptation

Indigenous knowledges have increasingly received attention in climate change discourses due to their close connection to the land (Johnson et al., 2022). Indigenous peoples view the Earth as a living entity in which reciprocity forms the basis of this relationship (McGregor et al.,

2020). This is different than the dominant Western society's view of the natural environment as property, commodity, and resources (McGregor et al., 2020). Although Indigenous peoples have a close reciprocal relationship with their physical environment, they have often been viewed as passive and helpless victims of climate change (Berkes & Armitage, 2010). There is the recognition that Indigenous peoples possess the skills and knowledges to understand, document, respond, and cope with the impacts of climate change (Turner & Clifton, 2009). Overall, the connection that Indigenous peoples, including the Métis, have with the land, along with their intergenerational observations of their natural environment, is crucial to adapting to climate change.

Nonetheless, there has been a shift from viewing Indigenous peoples as passive victims to understanding how Indigenous peoples have agency in adapting to climate change due to their highly localized and place-based knowledge (Vogel & Bullock, 2021). Johnson et al. (2022) explain this double view of Indigenous knowledges and climate change as "Indigenous groups have been presented in global fora as both the powerless victims of climate change and resilient heroes ready to adapt to rising emissions and share their adaptive expertise with non-Indigenous audiences" (p. 1542). Hence, rethinking Indigenous resilience to the climate crisis is vital when looking at the discourses around Indigenous peoples and their knowledge for climate change adaptation.

Rethinking Resilience

The term "resilience" is often used to describe Indigenous peoples and communities of colour dealing with the impacts of climate change (Indigenous Climate Action, 2021). The English word "resilience" stems from Latin meaning "jumping back up" (Fleming & Ledogar, 2008). Resilience can be described as a "dynamic process encompassing positive adaptation with

the context of significant adversity" (Luthar et al., 2007, p.1). Resilience has also increasingly been linked to climate change, with the last two decades seeing increases in discussions and literature on resiliency and adaptation to climate change (Mikulewicz, 2019). Klenk et al. (2017) explain that resilience "focuses on examining the magnitude of climate change that can be absorbed before a system changes to a different state, as well as the capacity to self-organize and adapt to emerging circumstances" (p. 236). In Magis' (2010) research on defining community resilience, they stated that the definition that emerged from their research is as follows: "the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise" (p. 402). Although recent decades have seen an upswell in resilience literature, there have also been some critiques on using the term resilience vis-à-vis climate change adaptation.

The Indigenous Climate Action (ICA) argues that instead of focusing on communities being stronger or tougher, the focus should be on the drivers of climate change (Indigenous Climate Action, 2021). Moreover, the ICA argues that the responsibility should not be on communities to adapt to climate change, but rather, corporations need to adapt their capitalist extractive practices instead (Indigenous Climate Action, 2021). There has been a tendency to offload the responsibility of communities to adapt to the impacts of climate change so that companies and governments can just continue on a path of inaction. Mikulewicz (2019) is also critical of the term resilience regarding climate change and echoes that resilience is insufficient in recognizing the larger political, economic, and social forces that are at play. Hence, although the term resilience is commonly used in climate change adaptation literature and language, it is crucial not solely to rely on resilience as a primary adaptation mechanism. It is equally important not to assume inherent resilience in Indigenous peoples based on already experienced hardships.

Instead, critically examining the broader systemic factors driving communities to adapt to the climate crisis is imperative. This shift from viewing Indigenous peoples as passive victims to acknowledging their agency underscores the need to rethink resilience paradigms and centre Indigenous knowledges in climate change adaptation.

This section identified that Indigenous knowledges, specifically focusing on Métis knowledges, highlights that ways of knowing are embedded in cultural, linguistic, historical, and environmental contexts. Métis people and communities possess valuable skills and knowledge to understand, document, respond to, and cope with the impacts of climate change, reinforcing the importance of integrating their perspectives into larger environmental discussions. Métis knowledges are already extremely underrepresented, and even more underrepresented in climate change adaptation discourses. This thesis endeavors to bridge this gap and contribute to a more inclusive and comprehensive understanding of Métis knowledges in the context of climate change adaptation.

2.3 Climate Change Adaptation Policies and Discourses

This section describes the shift from focusing on mitigation to adaptation, especially regarding Indigenous communities, while highlighting climate change adaptation discourses from global, national, Indigenous, and specifically, Métis contexts. It is essential to understand how Indigenous knowledges have been brought into these discourses and what gaps persist.

2.3.1 A Dichotomous Discourse: From Mitigation to Adaptation

To understand how global and national climate change discourses have included Indigenous knowledges for climate change adaptation, it is imperative first to discuss the dichotomous discourse of mitigation and adaptation. In climate change research and policy, there is usually a distinction that is made between mitigation and adaptation, where mitigation is focused on

reducing greenhouse gas (GHG) emissions causing human-induced climate change, whereas adaptation is focused on adjusting to the effects of climate change on social and natural systems (Huitema et al., 2016).

The initial view of climate mitigation was focused on the pollution problem of climate change, focusing on reducing GHG emissions (Burton et al., 2007). The "traditional approach" to addressing climate change over the last few decades has prioritized mitigation whereas adaptation was more of an afterthought due to misunderstandings of the definition of adaptation, along with the confusion around who is responsible for implementing adaptation efforts (Bednar et al., 2018). In the early 2000s, despite the increasing focus on mitigation on the global stage, there was the realization that even if the measures that were agreed upon in the Kyoto protocol do drastically cut emissions, there will still be the need to adapt as it takes decades for temperatures to start dropping (Pittock & Jones, 2000). However, although adaptation efforts are necessary and inevitable, focusing on adapting to climate change impacts should not diminish the urgent need for climate change mitigation (Huitema et al., 2016). Hence, focusing on adaptation does not mean that focus should be shifted away from mitigation, but rather, both should be used in a concerted effort.

Furthermore, adaptation actions have increasingly been divided into "soft" and "hard" actions to differentiate between different types of adaptation strategies. "Hard" adaptation measures refer to strategies that involve intensive technology, artificial human-built infrastructure, and are generally capital-intensive (De Grandpré et al., 2022; Sovacool, 2011). On the other hand, "soft" adaptation practices tend to be more community-based and focuses on natural infrastructure and natural capital, such as building preparedness plans, looking at land-use planning, and the inclusion of Indigenous knowledges (De Grandpré et al., 2022; Sovacool,

2011). However, I want to caution against using the term “soft” adaptation, especially when referring to Indigenous knowledges as “soft” adaptation, as using this term can possibly undermine the importance and effectiveness of these knowledge systems for climate change adaptation in comparison to “hard,” typically more Westernized approaches. Categorizing adaptation actions as either “soft” or “hard” can also oversimplify the complexity of the interconnectedness of social, environmental, political, and economic aspects of adaptation actions. Hence, caution is also warranted to further dichotomizing adaptation actions into “soft” and “hard” adaptation.

2.3.2 Actors in Recognizing the Importance of Indigenous Knowledges for Climate Adaptation

Although Indigenous peoples’ knowledges are increasingly recognized for their importance towards adapting to climate change, these knowledges have been dismissed, ignored, or posited as being solely folklore due to their qualitative nature (Vinyetta & Lynn, 2013). This shift in recognizing the importance of Indigenous knowledges in global and national discourses can be attributed to various actors. However, it is key to acknowledge that Indigenous peoples have been at the forefront of advocating for the recognition of their cultures, traditions, knowledges, languages, rather than viewing this recognition as being solely brought forth by settler-colonial institutions.

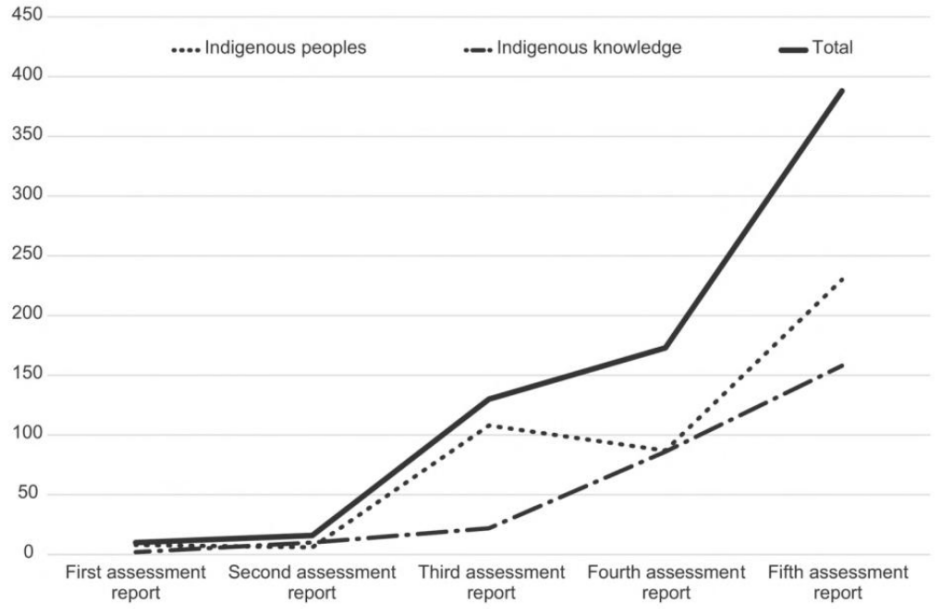
In Canada and around the world, the adoption of UNDRIP has played a crucial role in recognizing Indigenous knowledges. More specifically, article 31 states that “Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge, and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional

games and visual and performing arts" (United Nations General Assembly, 2007, p. 22-23). UNDRIP is also significant in recognizing Indigenous knowledges as the declaration recognizes the right to self-determination, and Indigenous knowledges are inextricably linked to Indigenous communities' right to self-determination (Brewer II & Warner, 2015). Thus, the increasing interest in Indigenous knowledges has in part been spurred by international conferences and declarations, such as UNDRIP (McGregor, 2021).

The Intergovernmental Panel on Climate Change (IPCC) has also played a role in bringing forth Indigenous knowledges into the climate adaptation discourse (see Figure 6). However, it is essential to recognize that the IPCC has historically ignored the importance of these knowledges (Alexander et al., 2011). Since the IPCC is subject to public and scientific scrutiny, the IPCC has relied primarily on Western science that comes from peer-reviewed scientific studies, which has often excluded Indigenous knowledges (Alexander et al., 2011). The same can be said for the Conference of Parties (COP), as at COP 16 in Cancún, there was a discursive shift in terms of what kinds of knowledges are deemed as valuable, as stated in Decision 1 paragraph 12 that "enhanced action on adaptation should be […] guided by the best available science and, as appropriate, traditional and indigenous knowledge […]" (Ford et al., 2016, p. 439). Hence, the IPCC and other global organizations, especially the United Nations Framework Convention on Climate Change (UNFCCC), have been crucial in increasing the recognition of viewing Indigenous knowledges as a significant facet of climate change adaptation at the global level, and consequently at the national level in Canada.

Figure 6

Increasing references to Indigenous peoples and knowledge in IPCC assessment reports.



Note. This is from the first report released in 1990 to the fifth report released in 2014. From Nakashima, D., Rubis, J. T., & Krupnik, I. (2018). Indigenous Knowledge for Climate Change Assessment and Adaptation: Introduction. In *Indigenous Knowledge for Climate Change Assessment and Adaptation*. Cambridge University Press.

In Canada, Indigenization, Decolonization, and Reconciliation are Indigenous-led movements that also play a significant role in setting the stage for increased public recognition of the importance of Indigenous knowledges. Although these three terms are often used interchangeably, they point to separate yet interrelated processes (Mason et al., 2018). Decolonization has played a crucial role in bringing forth the importance of Indigenous knowledges as decolonization focuses on revitalizing and valuing IKs and deconstructing colonial ideologies that privilege Western knowledge (Mason et al., 2018). Indigenization focuses on naturalizing Indigenous knowledges while not merging Indigenous and Western knowledges, but by viewing them as separate entities that can be weaved together (Mason et al., 2018). Finally, Reconciliation is focused on addressing past wrongs done to Indigenous peoples

to ameliorate the relationship between Indigenous peoples and non-Indigenous peoples alike (Mason et al., 2018). These three terms represent current movements in Canada that are focused on reconciling past wrongdoings towards Indigenous peoples, including the dismissal and erasure of Indigenous knowledges. In Canada, key movements initiated by Indigenous peoples have exerted pressure on current systems and governments, prompting them to understand the value and importance of Indigenous knowledges.

2.3.3 Adaptation Policy in Canada

Over the last few decades, Canada has seen the establishment of various policies that focus solely on adaptation or include aspects of adaptation. Many of these policies responded to the global adaptation discourses, many of which stem from the UNFCCC, the IPCC, and UNDRIP. The following is not an exhaustive list of adaptation policies in Canada, but rather, examples that help describe the adaptation discourse in Canada while also setting the stage for the inclusion of Indigenous knowledges in these policies.

Climate Change Action Fund (1998-2003). The Climate Change Action Fund (CCAF) is the first significant policy to touch on climate change adaptation. It was enacted in the 1998 Federal Budget under Prime Minister Jean Chrétien and allocated $150 million over three years. It was renewed for another three years in 2000 (Government of Canada, 2004). The CCAF funded 75 projects, of which many were related to assessing vulnerability and adaptation mechanisms in rural and Arctic communities (Larsson, 2003). The CCAF focused mostly on mitigation, with four of the five components and 90% of the budget focused on mitigating GHG emissions (Henstra, 2017). This focus on mitigation is consistent with the global discourse of the realization of the urgency to mitigate GHG emissions, initiated by the Kyoto Protocol. As Canada formally signed the Kyoto Protocol in 1998, the CCAF was a direct response to Canada's

commitment to reducing GHG emissions. Although most of the focus was on mitigation, there was a small section that focused on adaptation, as the document acknowledged the need to "develop strategies to help Canadians in various sectors adapt to a changing climate" (Natural Resources Canada, 2000, p. 15.). However, also consistent with the global adaptation discourse of this time, adaptation efforts found in the CCAF were mostly short-term and were primarily tasked with assessing Canada's vulnerability to climate change and Canada's capacity to adapt to climate change (Henstra, 2017).

Climate Change Impacts and Adaptation Program (2001-2007). The Climate Change Impacts and Adaptation Program (CCIAP) was enacted at a time when adaptation became established as a distinct policy area globally and in Canada, and adaptation was gaining increasing interest (Henstra, 2017). This adaptation program likely came about from a pivotal juncture where there was growing discourse and divergent opinions on whether we would be able to escape climate change. The CCIAP was focused on expanding adaptation research and improving collaboration between researchers and stakeholders (Henstra, 2017). A total of 135 projects were funded through the CCIAP, with a focus on including Indigenous communities' perspectives in climate change adaptation research (Henstra, 2017). For example, the Assembly of First Nations (AFN) received funds from the CCIAP to assess the barriers to adapting to climate change in First Nations communities (Assembly of First Nations, 2008). This project identified several key adaptation strategies, including education and awareness for community leaders, water technicians, and community members, along with the development of water protection plans and water monitoring programs (Assembly of First Nations, 2008). Hence, although the inclusion of Indigenous knowledges in the CCAF was not a major focus area, the funding of projects such as the one spearheaded by the AFN demonstrates the beginning of

considering Indigenous peoples, communities, and knowledges in climate change adaptation policies in Canada.

The Clean Air Agenda (2007-2011). In 2006, Prime Minister Stephen Harper and the Conservatives took office (Henstra, 2017). The Harper Government was known for its strong stance against the Kyoto Protocol and for cutting funding for climate programs (De Souza, 2014). Harper's first budget had accounted for an $8 billion surplus, yet the government had cut funding for climate change programs by 40% (Sanger and Saul, 2015). However, the Harper Government enacted the Clean Air Agenda in 2007, which was a $2.6 billion initiative to address air pollution and climate change (Henstra, 2017). The initiative was not necessarily focused on reducing emissions solely in Canada but was rather focused on intensity targets, which benefitted fast-expanding industries such as the tar sands (Sanger & Saul, 2015). The Clean Air Agenda, nonetheless, only had six of the 45 programs aimed at adaptation, with a budget of $86 million (Henstra, 2017). By the time Harper and the Conservatives took office, adaptation had already been entrenched at the federal level, so it was more convenient to keep funding adaptation policy (although adaptation was a smaller focus) rather than eliminate it (Henstra, 2017). Thus, although the government at the time is remembered for its anti-climate stance, it is significant that adaptation funding and action were continued, although it was limited.

The Adaptation Platform (2011 – 2017). Another significant adaptation policy was the Adaptation Platform, which was a result of the federal government renewing funding for adaptation programs, which committed $150 million over five years and across nine different departments (Henstra, 2017). The Adaptation Platform consisted of two main components including a plenary body and working groups (Natural Resources Canada, 2015). The plenary consisted of senior-level representatives who were tasked with identifying adaptation priorities in

Canada, and the working groups were focused on shared adaptation priorities (Natural Resources Canada, 2015). By this time, adaptation as a policy framework had become more refined in comparison to previous adaptation policies in Canada (Henstra, 2017). This is consistent with the global discourses of climate change adaptation as seen in the discursive shift that occurred in COP 13 where adaptation and mitigation were seen as being equally important in climate change discourses. However, Indigenous knowledges were still scarcely mentioned in these policies, reflecting the broader discourse at the time, which tended to overlook Indigenous knowledges. However, this changed in the next federal climate change policy, the Pan-Canadian Framework.

The Pan-Canadian Framework (2016 - 2020). The *Pan-Canadian Framework* (PCF) was released in 2016 under the newly elected Liberal Government led by Justin Trudeau (Reed et al., 2021). The plan was spearheaded by the momentum gained after the 2015 Paris Agreement, which focused on reducing GHG emissions and acting on climate change (Reed et al., 2021). The framework was enacted to help Canada meet its Paris targets and was set forth by the Government of Canada and all provinces and territories, excluding Saskatchewan and Manitoba (Tasker, 2016). Saskatchewan opted out because of its opposition to carbon pricing, whereas Manitoba explained that they were withholding its support due to the premier at the time asking to receive more financial support for healthcare (Cheadle, 2016). According to Robert MacNeil (2019), signing the PCF was "a critical turning point in Canada's response to climate change" (p. 36). The framework identifies four main interrelated pillars with subsequent working groups who developed these pillars, with one of these four pillars focused on climate change adaptation and resilience (Government of Canada, 2016). Moreover, in respect to these pillars, the framework states that "our governments will continue to recognize, respect, and safeguard the rights of Indigenous Peoples as we take actions under these pillars" (Government of Canada, 2016, p. 3).

This recognition can be attributed to the Paris Agreement's push towards recognizing and respecting the rights of Indigenous Peoples (Government of Canada, 2016).

Moreover, throughout the document, there is also mention of "recognizing the importance of Traditional Knowledge in regard to understanding climate impacts and adaptation measures" (Government of Canada, 2016, p. 3). While this reflects a significant shift in understanding the significance of Indigenous knowledges for climate change adaptation, it requires consideration of whether this recognition translated into tangible actions. The term "Indigenous" is used 83 times throughout the framework, in comparison to the term "fossil fuels" which only appears seven times (Lee, 2016). There is even mention of free, prior, and informed consent (FPIC) in the framework (Government of Canada, 2016), which is the first time this is mentioned in any major climate change policy in Canada. However, although this shift in focusing on the inclusion of Indigenous peoples and knowledges is present in this framework, it is not immune to criticisms. Not only are there criticisms of the inclusion of Indigenous knowledges, but there are also other interconnected aspects of Indigenous knowledges that require critique.

One of the major criticisms from the PCF is that its mitigation measures are weak, especially with its leniency towards oil and gas industries, particularly obvious with the federal government announcing its approval of the Trans Mountain Pipeline days before the Prime Minister and provincial and territorial ministers signed the PCF (Lee, 2016). The PCF was especially criticized as the engagement with Indigenous peoples was mediocre (Reed et al., 2021). Specifically, the framework was criticized for its refusal to include Indigenous representatives in the four different working groups, which removed Indigenous peoples from the decision-making table and framed them as being a group to consult with (Reed et al., 2021). Reed et al. (2021) concluded that although there are many references to Indigenous peoples and their knowledges

throughout the PCF, their exclusion of Indigenous peoples at the decision table fails to uphold their right to self-determination, which is conflicting with Reconciliation.

Furthermore, the framework does not address gender issues or considerations (Sellers, 2018). The ICA was also critical of the lack of gender considerations, especially the lack of recognition of the importance of Indigenous women's voices in the PCF (Indigenous Climate Action, 2021). Although the PCF is significant in eliciting a greater understanding of the importance of Indigenous knowledges than in any other previous climate change policy in Canada, the lack of gender considerations, especially that of Indigenous women, is a major limitation of this plan.

Ultimately, the PCF has primarily focused on addressing the symptoms rather than the causes of the climate crisis, as exemplified by its complacency with the oil and gas industry (Abson et al., 2017; Indigenous Climate Action, 2021; Temper et al., 2018; Reed et al., 2021). The ICA (2021) further argues in regard to the PCF that "…Indigenous Peoples are referred to as climate leaders and invited to participate in taking action on climate but only *within the limits* of an economic system created by others and imposed upon us which was built at the expense of our lives, lands, and cultures" (p. 47). One of Reed et al.'s interview participants also identified that "the framework and the narrative and the language is still very western… still us and the land as separate and not that we're actually a part of that system, that we're related to the land" (Reed et al., 2021, p. 7). Hence, it is essential to reflect on whether climate change adaptation policies led by settler-colonial governments can equitably bring Indigenous knowledges to the forefront of climate policies (Whyte, 2017).

Healthy Environment and Healthy Economy Plan (2020- present). The Healthy Environment and Healthy Economy Plan (HEHE) builds on the Pan-Canadian Framework through a $15 billion investment and 64 new measures (Indigenous Climate Action, 2021).

Although the plan is not a result of any significant global climate change discourses, the plan's strong focus on the economy stems from the impacts of the global COVID-19 pandemic (Government of Canada, 2020). The plan aims to "create over one million jobs, restoring employment to pre-pandemic levels – of which climate action and clean growth is a cornerstone" (Government of Canada, 2020, p. 8). In a press release for the HEHE, Trudeau compared the urgency of both the pandemic and climate change, stating that "there is no vaccine against a polluted planet. It's up to us to act because there is a real cost to pollution" (Tasker, 2020, para. 22). Thus, there is a clear focus on stimulating the struggling economy from the impacts of the COVID-19 pandemic through green growth.

The plan states that it will achieve a healthy environment and a healthy economy through five pillars, which focus on energy-efficient homes and buildings, increasing cleaner transportation and clean energy, carbon pricing, creating clean industries and jobs, and focusing on nature-based solutions (Government of Canada, 2020). The ICA identifies that the HEHE plan has a stronger emissions reduction than the PCF, in which the PCF target was set at a 30% reduction of GHG emissions below the 2005 levels by 2030 (Government of Canada, 2016), whereas the HEHE aims for net-zero emissions by 2050 (Indigenous Climate Action, 2021). If these GHG reduction measures from the HEHE are implemented, this would reduce emissions at least 85 million tonnes more than the goals laid out in the PCF, setting Canada at 32%-40% below the 2005 levels in 2030 (Government of Canada, 2020). The plan also puts a higher price on carbon than the PCF, which proposed increasing the price of carbon to $10 a year, so that the price of carbon emissions in 2022 would be $50/tonne (Government of Canada, 2016). On the other hand, the HEHE proposes increasing the price of carbon pollution to $15/tonne a year starting in 2023, rising to $170/tonne in 2030 (Government of Canada, 2020). Catherine Abreu,

the Executive Director of the Climate Action Network Canada, is also critical of the plan since the federal government is not keeping up with other developed countries in stopping the investment and expansion of fossil fuel investments (Meyer, 2020). Thus, although the emission reduction targets are more aggressive than the PCF, the government remains complacent in continuing investment in the fossil fuel industry.

However, in comparison to the PCF, the HEHE does not require the provinces and territories to cooperate (Indigenous Climate Action, 2021), thus, rather than being fraught with federalized objectives, the plan can be put in place even without approval from provinces and territories. This is significant as the PCF lacked consensus from two provinces, whereas this plan could have a stronger influence on all provinces and territories, especially those notorious for continuing their current path of environmental destruction and degradation, notably those whose economies are heavily supported by oil and gas.

Other criticisms are noteworthy regarding the HEHE, including that of gender considerations, failure to hold the oil and gas industries accountable, as well as having a surface-level understanding of the impacts of settler-colonialism on Indigenous knowledges. Having this surface-level approach is problematic as it risks not only neglecting Indigenous knowledges and ignoring cultural contexts, but it also perpetuates inequities and can hinder effective and equitable adaptation actions. Moreover, regarding gender considerations, as the PCF was lacking gender considerations, the HEHE then included an Annex that is titled *Gender-Based Analysis Plus* (GBA+) (Government of Canada, 2020). However, women are referenced only twice throughout the document (Government of Canada, 2020). Thus, it is fair to assume that both the surface-level understandings of Indigenous knowledges and the lack of gender considerations are mere gestures, both taking a step back in gender equity and Reconciliation.

Furthermore, similarly to the PCF, although this plan has more aggressive carbon emission reduction targets, it still fails to keep the oil and gas industries accountable as it remains committed to producing oil and gas to export to other countries (Indigenous Climate Action, 2021). Moreover, whereas the PCF was transparent in how the plan was developed, the HEHE does not provide any details or information on how it was developed (Indigenous Climate Action, 2021). The HEHE, similarly to the PCF, mentions Indigenous peoples many times throughout the document. However, the federal government does not take any responsibility for the legacy of colonialism and its contribution towards the climate crisis, thus continuing to disproportionately impact Indigenous peoples and their knowledges (Indigenous Climate Action, 2021). Thus, although the HEHE plan is noteworthy as it is much more ambitious with its targets compared to the PCF, the inclusion of Indigenous peoples' knowledges, and gender considerations are still surface level, with continued leniency towards the oil and gas industries. However, one important component of the plan is its commitment to developing Canada's first-ever National Adaptation Strategy developed in 2022.

National Adaptation Strategy (NAS) (2023 – present). Canada's National Adaptation Strategy (NAS) is the first-ever unified climate change adaptation policy in Canada (Government of Canada, 2023). The announcement of this Strategy was released a few weeks after the end of the COP 27 conference in 2022, where adaptation was a major focus. The Government of Canada released the final version for comment at the end of 2022, with the goal of ensuring that the voices and perspectives of provinces, territories, and Indigenous Peoples are heard before the final version is officially published (Government of Canada, 2022). The announcement of the final release of the National Adaptation Strategy happened on June 27, 2023, while wildfire blazes were ravaging parts of Canada (IISD, 2023). Ultimately, this $1.6 billion climate

adaptation plan "outlines a shared path to a more climate-resilient Canada" (Government of Canada, 2022, p. 6). The strategy is focused on bringing various entities together, such as governments, academia, Indigenous Peoples, the private sector, non-governmental organizations, citizens, youth, and residents to scale-up adaptation solutions for regions and communities across Canada (Government of Canada, 2022). The main focus areas of this plan include disaster resilience; health and wellbeing; infrastructure; economy and workers; and nature and biodiversity (Government of Canada, 2023).

Furthermore, in the release of the finalized National Adaptation Strategy, there is recognition of the role of Indigenous knowledges for adaptation planning, such as in the *Knowledge and Understanding* section of the Strategy, which identifies the importance of weaving local knowledge and Indigenous knowledges with scientific knowledge (Government of Canada, 2023). For example, one of the objectives in this section is that "Indigenous Knowledge Systems and science are fairly and sustainably invested in, and ethical and equitable engagement is upheld in adaptation knowledge co-production, in line with First Nations, Inuit, and Métis, research protocols and data sovereignty" (Government of Canada, 2023, p. 30). Thus, it will be interesting to see if the recognition of the importance of Indigenous Knowledges in the strategy will materialize.

Developing a National Adaptation Strategy for a federalized nation that is not only vast in geographical size, but also in climate change priorities, should be considered a "huge accomplishment" according to Anne Hammill, who is the Senior Director of Resilience, at the International Institute for Sustainable Development (IISD) (IISD, 2022). Hammill further states that "but on top of this, having one that places equity, inclusion, and environmental justice at its heart positions Canada as a leader in addressing the urgent needs of vulnerable people and

communities" (IISD, 2022, para. 2). The Insurance Bureau of Canada has also shown approval of the NAS, as Jason Clark, the national director of climate change advocacy at the IBC, stated that this Strategy is a "major step forward on climate adaptation" (Snape, 2022, para. 3). This is not surprising as many insurance companies and corporations, such as the IBC, have been pushing for quantifying the costs of climate change events as well as endorsing data collection for policy changes that support adaptation (Boyle et al., 2013). This is expected as adaptation is often considered to be a cost-effective and risk-averse choice (Feltmate & Thistlethwaite, 2011), where every dollar spent on adaptation measures can save up to $15 in costs (Williams, 2022). The focus on economy is also evident in the title of the strategy through the use of term "strong economy" (Government of Canada, 2023). The importance of the economy was also stated in Canada's HEHE plan, which says that the costs of inaction are significant, where insured losses totaled over $18 billion between 2010-2019 (Government of Canada, 2020). Thus, it is clear that acting on climate change adaptation is stimulated by climate change's impacts on the economy, as adaptation is seen as the most cost-effective option in the long run.

The main concerns about the strategy moving forward are centred around implementation. Although the IISD applauded the plan, they still indicate that there needs to be further work in ensuring that the policies from the NAS are implemented, stating that "we look forward to additional clarification on the governance framework to facilitate coordinated implementation of the NAS, the comprehensive framework for monitoring and evaluation of progress, and the strengthening of national assessments of our climate risks and adaptation progress" (IISD, 2022). The Canadian Climate Institute (CCI) similarly applauds the NAS as a significant and foremost step towards coordinated adaptation efforts, yet they also responded to the release of the NAS by recommending 11 ways to strengthen the strategy (Ness & Miller,

2022). These recommendations fall under four key elements, which include: 1) clear priorities and goals based on an understanding of the most significant climate change risks Canada faces; 2) concrete policy measures and actions to achieve those goals; 3) mechanisms for improved coordination of adaptation policy and action across federal government departments and between all orders of government; and 4) a framework for tracking progress, enhancing accountability and continually improving the Strategy and the actions that it guides (Ness & Miller, 2022, p. 4). The Canadian Climate Institute also argues that the federal government's commitment to consulting and engaging with Indigenous peoples is unclear, and they recommend that there needs to be greater clarity on implementing the strategy in accordance with UNDRIP (Ness & Miller, 2022).

In response to the final release of the NAS in June 2023, Ryan Ness from the CCI further identified three main next steps to turn the strategy into reality, including concrete action and funding; coordination within and across governments; and tracking, accountability, and continuous improvement (Ness, 2023). Moreover, there has also been criticism about the lack of funding for the plan (Owen, 2023). As this policy is relatively new, there are few articles focusing on any criticisms or acclamations of this plan, or whether Indigenous peoples were properly consulted at the decision-making table. Moreover, the outcome of whether the importance of Indigenous knowledges for adaptation is equitably brought forth remains uncertain.

2.3.4 Indigenous-Led Adaptation Programs

It is also vital to acknowledge Indigenous, grass-roots adaptation programs that address and reflect the diversity of Indigenous groups, their cultures, their knowledges, and their traditions. The NAS identifies climate change adaptation strategies, actions, or plans that are

developed and led by Indigenous groups, notably First Nations, Inuit, and Métis (Government of Canada, 2022). One example of First Nations-led adaptation actions includes the 2020 Assembly of First Nations National Climate Gathering. The gathering hosted sessions focused on "adaptation, nature-based solutions, and First Nations self-determination", which touched on various national and international adaptation efforts (AFN, 2020). The federal government has also created the *First Nations Adapt Program* in 2016 (which is ongoing) to provide funding for First Nation communities to respond to climate change impacts (Government of Canada, 2021). Some communities, such as Poplar River First Nation, conducted their own vulnerability assessments and adaptation programs through this program (Government of Canada, 2022). Poplar River First Nation undertook a two-year project to assess their vulnerability to climate change and develop adaptation strategies (Poplar River First Nation & North/South Consultants Inc., 2018). However, it is also critical to reflect on whether these types of programs contribute to "parachuting" consultants, possibly undermining the Indigenous-led nature of these projects.

The Inuit, who have already been particularly impacted by climate change, have also created some of their own adaptation plans and actions. For example, the Inuit Tapiriit Kanatami (ITK), the national representational organization protecting and advancing the rights and interests of Inuit in Canada, prepared a *National Inuit Climate Change Strategy* in 2019, in which a section of this plan focuses on Inuit adaptations to changing natural infrastructure (ITK, 2019). The NAS also identified SmartICE, which is "offers a suite of climate change adaptation tools that integrate Indigenous and local knowledge of ice with advanced data acquisition, remote monitoring and satellite mapping for ice travel safety" (SmartICE, n.d., para. 1). Thus, this is an example of an adaptation tool that was led by and for Inuit to help navigate the increasingly unreliable sea ice.

The Métis have also led their own adaptation plans and programs, such as the Métis National Council's *Métis Nation Climate Change and Health Vulnerability Assessment* in 2020, which although mostly focuses on health, touches on the varying capacities in adaptation for the Métis, such as analyzing dependency on weather patterns for livelihoods, food security, and well-being (MNC, 2020). The Manitoba Métis Federation has also created its own *Métis Community-Based Climate Monitoring Program* where Métis citizens conduct environmental monitoring and collect climate data (Manitoba Métis Federation, n.d.). However, there remains very little to no academic literature and grey literature on Métis-specific adaptation and adaptation programs.

These examples are not an extensive list of Indigenous-led climate change adaptation strategies, plans, or actions, but they provide an overview of a small sample of these diverse efforts addressing community-specific climate change adaptation challenges and strategies. Moreover, many Indigenous peoples in Canada and across the world have their own legal and intellectual traditions that influence their future of living well with their physical environment (McGregor et al., 2020). According to McGregor et al. (2020), "it is therefore simply not rational for Indigenous peoples to rely on these global, national, and regional economic and political frameworks for climate justice and a sustainable future" (p. 36). Thus, many Indigenous peoples are leading their own actions (with or without government funding), as many recognize the insufficiency of past and present government efforts to address climate change, mostly due to the governments' settler colonial context and functioning that has historically suppressed Indigenous peoples and their knowledges. Moreover, some communities and individuals may also already be adapting to climate change in ways that may go unrecognized or may not be considered "adaptation" in Western contexts.

Although the increase in both climate change adaptation policies and the inclusion of Indigenous knowledges have been significant in Canadian adaptation discourses, there have been various interconnected criticisms of different policies in Canada that touch on climate change adaptation and Indigenous knowledges. Most notably, the lack of gender considerations, the complacency towards the oil and gas industries, as well as assessing if settler-colonial-led policies are sufficient in addressing Indigenous rights and including Indigenous knowledges in climate change adaptation policies have been criticized. Moreover, these plans and policies have also raised concerns about whether government-led policies that are rooted in settler-colonial ways are sufficient to address climate change adaptation grounded in Indigenous knowledges. Hence, this has recently shifted towards Indigenous-led and community-specific adaptation efforts, actions, and plans. As climate change continues to have severe impacts across the world, it is of utmost importance that Indigenous knowledges are understood and equitably brought forth in climate change adaptation policies. Indigenous peoples already feel the impacts of climate change, and their knowledges, which are rooted in intergenerational experiences and connections with their physical environment, are critical to adapting to this crisis. Métis knowledges continue to be extremely underrepresented in climate change adaptation discourses, and it is crucial that Métis knowledges are recognized while avoiding pan-Indigenization.

Conclusion

There is no doubt that climate change is already having negative impacts in Manitoba, and Indigenous peoples are already, and will continue to be, disproportionately impacted by climate change. Various land-use changes and policies such as the Dominion Lands Act and the Drainage Act in Manitoba have not only altered the land with major focuses on agriculture, but it has also altered the socio-economic landscape of the province. These actions and policies have

unfortunately led to further dispossessing the Métis of their land and consequently, their knowledge, culture, language, and traditions. Special focus is placed on the Rat River Métis and how Mennonite immigration heavily pushed by the government has taken away Métis land titles in the area. This historical context is crucial for understanding the impact of land-use changes on Métis knowledge and land-use. Understanding this history is essential for informing future endeavors in harnessing Métis knowledge for climate change adaptation.

Indigenous peoples and their knowledges have been identified as crucial components in climate change adaptation – a stark shift from previously viewing Indigenous peoples as passive victims to this crisis. Unfortunately, Métis knowledges continue to be extremely underrepresented in general, especially in climate change discourses. If they are mentioned, Métis knowledges have, and continue, to be homogenized and pan-Indigenized, which is problematic as this does not consider the unique culture, history, language, and land-base that informs Métis knowledges. This overlooks the distinct cultural, historical, linguistic, and land-based foundations that shape Métis knowledges, posing a significant problem in understanding and leveraging its unique contributions.

Finally, this chapter analyzed various climate change adaptation policies in Canada, first understanding the shift from looking solely at mitigation to considering adaptation. Global climate change adaptation discourses influence many adaptation policies in Canada. However, as mentioned, Indigenous peoples around the world and in Canada have paved the way in understanding the importance of Indigenous knowledges in these discourses. Climate change adaptation policies in Canada have only explicitly started to state the importance of Indigenous knowledge in the recent decade; however, much of these actions so far have been superficial or insincere. There has been an increase in Indigenous-led adaptation actions in Canada which

respond to Nation-specific and community-specific strengths and needs. This sets the stage for looking at the strengths and challenges of Métis-specific climate change adaptation in the Rat River area, hopefully serving as a model for other Métis-led adaptation efforts and actions in Manitoba and across the Métis homeland.

Chapter 3: Methodology

This chapter describes the Métis-specific Kitchen Table Methodology (*Lii Taab di Michif*) used in this research, which is based in *Wahkootowin*, our relational responsibility to all living things, and other Métis-specific research frameworks such as *Keeoukaywin*, the visiting methodology. This chapter explores the tenets of Indigenous research methodologies and community-based research methodologies along with an explanation of how these methodologies relate to my own theoretical framework. This chapter describes the Métis-specific ethical considerations employed in this research and the specifics of my research design, including the participants and recruitment, the kitchen table talk design, transcription and analysis, and reciprocity and knowledge dissemination. This chapter elucidates how the employed research methodology contributes to comprehending the research objectives outlined in Chapter 1. Additionally, it establishes the foundation for analyses in the subsequent chapters.

3.1 Indigenous Research Methodologies

"Typically, a consciousness of self and community exist simultaneously in Indigenous methodologies, and we must view the self as interwoven into a larger tapestry not as a singular thread beyond the weave." (Kovach, 2021, p. 137)

Recent efforts to decolonize academia have gained momentum, with a focus on Indigenous research methodologies (IRMs). Recent decades have seen an increase in Indigenous and decolonizing methodologies, especially prominent through the work of Cree scholar Dr. Margaret Kovach and Maori scholar Dr. Linda Tihuwau Smith (Martel, 2020). These pivotal works in Western spaces have paved the way for many scholars, Indigenous and non-Indigenous alike, to engage in ethical Indigenous-focused research. Indigenous methodologies are rooted in Indigenous knowledges and epistemologies (Kovach, 2021) and it is important to recognize that

Indigenous knowledges and Western knowledges are distinct. However, Western knowledges have defined and continue to define what is "legitimate knowledge" (Kermoal, 2016).

Furthermore, there is no doubt that there is a dark history of research *on* Indigenous peoples that have further misrepresented Indigenous individuals, communities, and nations (Ball and Janyst, 2008). Commonly quoted, Tuhiwai Smith (2012) stated that "the word itself, 'research,' is probably one of the dirtiest words in the Indigenous world's vocabulary. When mentioned in many indigenous contexts, it stirs up silence, it conjures up bad memories, it raises a smile that is knowing and distressful" (p. 1). There have also been other statements such as being "researched to death" (Goodman et al., 2018; Castellano, 2004) where Indigenous peoples have expressed research fatigue due to being the subject of research, often portrayed in negative ways. The term "parachute" has also been attributed to researchers who have conducted research in Indigenous communities for their own benefit with inadequate communication before, during, and even after the study (Castleden et al., 2012). Non-Indigenous researchers who had colonial interpretations of Indigenous peoples "have historically had the loudest voice in representing Indigenous experience" (Kovach, 2021, p. 239). Thus, research has been *on* Indigenous peoples instead of being done *by* or *for* Indigenous peoples (Dacich et al., 2019; de Leeuw et al., 2012; Delemos, 2006; Evans et al., 2009; Koster et al., 2012; Schnarch, 2004). This has led many Indigenous researchers to engage in "researching back" (Smith, 2012) or "researching ourselves back to life" (Castellano, 2004) to challenge these narratives that have perpetuated damaging colonial legacies. Indigenous methodologies are crucial to emphasize Indigenous voices and knowledges, and by bringing these forth, ethical research can aid in shifting the power balance from the colonizers to Indigenous peoples and communities (see L. Smith, 2012; Kovach, 2021).

However, it important to not take a homogenous, pan-Indigenous approach to Indigenous research methodologies. Each community has their own set of values, beliefs, traditions, cultures, and languages that must be respected and honoured. As Kovach (2021) states, "because so much of Indigenous ways of knowing is internal, personal, and experiential, creating one standardized framework for Indigenous research is impossible and inevitably soul sapping for Indigenous people" (p. 48). Despite commendable advancements that have taken place in academic institutions to conduct research with Indigenous communities more ethically, there exists a potential pitfall in the form of adopting a "one size fits all" approach to grouping Indigenous ontologies and epistemologies for research purposes. I acknowledge the significance and importance of Indigenous research methodologies and their role in righting past harms caused through academic and colonial institutions. However, caution is warranted to not use a homogenous and pan-Indigenous framework for research involving Indigenous communities. It is critical to respect and embrace the specificity of not only Indigenous nations, but of Indigenous communities as well. For example, different community members may have different values and knowledges, and respecting this diversity amongst individuals, communities, and nations is paramount.

3.2 Métis Specific Methodologies

When I first started my preliminary research for this thesis and I was thinking about what methodology I would use, I fell into the "soul sapping" trap of trying to figure out specifically how my research falls into IRMs. I encountered much difficulty in locating Métis-specific methodologies, as many IRMs appeared to be primarily First Nations-specific. I found it challenging to establish a clear connection between my research and IRMs. This lack of Métis-specific methodologies has also been expressed by other scholars (see Ferland, 2022; Fiola,

2021; Forsythe, 2022). While Métis-specific methodologies have been scarce, it is important to acknowledge the immense progress achieved by Michif scholars in addressing this gap and forging Métis-specific methodologies (see Fiola, 2021; Flaminio et al., 2020; Gaudet, 2018; Gaudry and Hancock, 2012; LaVallee et al., 2016; Poitras Pratt, 2011, 2019). My own Métis-specific and community-specific methodology for this thesis has been inspired by the work of the aforementioned Michif scholars, and I have immense gratitude for their work that allows other Michif scholars like myself to understand where and how our research "fits," making our already complex academic journey less isolating.

Furthermore, similar to how it is important to move away from pan-Indigenous research methodologies, it is also important to understand that there is not one specific Métis methodology (Lavalle et al., 2016) and the methodology used should be tailored to the Métis community/communities involved in the research. My research employs a visiting methodology actualized through *Lii Taab di Michif* (Métis Kitchen Table Methodology) and is based off *wahkootowin*, and *keeoukaywin*. Below I will describe what *wahkootowin* and *keeoukaywin* mean and how they have been utilized as Métis-specific frameworks/methodologies by other scholars, and finally how this formed the basis for my own Métis kitchen table methodology.

3.2.1 Wahkootowin

Wahkootowin, a Cree/Michif concept brought into Métis scholarship by Brenda Mcdougall and Maria Campbell, is the basis of Michif knowledge and describes our relational responsibility to all living things (Macdougall, 2010). *Wahkootowin* as a framework upholds researchers to "behave in culturally appropriate ways" (Macdougall, 2017, p. 8) Engaging *Wahkootowin* dictates my responsibility to be respectful to all my relations as "Wahkootowin is about a shared responsibility to kinship relations, both human and non human" (Macdougall,

2010, as cited in Gaudet, 2019, p. 48). Gaudry (2014) argues that Wahkotowin[3] "encourages individuals with specific skills to contribute to the well-being of their relations" (p. 91). When deciding what I wanted to do for my research, I knew that I wanted to "research back" in my community. I have a similar sentiment to what Poitras Pratt explains: "as an Indigenous scholar of Métis ancestry, I believe I bear a responsibility to 'give back' to my home community through the privilege of my education" (Poitras Pratt, 2020, p. 44). My community, including the people and the land, has given me so much. It is important for me to conduct myself positively and contribute to my community in a reciprocal manner. *Wahkootowin* serves as the foundational framework that guides my research as both a Michif insider to these communities and as a Western-trained academic. I strive to harmonize both perspectives, ensuring that my actions align ethically and reciprocally with these communities.

3.2.2 Keeoukaywin

Keeoukaywin (also spelled Kiyokewin) was originally theorized by Métis scholars Flaminio, Gaudet and Dorion (2020, p. 58) in their community research with Métis women, in which they describe it as "the process of meeting over tea, listening to and talking with one another and understanding each other's point of view." Flaminio et al. (2020) also further describe that Métis families lived the ways of *wahkotowin* through visiting or *kiyokewin*. Gaudet (2019) further coined keeoukaywin as a Métis "visiting way" methodology that centres Métis knowledges and ways of being and fosters relational accountability. Visiting is a vital part of Métis life (Flaminio et al., 2020) and our visiting ways were subjected to attempted erasure stemming from colonial policies (Gaudet, 2019). This is exemplified by the post-1885 era after

[3] There are different spelling variations of this word.

the Battle of Batoche where settler communities were becoming increasingly weary of Indigenous Nations and communities coming together and visiting one another, and thus, visiting avenues such as the sundance, for example, were restricted (Flaminio, 2013). Nonetheless, visiting in a Métis way can be complex – as "visiting, both with the land and with relatives, was also a method of survival, a dialogue of deliberation, or decision-making, of responsibility, of celebration, and of sharing and caring for our relatives" (Flaminio et al., 2020). Knowledge was exchanged by visiting with relatives and community (Flaminio et al., 2020). However, it is important to note that visiting in a Métis context incorporates much more than what would be "relationship-building" used in Western research methodologies (Gaudet, 2019).

3.2.3 Lii Taab di Michif: Métis Kitchen Table Methodology

The Métis Kitchen table theory, introduced into scholarship by Sherry Farrell Racette (2004), has since been a foundational concept that many Michif scholars have built upon. Mattes and Farrell Racette (2019) expanded on this theory through a series of talks where they have emphasized that the kitchen table is not solely a physical space, but a safe space that enables the sharing of Métis knowledges and ways of being. This theory underscores the importance of Métis-centred spaces, which Flaminio et al. (2020) argue are crucial for Métis to share their knowledge and stories with others. Growing up, it was not uncommon to have relatives show up unannounced to my home, and we usually sat around the kitchen table. The kitchen table in a Métis household was often the location where political scheming and revolutions were started, where loved ones were fed, where beadwork creations took place, and where our culture and knowledges were shared and upheld (Mattes, 2021). It is a space that has sustained our families, our language, our knowledges, our values, and our physical systems for many generations (Gaudet and Rancourt, 2024). It is also a space that has enabled us to practice our sovereignty

and honour the crucial role of women in our families and communities (Gaudet and Rancourt, 2024).

Sitting at a kitchen table while listening to my relatives speak and contributing to the conversations has been an extremely important part of my life. From my childhood to the present day, sitting around the kitchen table enabled me to learn a lot about my family, our history, and our culture. It is a place where both happy and sad moments were shared – fostering a sense of familial and communal connection. It is a place where my stomach was hurting, not only from eating so much of the food that kept showing up on the table, but from laughing at various jokes. The kitchen table is where my mother taught me how to bead during the pandemic, teaching me how to make a medicine pouch. At the heart of Métis existence, the kitchen table is not solely a physical space, but a space where threads of our stories, culture, traditions, and knowledges are woven together.

However, it is important that we do not look at these spaces, such as the kitchen table, through colonial and patriarchal lenses where the kitchen is solely a site of gendered home life (Mattes, 2021). Instead, Gaudet and Rancourt (2024) further discuss the importance of *Lii Taab di Faam Michif* (translated in English refers to Métis Women's Kitchen Table) in upholding the role of Michif matriarchy as knowledge stewards. They further describe the important role of the kitchen table by stating that "as infants, toddlers, and young children – regardless of gender – we spent the majority of our time in the company of our mothers, grandmothers, and aunties at or near Lii Taab di Faam Michif" (Gaudet and Rancourt, 2024, p. 173). However, kitchen table methodologies are not solely Métis – both feminist scholars and critical race theorists have utilized a kitchen table methodology to move away from patriarchal and colonial research methods to one that is more community centred (Smith, 1989). The kitchen is also used as a

space of “communities of care” for women to communicate, share food, and enjoy each other’s company in this space (hooks, 2009, p. 292). And, recently, the kitchen table has also been used as a reflexive research method which enables a safe space between the researcher(s) and the participant(s), which is often lacking in Western academic spaces (Kohl & McCutcheon, 2014).

Moreover, the Métis Kitchen Table Methodology can cover a lot of ground as stories may meander as there is no set list of questions or an agenda – but that is the beauty of this methodology, as participants can help shape the direction of the conversation. However, there may be a general topic that can be followed or an entry question, such as asking someone who their family is or where they are from. Kovach (2021) states that by having a less structured method, “the story breathes, and the narrator regulates” (p. 166). Stories are an integral part of Métis culture and the “moccasin telegraph,” which is described as transmitting information across families and distances, has been crucial to Métis ways of being (Richardson, 2004). Leclair (2004) further states that “the telling of a good Metis story creates and strengthens our connections to each other, to our collective remembering of who we are, and to our personal and communal aspirations for our children’s future” (p. 4). Colonial policies have attempted to erase storytelling and oral traditions in many Indigenous Nations including the Métis (Gaudet and Rancourt, 2024; Friskie, 2020). Utilizing the Métis Kitchen Table Methodology also serves to reclaim and reconnect to our stories while they can also “braid the past, present, and future generations together” (Kovach, 2021, p. 158). Stories are our relations.

The Métis Kitchen Table Methodology also ensures that there is no unequal power dynamics between the researcher and the participant(s) and if done in a respectful manner, everyone’s voices should be heard (Loyer & Loyer, 2019). And, most importantly, this methodology fosters knowledge transmission that is Métis-specific and familiar for many Michif folks. The Métis

Kitchen Table Methodology embodies both *Keeoukaywin* and *Wahkootowin* through visiting as a way to conduct research that is community-focused and community-engaged (Flaminio et al., 2020). For this thesis, my hope is to build upon the contributions of the aforementioned Michif scholars in recognizing that the kitchen table extends beyond a solely physical space. The next section will speak to the importance of community-based research.

3.3 Community-Based Research

Community-based research (CBR) has become a commonly used methodology/framework when engaging with Indigenous communities (de Leeuw et al., 2012; Victor et al., 2016; Kovach, 2021). CBR methodologies arose from the need to address power imbalances in qualitative research, especially with marginalized communities (Koster et al., 2012; Castleden et al., 2012). Various terms describe collaborating with a community for research endeavours, including community-based participatory research (CBPR), participatory research (PR), participatory action research (PAR), action research, and collaborative inquiry (Castleden et al., 2010) (see Etmanski et al., 2014 where they provide a list of 26 terminologies and traditions that are associated with community-based research). All these terms are under the umbrella of CBR because they encompass research that is participatory, inclusive, and equitable (Halseth et al., 2016). Although CBR is a Western-developed methodology, it shares many aspects of Indigenous methodologies, such as community participation, empowerment, leadership, and radical transformation (Cameron, 2018). Even though CBPR is a Western framework, the recognition of community needs and addressing colonial legacies serves as a method that aligns itself with Indigenous methodologies (Castleden et al., 2008; Koster et al., 2012).

The Métis Kitchen Table Methodology lends itself to the tenants of community-based research due to its inclusion of marginalized subjects in which the researcher is undertaking research *for* and *with* the communities in question. However, it is important to recognize that there are still differences between these methodologies, and it is important to view Métis-specific methodologies such as *Lii Taab di Michif* as its own methodology rather than trying to amalgamate it into Western research traditions. More specifically, this methodology can also be tailored to specific communities while always holding ourselves to the *ita a lawntour kawweekihk* (community/communities) involved in the research. This next section will outline the specific *Lii Taab di Michif* research design employed in this thesis based off the methodologies and frameworks described above.

3.4 Lii Taab di Michif Research Design

Lii Taab di Michif is an ideal methodology for me to use due to my unique positioning as an insider to the three research communities (Johnson, 2008). Before even knowing about the Métis Kitchen Table Methodology, I knew that I wanted to have some type of informal conversations with community members while having tea at a kitchen table – something that is very familiar to us. When I found this methodology while scanning literature on Métis-specific methodologies, I felt a reassuring sigh of relief knowing that my desire for a methodology that could align itself with my objectives while following cultural norms in these communities had already been identified by other Michif scholars. Thus, as visiting is common amongst Métis peoples, including in my own community, this methodology lends itself to informal conversations that do not feel very academic or Westernized – which could be very isolating and unrelatable for many community members participating in this research. The following section

describes how I established this methodology and tailored it to both the research communities and my research goals.

3.4.1 Ethical considerations.

Generally, research ethics protocols and Indigenous-specific axiology has grown significantly in the last decade (Kovach, 2021). The most commonly followed ethical frameworks for research with Indigenous peoples in Canada include Ownership, Control, Access, and Possession (OCAP) identified by Schnarch (2004), the Four Rs (Respect, Relevance, Reciprocity, Responsibility) of ethical research with Indigenous peoples (Kirkness and Barnhardt, 1991) as well as the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS2) and its inclusion of "Chapter Nine: Research Involving Aboriginal Peoples." The latter is the most current ethical guideline document in Canada (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council, 2018). However, Métis-specific ethical considerations are emerging, although they are still in their early stages. In 2010, the National Aboriginal Health Organization (NAHO) developed the Principles of Ethical Métis Research, which, although was created for health research, can be applied to all research concerning the Métis (Forsythe, 2022). They outline six principles that relate to this research, which I will describe below.

Principle 1: Reciprocal Relationships. Reciprocity is described by NAHO (2010) as a three-part process: 1) engaging the community by going among the people and becoming known, 2) earning acceptance through this process, and 3) getting community involvement once the trusting relationship is established (p.2). It further states that "by reciprocity, it was meant that there would be equal partnerships, which includes equal responsibility and equal benefits. Also, there was the explicit expectation that all involved would learn from each other" (NAHO, 2010,

p. 2). My responsibility to form reciprocal relationships has already been established as an insider to these three communities. Growing up in St-Pierre and having family that lives in St-Pierre, St-Malo, and Otterburne has facilitated the "becoming known" part. However, this holds extra accountability as making a mistake or doing something unethical would most likely be known by the whole community. As a community member, it is my utmost priority to ensure that my research is of benefit to the communities involved in the research and that I hold myself accountable to act ethically within the already established relationships. Every participant in this research either knew me personally or knew who I was because of my siblings, parents, or grandparents. It is common practice in these communities for people try to understand what family you are from, either by your last name, the way you look, or even your mannerisms. Further, using *Lii Taab di Michif* enables this research to form equal partnerships and knowledge exchange with the participant and myself. Many times, I would learn something knew from the participants, and many of the participants also identified that they had learned something new from our conversation.

Principle 2: "Respect For." Respect in this framework incorporates many different factors, including: "respect for both the individual and the collective; determine if there are any existing practices or protocols that should be respected; confidentiality must be respected as much as possible; and respect individual's autonomy and identity" (NAHO, 2010, p. 2-3).

When deciding to do this research, I as a researcher have committed to be respectful of the communities, the participants, and the knowledge shared with me. All existing practices and protocols were followed (see more information in the Participants and Recruitment section) and I have committed to respecting the research participants' identity, autonomy, and confidentiality. Open and clear communication was of utmost importance at the beginning of the Métis Kitchen

Table Methodology conversations and throughout the research project. Through recruitment materials and conversations, it was made clear to participants that they can contact me at any point in the research if they have any concerns or questions and all quotes were sent to the participants for their approval before submission.

Principle 3: Safe and Inclusive Environments. Safe and inclusive environments are described by NAHO (2010) as "research should, when appropriate, be inclusive to youth and elders, all genders and sexual identities, find the correct balance of individual and collective influence, and be inclusive of a variety of concepts of Aboriginality" (p. 3). I am committed to be respectful and inclusive of all genders and sexual identities, and of youth and Elders. It was also made clear to the participants that they can withdraw from the study at any point and remain anonymous if they wish to do so. No personal information was sought - the research only touched on the environmental knowledge and the historical knowledge of the participants. I identified that some participants may feel distressed or may get emotional when talking about the past due to colonial harms and loss of land; however, it was made clear that we did not have to talk about this if the participants did not want to, and it was made very clear that we could stop at any moment or redirect the conversation.

Principle 4: Diversity. The fourth principle explains that "the diversity of the Métis must be recognized by researchers and taken into account as appropriate" with further explanation that research may look differently for different Métis communities, that Métis participants have "a diverse set of ways of knowing, lenses, or worldviews," and finally to recognize that "there can be great diversity even within a single Métis community" (NAHO, 2010, p. 3). As an insider to these communities, I understand that the Métis participants may have diverse ways of knowing,

worldviews, or even different understandings and interpretations of their knowledges. Community members may have different values and beliefs – and this is fully respected.

Principle 5: What Research Should Be. This principle is focused on outcomes and incorporates six different components, including: "research should be relevant to those involved; research should be accurate; research should benefit all involved; researchers should be responsible and accountable; researchers should acknowledge contribution of participants and community partners; and research should protect Métis cultural knowledge" (NAHO, 2010, p. 4).

Many Métis community members are collectively wanting to learn more about the history and the environmental knowledge that was taken away from them due to past and ongoing colonial harms. The research will benefit the communities as it will help reclaim and empower the knowledge that was taken away from us. The MMF Locals and the research participants will also have an equal say in helping me determine how the findings can be shared in a way that will benefit the communities the most. The benefit of this research is ultimately for the participants and the three communities. This research goes beyond simply receiving a master's degree – this research is extremely personal and it is my way of helping build capacity and support reclaiming our history and our knowledges. This research lends itself to uphold Métis knowledges, and the words and knowledges shared with me are to be properly and accurately represented and treated with respect.

Principle 6: Métis Context. The final principle relates to the importance of understanding the Métis context of research, including understanding the relevant history, having insight into Métis methodologies and context, and moving away from making assumptions that Métis might have a Western or First Nations worldview while understanding the need to balance traditional and contemporary. As a Michif woman from the Rat River, I am very well aware of

the relevant history of both the Métis Nation and the Rat River Métis. This is not to say I am an expert in these histories – hence why I am broadening my knowledge through this research. Understanding the historical context, communal values, and Métis knowledges is a central component of this research.

In crafting my research design, these six principles emerged as essential threads, weaving knowledges that not only upholds the integrity of my study, but also ensures that I fulfill my responsibility to be a good community member.

Manitoba Métis Community Research Ethics Protocol (MMCREP). In addition to obtaining approval from the University of Winnipeg ethics board (see Appendix A), I have also received a letter of support from the Manitoba Métis Federation (MMF) by going through their ethical review, the Métis Community Research Ethics Protocol. This protocol was created in 2016 and implemented by the now non-operational Tripartite Self-Government Negotiation Department (Ferland, 2022). The goal of this protocol is to ensure that research conducted in Manitoba Métis communities is done in a way that protects Métis citizens' culture, identity, and knowledge. I submitted my completed MMCREP form on June 27, 2023, and participated in a follow up meeting where I met with MMF employees from both the Engagement and Consultation Department and the Energy, Infrastructure and Resource Management Department which occurred on July 20th via Zoom. They were very supportive of this project and provided a signed endorsement letter (see Appendix B). However, one concern was about the possibility of participants falsely claiming Métis identity, which can be described as "race shifting." The goal of this thesis is not to provide a full explanation of the complexities of Métis identity; however, some background information is necessary to understand this concern posed by the MMF and how I have addressed this issue.

There are multiple scholars addressing this race shifting identity issue, and I would argue it is probably one of the most well-researched Métis-specific topics. There are various reasons why someone may falsely claim to be Métis, however, much of it stems from the misconception that Métis equates solely to being mixed (Adese et al., 2017; Andersen, 2014; Gaudry, 2018; Gaudry & Andersen, 2016; Leroux, 2019; Martel, 2020; Teillet, 2019; Teillet & Teillet, 2016). Some of the confusion stems from the word "métis" which means mixed in French and is often used around the world in French-speaking countries to describe people of mixed ancestry (Leroux, 2019). However, equating the Métis Nation to race and blood quantum perpetuates colonial legacies that created social classifications to create the superiority of Euro-Canadians (Andersen, 2014). Blood quantum has been used to eradicate Indigenous peoples (Adese et al., 2017), and perpetuating this colonial legacy of viewing the Métis as "half-breeds" is still deeply embedded into Canadian society and Canadian colonial governments, policies, and law (Martel, 2020).

Many individuals mistakenly believe that being Métis solely means having mixed Indigenous and European ancestry. As a result, some people incorrectly assert being Métis based on this misconception. Many people will claim to be Métis by having a distant Indigenous relative born between 300 and 375 years ago (Leroux, 2019), which has also recently been intensified by the popularization of DNA tests. Adese et al. (2017) also describe that some settlers are claiming Métis identity to "indigenize" themselves to justify their presence on Indigenous lands. And, some Non-Status Indians may claim to be Métis due to losing Indian Status through the Indian Act (Gaudry, 2018). While individuals who inaccurately claim Métis identity may not intend harm, their actions contribute to perpetuating colonial legacies that inaccurately equate Métis with mixedness.

Ferland (2022) argues that people falsely claiming Métis identity is problematic because it "threatens Métis sovereignty and self-determination, and has serious ramifications for Métis-centred research" (p. 49). As academia can have a significant impact on society, public policies, decision-making, and educational development, it is extremely important that we address false claims to Métis identity and prevent perpetuating misconceptions that being Métis equates to being mixed. To ensure Métis sovereignty and self-determination, I am accountable for ensuring that the participants in this research are Red River Métis[4]. It is not my goal to "police" who is and who is not Métis in these communities, but rather, it is my goal to ensure that the participants can truthfully represent the Métis Nation. I use the Manitoba Métis Federation's definition of Métis from their constitution, which states that "'Métis' means a person who self-identifies as Métis, is of historic Métis Nation Ancestry, is distinct from other Aboriginal Peoples and is accepted by the Métis Nation" (Manitoba Métis Federation, 2022).

As is common practice in the research communities, each conversation started off by understanding any familial connections between the participant and myself (for closer relatives, this was not always the case as it is a given). This encourages the participant to self-identify and self-locate themselves. Many participants (and I) have enjoyed making connections and identifying common ancestors. The participants were also recommended by the executive members of the St-Pierre and St-Malo MMF Locals, and so they know who members of the Locals are and who are not. I also verified with the participants that they self-identify as Métis (all did) and I also asked if they are MMF citizens (all said they are MMF citizens except for one participant who stated that she is Métis and has had an MMF card but has not renewed her card

[4] The term "Red River Métis" is now more commonly used to differentiate between the historic Métis Nation (born out of the Red River Valley) and those who falsely claim to be Métis (most commonly seen in Québec and Eastern Canada).

since it expired). All participants self-identified as Métis, are of historic Métis Nation ancestry, and are accepted by the Métis Nation. I am confident that the participants in this research represent the Red River Métis and thus support our self-determination and sovereignty.

3.4.2 Participants and Recruitment

While I was doing my undergraduate degree and had started looking at traditional ecological knowledge and Indigenous knowledges, I started to notice a pattern in research – most participants sought for interviews on traditional knowledge were men and Elders. In their systematic review of traditional ecological knowledge in the circumpolar North, Hitomi & Loring (2018) found that there was an apparent bias towards male knowledge-holders who tend to be hunters and Elders, whereas women and youth were not represented to the same extent. They also found that the studies were mostly led by men, where they outnumbered women 2:1 (Hitomi & Loring, 2018). Although this study takes on a binary approach and may lack the inclusion of gender-diverse folks, it is still telling that male-identifying participants are most likely to be sought in traditional knowledge studies in the circumpolar North – an area which has seen significant traditional knowledge focused research in the last four decades (Hitomi & Loring, 2018). Sadowsky et al. (2022) also found that community-based research in Canada's Arctic tends to prioritize the voices of experienced hunters, trappers, and harvesters whereas youth are often excluded from participating in research. There is obviously a major gap in most traditional knowledge studies where male participants' knowledge seems to be prioritized, missing a large body of women's and gender diverse folks' knowledges. This is unfortunately common across many research projects, where male voices tend to be the dominant ones. Moreover, not including youth can also be a major gap in that the knowledge of a generation of

people that have most likely already experienced the impacts of climate change is not being represented.

For my research, I made it a goal to talk to more women and non-binary participants to move away from solely seeking knowledges from men. I also prioritized listening to participants from various age groups to include youth voices. For the purpose of this research, I followed what the MMF classifies as youth, which is from ages 15-29. Thirteen kitchen table conversations were conducted, and eight participants (61.5%) identified as female or two-spirit, and five participants (38%) identified as male. Two participants fall into the youth category, and three participants are Elders. I believe that the limited presence of Elders in this research is attributed in part to the loss of knowledges amongst older generations, where some Elders might still feel ashamed to discuss their culture and knowledges, or it may not have even been taught to them from their parents and grandparents who themselves felt ashamed to be Métis. And, the following generations are experiencing a reclamation of culture and knowledge, which I would argue is reflected in this research through the participant demographics.

The participants for this research were identified by executives from the St-Pierre and St-Malo MMF Locals and I. As the two Locals had provided letters of support for my research and we have been in conversation since the beginning, they were well aware of the topic that would be discussed. Thus, I said that I wanted to talk to community members that either had historical knowledge about the Rat River or who spend time on the land or grew up spending time on the land. And, I said that the participants could be of any age and gender identity. The inclusion of these broad parameters stems from my intention to gather a wide range of opinions, perspectives, and knowledges, ensuring diversity in the information collected. The Locals' executives helped me contact community members who had the aforementioned criteria. For example, one

participant owns a local butcher store where many people will bring their wild game to get processed, and he was also a trapper for many years. One youth (20 years old) has been active in reclaiming her knowledge through beading and hunting on her property in Otterburne. Another participant is the local librarian who has been doing extensive research on the history of the Métis of the Rat River, conducting various art projects that link our collective history, such as a communal painting project that shows the old river lot system on the Rat River. The diverse array of participants reflects the richness and depth of perspectives gathered with the broad parameters set, enhancing the holistic understanding of this research endeavor.

I then used the snowball method where participants also helped identify other community members to chat with. Their involvement extended beyond the kitchen table conversations, as they frequently recommended other individuals that I should talk to. Towards the end of the last conversations, the same names were mentioned repeatedly, assuring me that I had talked to those who are considered knowledgeable in the three communities. The next section will delve into the creation of this research-specific Métis Kitchen Table Methodology.

3.4.3 Rat River Michif Kitchen Table Conversations

After participants agreed to participate in the research, we decided together where to meet. Usually, we met at the participant's house, however, to make it easier for some participants, other locations were also used. For example, one conversation was conducted at the participant's office, one conversation also occurred over the phone, one at the local library, and one at the park, as the participant has children and it was easier for them to play around outside while we chatted. However, all the other conversations occurred around a kitchen table. Although I had anticipated that all conversations would be done around a kitchen table, it was also my priority to ensure that the research would not be a burden on the participants, as I know

that many of them are already busy. Although some conversations were not around a kitchen table, they still embodied the importance of visiting with one another based in *keeoukaywin*.

Before starting the conversation, I thanked the participants for their time and provided them with a gift to say thank you. Gaudet et al. (2020) speak of the importance of giving tobacco to participants as an act of reciprocity and the continuing of a relationship. However, giving tobacco is not commonplace in these communities, so I opted for gifts that are more specific and relevant to the three communities. Each participant received homemade Bannock (made by me), and then another gift specific to the participant such as beadwork creations/earrings, pickerel filets, or Métis-branded items such as coffee mugs. I tried to give Elders and those who are not able to go out fishing anymore the fish filets. One research participant, when discussing the significance of sharing one's harvest with family and community, stated that my act of gifting him with fish is "a Métis way of saying thanks or just looking out for each other."

Before talking about the university ethics form, there is an unwritten rule to respect the words of the participants through their trust instilled in me, much of it due to our familial or communal connections (LaVallee et al., 2016). However, the consent process was explained to the participants. At first, I opted for signed consent forms, following what seemed conventional for a university researcher and aligning with my perception of what was ethically appropriate. However, the formality of having participants sign the document seemed to create a noticeable shift in their demeaner and even the way they spoke as they might have felt that they needed to speak "formally" to adhere to Western academic conventions. So, after the first few participants, I had decided to give the participants the option to either give verbal consent or to sign the consent form (both were accepted in my university ethics application). After I gave the option for verbal or signed consent, all participants opted for verbal consent. Everything in the consent

form was explained to the participants and it was made clear that the participants could opt out of the study at any time. After receiving consent, I started recording the conversation on my phone and on another device as a backup. I also explained the focus of the research to the participants and told them that there was no set agenda for the conversation, but that I wanted to chat about the history of the Rat River Métis Settlement, the impacts of climate change, and how to move forward with the threat of climate change.

I had prepared some questions just in case the conversation fell flat or there was nothing to chat about (which I knew would not necessarily be a problem) but I also used them as anchoring questions if the participants would ask me if there was anything else I wanted to ask (see Appendix C). However, no paper copies of the questions were brought, but rather, I just kept them in the back of my mind. Each conversation was first started by asking the participants about their connection to community to try to make any familial connections if that was not established already. This usually would lead quite well into the topic that I wanted to chat about, which segued to the history of the Rat River Métis Settlement and their family's role in our collective history. The guiding questions served as conversation starters to keep the conversation as informal and open-ended as a way to allow the participants to speak about what they wanted to speak about. This approach also allowed space for storytelling.

Once it felt like the conversation was settling or after the one-and-a-half-hour mark (I wanted to be conscientious about the participants' time) I started to end the conversation. However, often after we stopped chatting at the table, we would chat at the door for a long time as I was leaving. I thanked the participants for their time and reiterated that they can contact me to withdraw from the research at any time and made sure they have my contact information. I assured them that some information from the conversation could be included in my thesis but that I will send them

their quotes for approval before officially submitting my thesis (i.e., I conducted member checking). I also talked to the participants about research outputs, asked them if they had any ideas, and told them that the same would apply to their quotes for any other research outputs.

Overall, the conversations went very well. We shared knowledge and stories with one another, and we also shared laughter, tears, hugs, and overall, a sense of community and pride in our Métis culture and knowledges. After some conversations I could not help but tear up on my way home from feeling so proud of who I am as a Michif woman from the Rat River – something I did not always have the privilege or strength in feeling. Many participants also thanked me for doing this work and encouraged me to stick through it in difficult times. I ran into one participant at an Indigenous art market in Winnipeg, and they had asked me how my thesis was coming along. I told them that it is not easy, and they replied with "great things aren't easy." In difficult times conducting this research and writing this thesis, those are the words I hold with me. I am extremely grateful for the participants of this research, and I look forward to maintaining conversations and connections with them.

3.4.4 Interviews with Municipal Representatives

Interviews were also conducted with representatives from the two municipalities located in the research area: the Rural Municipality (RM) of De Salaberry (which includes the towns of Otterburne and St-Malo), and the Village of St-Pierre-Jolys. The interviews were conversational and focused on discussing local political climate change adaptation planning and current or potential engagement with Métis citizens and their knowledges related to climate change and environmental projects in the Village of St-Pierre-Jolys/ RM of De Salaberry. I contacted both the Village of St-Pierre-Jolys and the RM of De Salaberry, where I was directed to the appropriate contacts actively involved in climate change adaptation planning. The identified

representatives were then contacted via emails in which information about the research was shared, along with asking if they would want to participate in an interview. The representatives from both RMs were very supportive and willing to participate. Two representatives from the Village of St-Pierre-Jolys participated, and one from the RM of De Salaberry participated. I sent the questions ahead of time for their review, and before starting the interviews, the consent form was explained and signed by the participants. The interviews were recorded for transcription purposes. The two interviews were both around 45 minutes long, and the transcripts were also sent to the representatives for their approval.

3.4.5 Transcription and Analysis

As I wanted the participants to speak how they normally would speak (switching back and forth between French and English with a few Michif words throughout the conversation), I told them they could speak in whichever language they wished. I also decided to transcribe the interviews verbatim to really capture the essence, the emotions, the expressions, and the stories from these conversations. Moreover, as most of the participants spoke in both languages, there is currently no transcription software that can transcribe multiple languages at once. All recordings were uploaded to Otter AI, software that enables speech-to-text transcription. As some English words and phrases were included, to save some time transcribing, Otter AI transcribes most of the English words, and so I had to go through afterwards to transcribe the rest of the conversation. And, for conversations that were mostly in French, the conversations were transcribed through NVivo Transcription as Otter AI does not process French transcripts.

During transcription, if anything stood out to me from the conversations, I would highlight or leave a note in Otter AI or NVivo. I used qualitative data analysis through an open coding method by assigning different coloured codes to passages to identify commonalities and

major themes throughout the different transcripts. Open coding was most suitable for this coding process as it generates a "participant-generated 'theory' from the data" (Blair, 2015, p. 17). Historically in academia researchers were expected to be "removed" from the research and that researchers must be objective; however, as an insider to the research, it is truly impossible to detach myself and my own knowledges from the research. Hence, that is why I did open coding to try to capture the essence and themes of the conversations while also allowing my voice and perspectives as a Michif woman from this area to be included. Furthermore, I coded the conversations into Word documents rather than through the transcription software as OtterAI does not allow highlighting in multiple colours. It was also more convenient to have all the documents as Word files in one folder for quick access to go back and forth between transcripts.

I like Kovach's (2021) metaphor of a jigsaw puzzle to arrive at findings in thematic analysis. Kovach (2021) states that "as the researcher interprets how themes fit together, using both a systematic and organic thought process, the puzzle takes form, and a cohesive picture comes into view" (p. 228). It is important to understand that interpreting these stories is impacted by my personal ways of knowing. I approach the analysis of the transcripts with respect and care, and carry with me what Kovach (2021) says, in which "it is critical that researchers carry out analysis with a critically reflexive consciousness that has the community context in mind, that allows for the personal and particular of the experiential, that has room for abductive knowledges, and that is committed to a search for knowledge that will serve" (p. 205).

Through member-checking to provide validity and allowing the participants to accept, change, or remove anything from the quotes, the participants were offered to receive a copy of their transcript and/or the recording of the conversation if they wanted to have it (McKim, 2023). If they wanted to have the transcript, I would provide them with a copy of the transcript that had

no highlights or comments. I think this is important to preserve knowledges within families, as possibly future generations could possibly listen to the recordings and/or read the transcripts.

3.4.6 Reciprocity and Knowledge Dissemination

As a way to practice reciprocity, it was a goal of mine to return the knowledges from this research to the research communities in a digestible and non-Western approach (Oosman, 2012). Many community members and family members have expressed interest in reading my completed thesis. However, I empathize with the challenge of expecting them to navigate through a lengthy academic paper. While sharing research findings through a written report is conventional in academia, Indigenous methodologies prioritize both written and oral dissemination of findings (Kovach, 2021). Moreover, knowledge mobilization and dissemination are a major tenant of CBR, and involving community in the design is crucial to move away from unethical and extractive research (Castleden et al., 2012).

As previously mentioned, I had asked for the participants' feedback on how to share my research with the community and I have also been in touch with the two MMF Locals throughout the research to see what form of knowledge sharing would be most suitable for the respective communities. However, my commitment extends beyond a one-time knowledge-sharing project; it is a lifelong commitment to sharing the knowledge I have gained from this research with these communities. For example, outside of academia, I am already involved as a board member for the Musée St-Pierre Jolys, where my commitment to joining this non-profit organization stems from wanting to enrich the museum with more Métis-specific history, as its current focus is predominantly on Catholicism, which has been voiced as a concern by some community members. Because this research is metaphorically and literally close to home for me, it is impossible to detach myself after completing the research outputs. I am committed to acting as a

good community member and engaging in reciprocity by continuously sharing this knowledge, enabling these communities to not only reclaim what has been lost or hidden, but to help foster a sense of pride in our identity as Michif people from the Rat River Settlement.

3.5 Chapter Summary

This chapter provided an overview and detailed discussion about Indigenous methodologies, Métis-specific methodologies, community-based research methodologies, and finally, my own research design. This research incorporates Métis-specific methodologies, including *Wahkootowin, Keeoukaywin,* and *Lii Taab di Michif* along with Métis-specific ethical considerations. The following chapter will present the results and common themes from the kitchen table conversations, along with my interpretation and conclusions from these findings.

Chapter 4: Results

This chapter is the part of my thesis that I was the most excited to dive into. I feel extremely grateful to re-live the experiences of visiting with Métis kin by listening to the recordings and immersing myself in their voices, expressions, concerns, pride, and their stories. This research has been extremely fulfilling and has made me feel a deeper connection and pride in my own identity and to our communities. I am overwhelmingly grateful to the research participants, for them opening their homes to me and for their time and passion in sharing their stories with me. Before starting the kitchen table conversations, many participants would humbly say that they do not know if they have a lot of knowledge to contribute. Yet the depth of knowledge and insights they shared with me was immense, enriching this chapter with important perspectives and stories. So, for that, kiitchi marsii (thank you very much) to the participants for making this thesis come to life and for playing a major role in reclaiming who we are as Métis from the Rat River.

As I was going through the transcripts and connecting the themes, I quickly came to realize how interconnected the various segments of the conversations were. To avoid the limitations of compartmentalization and to represent these interconnections, I will be using the Métis sash as a thematic framework. This approach, used by other Michif scholars to weave various Métis-specific research topics, is gaining momentum (see Burke and Robinson, 2019; Donald, 2009; Scott, 2021; Toorenburgh and Reid, 2023). The sash, an identifiable Métis emblem with its bright colours, remains an important part of Métis culture and identity, serving not only as an indicator of Métis heritage, but the different coloured threads can also distinguish between different Métis communities, regions, and families (Toorenburgh and Reid, 2023). In this chapter, the sash as a thematic framework symbolizes the weaving of diverse strands of

information from the kitchen table conversations, allowing for a holistic grasp of the broader context of these conversations. This chapter weaves the various threads of the kitchen table conversations, in which emerging themes include 1) reclaiming who we are as Métis, 2) reclaiming our knowledges and connection to the land, 3) climate change impacts and land-use changes, and finally, 4) adapting to climate change impacts and land-use changes. The final part of this chapter also discusses interviews conducted with the Rural Municipality of De Salaberry and the Village of St-Pierre-Jolys to understand local political climate change adaptation planning, and current or potential engagement with Métis citizens and their knowledges. This chapter will pave the way for Chapter 5, which discusses recommendations based on the insights shared here.[5]

Figure 7

The Métis Sash

Note. From Festival du Voyageur. (2019, September 17). *6 steps to tying your sash like a real voyageur*. https://heho.ca/en/6-steps-to-tying-your-sash-like-a-real-voyageur/

[5] *A Note on Quotations:* To capture the importance of language and the participants' voices, which often include a mix of French, English, and some Michif words, untranslated quotes are presented in Appendix F. Throughout this chapter, English translations are provided to ensure clarity for the readers. Translated quotations are accompanied by a corresponding participant number, which is cross-referenced in Appendix F. It is important to remember that the translated quotes throughout this chapter may not fully capture the nuances and richness of the knowledges present in untranslated quotes.

4.1 *Roozh*: Reclaiming Who We Are as Métis

Roozh (Red) in the Métis sash represents the blood shed by the Métis while fighting for our rights (Scott, 2021). This section represents the reclaiming of Métis history and identity, reflecting the struggles and sacrifices endured throughout Métis history, which has resulted in past and current shame and hiding who we are. This section examines Métis identity, the history of the Rat River area, and the importance of relationships in this area from the participants' perspectives and stories.

4.1.1 Métis Identity

Métis identity is a complex and multi-faceted aspect of Métis life and collective heritage, serving as a focal point across various research topics related to the Métis. In the stories of several participants, a common theme emerges regarding the revelation and rediscovery of their Métis identity. Through personal accounts, participants mentioned the complexities of their Métis identity, as many participants said that they grew up not knowing that they are Métis as it was hidden by their family members or not discussed by family members:

> **Darrell 1:** We didn't grow up with it [being Métis]. When I was about 15, my great grandma made an off comment to my grandmother and her sisters about oh, I am lucky that your father never treated me as a little Métis, and that's when they [my family] started uncovering and they learned that we're Métis.

> **Dolorès 1:** I learned that I was Métis only in my forties, because Memère Perreault didn't want to tell us that we were Métis. And then really the Métis kids at school were being abused, and then they were being beat up. So, I think in a sense, you know, my mother and then my grandmother wanted to protect us, but also, well, my grandmother never said she was Métis. Because after they hung Riel, the Métis hid. I know there are some who have continued to assert themselves as Métis, but there are not that many. My grandfather and then my grandmother did not say that they were Métis because, well they were called "half-breeds."

> **Candace 1:** My grandma, she was ashamed. Yeah, so she did not announce it.

Dolorès also mentioned that her grandmother hid cultural/spiritual activities, such as smudging, and she said that her grandmother did not necessarily explain to her grandchildren why she was doing this, in an attempt to hide her Métis identity and spirituality:

> **Dolorès 2:** But my grandmother, she did smudges anyway. But she didn't tell us that it was a smudge, she told us, "I'm making smoke." Then when I did a smudge for the first time, I smelled it and said, "Oh, memère Perreault!" Right then I realized she used to smudge. And we used to ask her, "well memère, why are you making smoke?" And she would say, well, because I'm sick. But she wasn't really physically sick, you know, because smudging is about releasing negative energies. So, for her, negative energies, she called it sick, but she didn't want to explain to us what a smudge was.

Emphasizing the importance of honouring the strength and perseverance that our ancestors had, while still recognizing the cultural suppression and discrimination they have faced, Nicole stated:

> **Nicole:** Our history is what makes us really unique. But it's really sad history too. But you have to find some of the positives in some of the history too, like, the perseverance that some of our ancestors had.

For some participants, pride in Métis identity emerged only recently, as the burden of shame associated with being Métis has unfortunately endured throughout generations. Some participants only found out in the last decades that they are Métis and have undergone their own reclamation journeys. Although the burden of shame and secrecy surrounding Métis identity persists today, the participants demonstrated resilience and pride in their identity by reclaiming who they are and uncovering their Métis family histories. This section highlights the struggles and sacrifices endured by past and present generations, while also emphasizing the importance of reclaiming and celebrating our identity.

4.1.2 History and Passing Down our Stories

Many participants identified that they are now learning more about general Métis history and the history of where they grew up in the Rat River area. Many participants stated that they were discovering more about the history of this place, linking historical connections to our physical environment. Furthermore, some participants also recognized the marginalization of Métis women's stories. This section recognizes that some of our intergenerational knowledge was not always passed down, which is why continuing to talk about and document our stories through this type of research is important. Future generations can hopefully grow up knowing more about our collective history in the Rat River area. Several participants talked about the loss of stories:

> **Darrell:** But to know that this is a road I went on every day and to know that there's so much cool history that's all around us that it's awesome that when things are preserved, our histories are preserved around this, because it's not always there for families to pass down, you know. Like my memère hid it, and so my memère doesn't have any stories about being Métis or anything like that, so that's where it dies.
>
> **Jesse:** Part of the story was lost or not talked about.

Nicole, Christine, and Dolorès further reflected on the overlooked knowledge, wisdom, history, and important familial and communal roles that Métis women had that were not passed down due to patriarchal and Western actions that have marginalized the voices of Métis women. The absence of recorded history and practices of intergenerational knowledge exchange left many stories of Métis women untold, who held important knowledge of our history, our traditions, our culture, and our livelihood:

> **Nicole:** And I wonder if, you know, going back to the patriarchy. If you look at the patriarchy, like, who would have had this knowledge? Well, their grandmothers would have had this knowledge. But that was never recorded, none

> of that was ever recorded. Our grandmothers had so much knowledge, they knew so much. And it's sad that some of that history is being lost, right?
>
> **Christine:** Yeah, I have a couple books at home about the Métis women. And back in the day, the European men wanted "half-breeds" because "they knew the best of both worlds, they could still be a pretty lady and bake." But when the men are gone, the women could hunt, it was the women who did all the skinning all the cutting, the women did all that hard work. And where did we lose that? And I don't want to judge the church, but I feel like it's almost the church where the men wear the pants and control. Yeah, that's where it was lost. But my parents taught me anything you can do; I can do better.
>
> **Dolorès 3:** You know, I do First Nations ceremonies. Sometimes people will tell me well, that's not the Métis tradition, but I do them because my grandmothers, they were forbidden to do it, so I want to bring them back. My grandmothers were First Nations women, you know. We have to respect them, it's part of who we are as Métis.

Furthermore, many participants had vast knowledge about the history of the Rat River Settlement and its surrounding area. Their knowledge of this area encompassed various aspects such as economic activities, important trading routes, and the wintering activities that happened on the Rat River. This historical importance was exemplified by Nicole who mentions the historical wintering activities:

> **Nicole 1:** Yeah, well, you know, St-Pierre, this area along the Rat River, it was the winterers, right. So, they had land here. They had their cabins they had little houses and homesteads. But as winterers, they weren't here all year. Some of them would lease it to other people, they would let other families live on their land. And that's when a lot of these things were disputed when the surveyors came.

Edith also recalled stories of "la drave" (log drive) on the Rat River that her husband's father would often talk about:

> **Edith 1:** La Drave. Well, pepère Desrosiers, you know in the parish book, they talked about la drave. They used to come down the river with the logs. But it was this river here [points to the Rat River]. Then they would come around the corner there on our land at the point, and that's where they would stop, and they would come off. Anyway, there was a sawmill, and they made planks, and it was sent to Dufrost to the train. I don't know how they did it with their horses and wagons and all that. They called it la drave.

Janelle also recalled how her grandfather played a role in building the railroad in Otterburne:

> **Janelle 1:** Right around the time that the Rat River Settlement started working its way out, my grandfather built the railroad. Like that's when they came in, he married a Carrière, that's like this whole area, the Métis family.

Jesse also talked about the role that trapping and selling furs had in the area, specifically regarding muskrats. Jesse explains the reason behind trapping muskrats:

> **Jesse:** The reason muskrat trapping kept going for so long is all the RCMP hats. That was strictly because of that, that's what kept them going. And muskrats, it's a great fur, it's super water repellent. It's very soft. Like beaver fur is a lot more coarse until those long hairs are plucked off and then they're soft but muskrat is really soft right off, just as is. They don't need to be doctored up.

Further, Edith also recalls the Crow Wing Trail, a historic trading route in the area:

> **Edith 2:** The Crow Wing Trail, it goes out in the field of [community member], I think that's where it exited. Then after that, you go to the grotto[6], all of that is at the grotto, because they followed the river to go to the Red River Settlement, which is what they called it, it was at Fort Garry.

The Rat River Settlement and surrounding areas are steeped in physical and cultural history that was reflected upon by many participants. Nicole tells stories of her childhood growing up on the Rat River and finding remnants of history:

> **Nicole:** And you know, what's really cool is when you find arrowheads along the river. We have some arrowheads at home. So, when they dug up the pipeline, or they installed a pipeline in the 1990s, just behind my dad's land… we would go take walks down there, and we found several arrowheads along where they had dug. So, it like solidifies that along the Rat River, we were here, our ancestors were here.

Dolorès also mentions that Louis Riel had stayed in St-Pierre while he was in exile, which has also been mentioned to me by a few other community members during my years growing up in St-Pierre:

> **Dolorès 4:** And then she tells a story, my grandmother, she didn't tell it to me, but she told one of my cousins, because they lived on the banks of the Rat River,

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[6] Catholic shrine built in a rock formation located in St-Malo.

> south of St-Pierre. Then [my grandmother] says that when [she] was 7 or 8, there was a man who came to our house, and he was there for 4 or 5 days. That man was Louis Riel. That's all she told, she didn't talk about what he looked like, Louis Riel, what he was talking about, you know. Small pieces of histories that we discover!

The above section highlights the ongoing efforts by individuals to reclaim and talk about our collective history, specifically in the Rat River area. While many participants expressed that they were uncovering more about Métis history as there are gaps and losses in familial narratives, there was also recognition of individual and community efforts to preserve and share these stories for future generations. The stories about the economic activities of the area, the trading routes, wintering practices, and family tales told by the participants offer insights into Métis life along the Rat River. These stories demonstrate the resourcefulness and enduring spirit of our Métis ancestors while acknowledging the role they played in shaping our present lives. While I acknowledge that this section on reclaiming our history falls short of painting a complete picture of the Rat River Métis, these stories, coupled with the introduction in this thesis on the history of this area and its people, are an important first step in reclaiming and uncovering our collective history. These stories serve as a reminder that despite efforts to erase Métis history, our contemporary communities remain connected to culture, land, and histories.

4.1.3 Relationships

As discussions unfolded around kitchen tables, it became clear that relationships and visiting with community members and family was, and continues to be, extremely important in the life of the Métis in the Rat River area. Several participants also identified the importance of relationships when it comes to harvesting, conveying that the

communal aspect of sharing and processing meat is more meaningful than the act of hunting itself. Darrell, Christine, Jesse, and Mike describe the importance community and family when it comes to harvesting, each offering a unique perspective that helps to understand that one of the most important aspects of harvesting is sharing it with those that we love:

> **Darrell:** My first deer was pretty much just shared with family and friends, because there's so many people who helped me get it.
>
> **Christine:** First thing you do, everyone calls each other that you got a deer, and everyone goes and looks at it. It's a little celebration.
>
> **Jesse:** …the best thing is harvesting for that purpose and having that in the back of your mind when it's cold and windy and you just want to go back to the cabin. But you think, oh I'll hang out a couple more hours on my stand, and you get to bring that beautiful meat back and share it with people.
>
> **Mike:** My grandfather had very severe diabetes. He was from a very poor family, and he used to enjoy wild meat. And at that time, I was six years old, and for him, rabbit meat was what he enjoyed in the fall and winter. So, I started going hunting for him to harvest some rabbits at that young age. So, for me it goes back [to] that early age.

Moreover, Darrell and Jesse also identified that the uniqueness of growing up in small communities where many of your family members also reside, while also continuing to forge new connections. This emphasizes the importance of knowing community members and making familial connections in these communities. This also happened during the kitchen table conversations, where the participants and I would often try to see if there are any linking familial connections, which is common practice in these communities to try and see if you are either related or if you might know each other's family. Making these connections helps shape a cohesive communal and collective identity where, as Jesse says, "everyone feels like family":

> **Darrell:** Otterburne is just like such a small community too that it's still continually beautiful to learn the connections that people have… it's funny and it's beautiful having those small-town connections.
>
> **Jesse 1:** Yeah, and then sometimes it's closer than you think, you have cousins that you're really close to, like every day, every week you see them, then you're like third or fourth cousins, and sometimes there's a part of your family where someone died young, so you never connected with them and it's your second cousin, right? Especially in a small town, everyone feels like family."

Participants emphasized how visiting with family and community members remain integral to their lives. The communal and familial aspect of harvesting demonstrates that harvesting is not only about bringing food home, but that it is also about sharing and celebrating the harvest with others. These conversations demonstrate the beauty of connections in these communities and how it remains a crucial component of Métis life in the Rat River area.

To summarize, this section on reclaiming who we are as Métis (Métis identity, History and Passing Down our Stories, and Relationships) helps us understand how Métis identity and history of the Rat River area has gone underground, much of this stemming from the dark period after 1870 when the Métis suffered from suppression and dispossession at the hands of the Canadian Government. As participants shared, there is still pride and strength in our identity and our history, and relationships and visiting remain a vital part of Métis life in the three research communities.

In conclusion, *roozh* represents the pain suffered by the Métis in having to hide and be ashamed of who we are, and it also symbolizes the reclaiming of Métis history and identity, while emphasizing the profound significance of relationships in this area. *Roozh* showcases that the spirit of the Métis from the Rat River persists, even in the face of hardships.

4.2 *Blawn*: Reclaiming our Knowledges and Connection to the Land

Blawn (white) in the Métis sash represents our connection to the earth and to the Creator. *Blawn* in this framework signifies the reclaiming of Métis knowledges and restoring and reinforcing our connection to the land. This section tells the stories of the participants' vast environmental knowledges that has been passed down through generations, while also revitalizing and reinforcing their strong connections to the land.

4.2.1 Environmental Knowledges

The conversations around the kitchen table revealed deep environmental knowledges that the participants hold, from general teachings of respecting the environment, to knowledges of harvesting plants and fruits, to knowledges of animals and their behaviours. The participants' wisdom and knowledges serve as a poignant reminder that despite efforts to erase our knowledges and break our connection to the land, these bonds and knowledges remain unbroken.

Teachings on Respecting the Environment. Much of the conversations around environmental knowledges also revealed that many participants hold strong teachings about respecting the environment. These teachings have either been passed down to them through generations or have been personally developed from spending time on the land and learning from others. For example, Dolorès, Jesse, and Darrell talk about the importance of patience while hunting deer:

> **Jesse:** It's good to take your time [hunting]. Like even if you go out a couple of years and you just gather some info.
>
> **Dolorès 5:** And I tell myself, the old people, they went hunting, they knew which deer had agreed to give his life to feed us. So, if they saw a deer, "oh no, not him." They waited. So that too we lost, this notion of communicating with the animals.

> **Darrell:** And you go and you do it, and you get lessons of, like a couple people said to go out with a camera first, go where you think you will shoot a deer, shoot them with the camera first, go and appreciate them. Go sit with the animals, go sit with them and appreciate them. And then you learn all the clicks and whistles so you're not excited with a gun. And so, I think it's a way to be calm and embrace nature, it's a totally new aspect. Even though you know that you're about to end a life, of a deer that is, that it's still a beautiful thing. And yeah, it's still something you can share with the land and appreciate and now you don't take meat for granted.

Jesse also talked about how he has personally set his own rules regarding harvesting and respecting the environment and animal populations:

> **Jesse 2:** We followed the seasons, we learned to respect the seasons, it's not always go go go take all you can, you gotta have rules within the rules. Like me, I am not one to go kill the cow moose because I know that their population is not good. So, you have to have your own limitations or your own personal rules within.

> **Jesse 3:** Lakes that can sustain it [fishing pressures] like Lake Winnipeg, like off number six highway where everyone goes walleye fishing, it can sustain it. You don't go to small lakes like St-Malo and then try to get your 50 pounds[7], small lakes they just can't sustain it. And you also got to put the big fish back in my eyes, I'm rambling on but these are all my personal rules and values on harvesting. It's never a number to hit, you're never trying to max out all the time, but yeah there are some times that you will go fishing 5-6 times and then you come back with nothing. Then there are times when you're in the right fishing hole at the right time of the year, and I think it's okay and it's nice to take your 30 pounds, give that to your parents, give that to members of your family or very close friends, like you did to me today[8], a really nice gift, that is a Métis way of saying thanks or just looking out for each other.

Dolorès also shared various teachings with me about respecting our physical environment. She shared the teaching of understanding that we as humans do not own the land, that we are all related and interconnected, and speaks about ceremonies that she participates in that reinforces these teachings:

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[7] This is referring to the Métis Laws of the Harvest, where it states that "a harvester can only have 50 pounds of filets per household in possession (including fish in freezer) at any one time." (MMF, 2013, p. 10)
[8] Here Jesse is referring to the pickerel fillets that I gifted him before starting the kitchen table conversation.

> **Dolorès 6:** We're all connected, the birds, the animals, the trees, and the plants. Like I don't say we have weeds, I say all the plants are there for a reason.
>
> **Dolorès 7:** In my spirit, the land does not belong to us. The land belongs to everyone, and everyone must take care of it.
>
> **Dolorès 8:** I have a fire ceremony because fire is important. I have an earth ceremony to help people connect with the earth. Then I have a ceremony at the river. For me, it's all part of the environment.

Knowledges of Plants. Several participants also discussed their knowledges about plants, including harvesting fruits and general knowledges about the usage of plants. Interestingly, only the women and two-spirit participants mentioned knowledges about plants, reinforcing the importance of plant knowledges that have been passed from our mothers and grandmothers for many generations (Hodgson-Smith and Kermoal, 2016). The following quotes emphasize that although Métis women and two-spirit peoples' knowledges have been marginalized and overlooked, many Métis women and two-spirit individuals still hold on to important knowledge about the plants in their physical environment:

> **Candace 2:** I pick stinging nettle every year on my property because it grows here. Yeah, I make pesto with it, and soup. It's super good for you, it's your first like, spring tonic, super high in antioxidants. Another thing that I do is I'll pick plantain here if I feel bad, or like mosquito bites or you know stuff like that and sometimes like medicinal plants.
>
> **Christine:** For me, come spring, I know my favorite flowers are the lady slippers. And the yellow lady slippers when I was younger were a bit more rare to see. But we noticed a pattern. Father's Day weekend is when they're blooming. And then a couple of weeks after is when you can find the pink ones.
>
> **Nicole:** Well, and I think if you were Métis too you were linked to the knowledge of the plants, right. You knew what grew in the river or by the river. And you knew which plants had medicinal purposes. The women knew what was edible, what wasn't. And some of that knowledge was passed down from generation to generation.
>
> **Candace:** And you know, being Métis, we know not to take the plant from the roots, we know to leave some there, we know to leave the mothers there. Land based learnings or teachings, that's what's important because some people can

> identify a simple plant and some people don't know that this is useful, or how to do things so that they don't damage more of the ecology.
>
> **Nicole 2:** Yes, you could chew the [plantain] leaf to kind of open it up, and then you put it on your sores. You put it on your bobos and stuff. Our grandmothers did that. I could show it to you, it's outside on the sidewalk, it's everywhere. But that's not a weed. It's a medicinal plant.

Knowledge of Animals and Their Behaviours. Participants also discussed their vast knowledges about animals, such as when it is better to harvest and eat specific species, such as Edith saying that it's best to harvest Jack (northern pike) during the spring when the water is cold, because in the summer, it tastes strong. Jesse, Déric, and Mike also shared their vast knowledge about deer behaviours, acquired from spending a lot of time on the land observing and hunting deer:

> **Jesse:** There's so much agriculture and they will pick up and move to a new area if they are feeling too much pressure. Like, they're too smart to just stand there and get decimated.
>
> **Déric:** They [mule deer] run really weird. And they do like a weird hop. And they have bigger ears, the tail is different. They don't seem much bigger. I can usually tell just by looking at the way that they run. They do like a weird, bouncing hop like a kangaroo. It's the weirdest thing ever.
>
> **Mike:** And deer typically don't like to be in a lot of water, they'll go in water, they will, they'll swim, they'll swim across a lake. But typically, they don't like to be in lot of water. They will go in water, if they're pushed, if they're hunted, if they have to cross to go somewhere or where there's better vegetation.
>
> **Jesse:** One thing I have noticed is also where they're hit, they'll react differently. If it's like a further back shot, they don't feel good, they go like rounded back, take off slowly. A lot of times when they're punched super good, it's in their lungs, so they go like 100 miles an hour[9].

4.2.2 Connection to Land and Activities on the Land

[9] Note that 100 miles an hour is used as an expression here to describe how fast the deer is running.

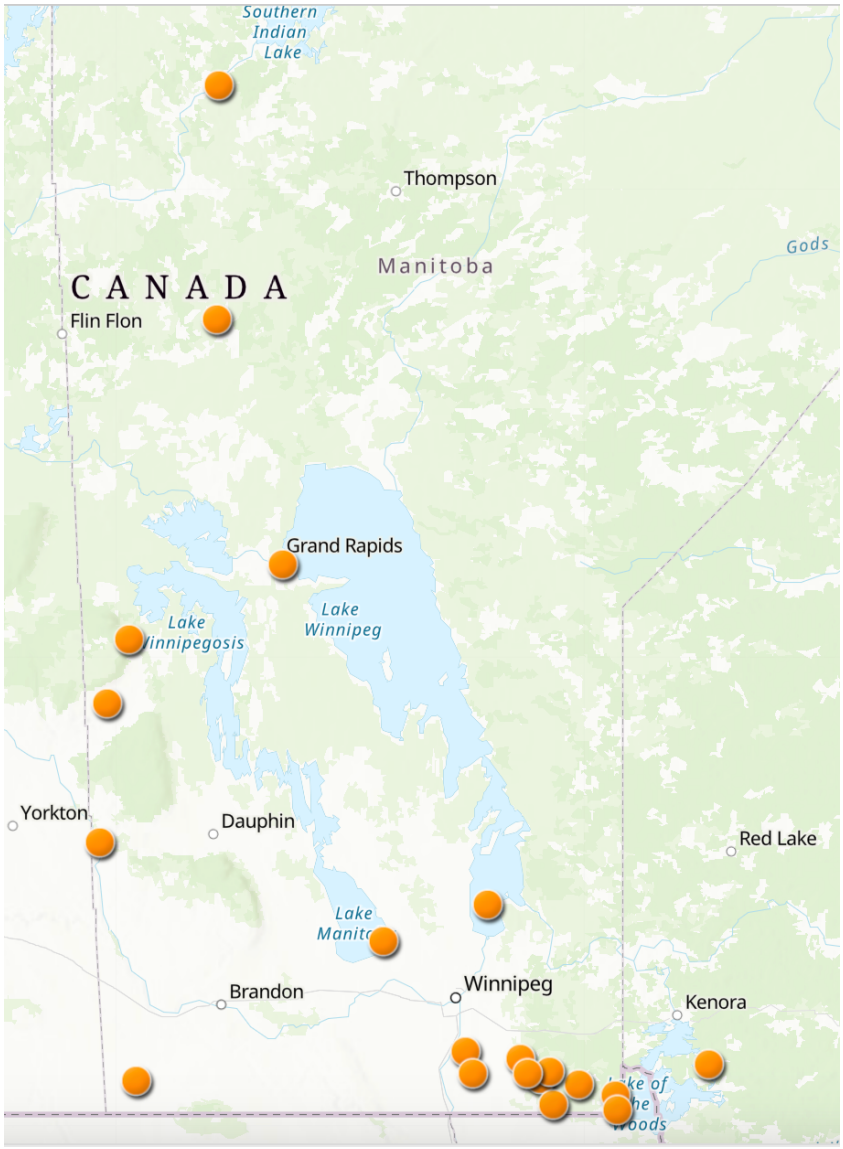
This next section highlights the connection that some participants have to their physical environment along with the activities they engage in. This section highlights the continued importance of Métis connections to the land and the activities on the land that remain a strong part of our culture and identity. It became clear throughout the conversations that participants' involvement in land-based activities, such as harvesting, is a major part of the participants' lives and a major way in which they express and affirm their Métis identity.

Hunting. Several participants talked about hunting and the various locations across the province where they hunt, from the southeastern part of the province to parts of northern Manitoba (see Figure 8). In order to protect the privacy of the participants' hunting areas, specific locations will not be disclosed, but general place names will be used to provide geographical context while maintaining confidentiality. Much like following the buffalos for the buffalo hunt, the Métis participants identified that they have harvested in various parts of the province for specific animal populations. For example, Edith recalls her father leaving for deer hunting trips in the eastern part of the province, highlighting that hunting has not been static in its location:

> **Edith 3:** But back in the day, there was hardly any [deer] here. So they went east, like Piney, that's where they would get them. This is where they went hunting, they would leave for a couple of days back in the day. I remember my father, he would pack a box, with food, I don't know what he needed, but anyway, then he went hunting.

Figure 8

Harvesting areas identified in conversations.



Note. The location on Lake of the Woods in Ontario is not an MMF recognized harvesting area, and the participant identified that they get an Ontario fishing license and follow regulations in this area). (Martel, 2024).

The majority of participants say that the animal they usually hunt is deer (Christine, Darrell, Jesse, Mike, Edith, Déric, Janelle), while there were still mentions of hunting other animals, such as prairie chicken (Christine, Candace, Déric) moose (Mike,

Jesse), and bear (Mike). Déric, Jesse, and Edith also discuss that fishing is a big part of their harvesting activities, and Déric even stated that he recently started net fishing:

> **Déric:** I usually go fishing on Lake Winnipeg. I used to go fishing hours at a time, and sometimes the full day and I would come home with no fish. A local guy from God's Lake taught me how to net and I decided to get all the stuff myself and start netting just to like be able to actually catch fish more reliably and make it worth the two-hour drive.

Jesse and Edith also mentioned trapping animals, however, it was noted that this practice has been used less frequently. The decline in trapping was primarily attributed to the diminishing profitability of selling furs. Jesse recounted his previous experience trapping, but mentioned that the combination of having to be out in the bush on a trap line for half the year coupled with the price of furs dropping prompted his decided to stop:

> **Jesse:** I did it [trapping] full out for like three years, like right out of high school. I was guiding fishing, and then I would trap throughout the winter. But fur prices are really not that good. So, it was like, I had to get a real job.

Jesse also added that trends and economic factors also play a role, such as when Canada Goose jackets were using coyote furs for the trims on their jackets, the prices of coyote furs "went through the roof." Edith also talked about her father trapping in the woods by their house when she was younger, but she also went on to say that many Métis do not trap anymore because the prices of furs fell dramatically. She explains that the animal rights movements have contributed to the problem:

> **Edith 4:** Well, it's because the price [of furs] has fallen. Because back in the day, when they started revolting against people who killed animals for furs, well that stopped the trappers from making money.

Hence, changing economic and societal factors were identified by Jesse and Edith as contributing to the decline of Métis people trapping. Both also mentioned that the Manitoba Métis Federation has tried to revitalize this practice through the Red River

Métis Fur Company.[10] Additionally, when it comes to harvesting and participants' connection to the land, many participants unfortunately discussed the judgement they may face from non-Métis hunters while hunting on Crown Land.[11] Many participants identified that they hunt on Crown Lands, however, they said that as they have an extended hunting window in comparison to non-Indigenous hunters, they are often subject to judgement from non-Indigenous hunters who may see Métis hunters harvesting outside the regular hunting season or may be using rifles when non-Métis hunters are only allowed to use archery weapons:

> **Déric:** For sure, yeah, you get looks and judgement all the time. I try not to advertise it for that reason. That's why it's been nice to hunt on [private location] on Métis-owned land.
>
> **Chrisine:** And then, for me to be able to hunt through our harvesting season, at home I feel more comfortable. I know we shouldn't feel judged. But because we have a longer season if we want, and to me as long as we're feeding our family and not abusing it, we'll hunt within the Métis season, but I feel like you go on that corner [in Woodridge] and you get looks.

On the other hand, some participants mentioned that they feel thankful that they either have their own private land for hunting or that they have permission to hunt on private land:

> **Mike:** So, in our case, 33 years ago, we bought a property in the southeastern part of the province, just for that purpose [hunting] alone. And at the same time, it gave me an opportunity to mentor a lot of younger generations starting to hunt.

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[10] The Red River Métis Fur Company was established by the MMF in 2021 "as a way to support Métis fur harvesters and traders in Manitoba by providing a market for their furs & hides and offering above market prices for their products" (Manitoba Métis Federation, 2023a).

[11] According to the Métis Laws of the Harvest, Métis harvesters "may harvest throughout the Metis Recognized Harvesting Area on all unoccupied provincial Crown Lands in Manitoba and occupied provincial Crown lands, including provincial parks, wherever First Nation Members are allowed to harvest; and on any privately owned lands in Manitoba on which that Metis Harvester has been given permission by the owner or occupant, or Indian Reserve lands with permission of Band Council" and that there is "no big-game hunting (caribou, moose, elk, deer) from January 15th to July 15th." And, for general hunters who are not Métis or First Nations, their hunting season is shorter, depending on the game area in Manitoba, the targeted species, and the weapon used (archery, muzzle, or rifle) (Government of Manitoba, 2023a).

> So, we still have that property today. And I've been fortunate to have permissions close to home, around St. Malo, through the years.
>
> **Janelle 2**: I harvest on our land at home, we grow all the food on the land at home. So, and like I said, we're in the woods, we are isolated, so I grew up in that, I plan to stay in that, I love that. That's my life like I can't imagine myself anywhere else, so I feel very connected to the land.

Many participants also mentioned the importance of minimizing waste when harvesting and using as many parts as possible for different uses. And, much of these quotes also demonstrate that hunting is a practice that is steeped in tradition and community, where parts of the animal such as bear fat was given to community members as medicine:

> **Mike:** It's something that we really enjoy because we eat all the meat of animals that we take even bears for instance. And if I wouldn't take all the meat from the bears, I would make sure I give it to people that would consume it all. Now, going back many years ago. Oh boy, this is probably 35 years ago, 38 years ago, there used to be an aging couple in St-Malo. They had real bad arthritis. And I would give them the fat from the bears that we would harvest. And for them, they would find it very soothing, better than any medication that they had. So, what they would do is basically they would render it so they would boil it, and they would make a topical cream that they would put on their joints.
>
> **Christine:** That's what we always call it [deer heart], holy steak. It's so good. But I've heard of people who hollow it and stuff it and bake it on low. I don't know whether it's with rice and vegetables, kind of like a stuffed pepper. But to me, the heart was more of a celebration that you just fry up right away with onions and salt and pepper.
>
> **Gabrielle 1:** There's a little grandpa with black fingertips, they're dying, like they'll fall. But sometimes when it hurts, he'll grab bear fat and then put it on. Healing bear fat. And it helps!
>
> **Mike:** So I haven't hunted bear in a while. But when I used to hunt bear, we would keep the meat, at the time there was a person that was still living and he swore that bear meat was the best meat out there. So, I would give them whatever meat that we wouldn't keep for ourselves, and he would mix it with pork and make some bear sausage.
>
> **Christine:** Well, to me the tallow, it smells. The deer fat is gross smelling and sticky. But then you render it, it's just like lard.

These examples demonstrate that hunting is still a major part of the participants' lives and their way of connecting with who they are as Métis. Hunting plays a major role in the Métis participants' ways of connecting with and appreciating the land and its gifts. Participants mentioned some barriers to hunting, specifically judgement they may face when hunting on Crown Land. They also discussed how they feel more comfortable hunting on their own land or on other private land for that reason. Communal aspects of hunting where explained, for example, sharing parts of the animals that might have been "unusable" to them by instead giving these parts to community members or family who might utilize it. This embodies the spirit of kinship and reciprocity that lies at the heart of the Métis from the Rat River area. The participants' harvesting practices, such as hunting, serves as a reminder of their deep connection to their physical environment and the communal aspect that accompanies this connection.

Harvesting Plants. Several participants also talked about their activities on the land harvesting plants and fruits, from memories as children to current practices:

> **Christine:** I do a lot in St-Malo, so saskatoons and stuff in St. Malo. I like to harvest wild herbs instead of growing it in the garden. We do a lot in [a private location], too. This year was blueberries, raspberries, saskatoons, like crazy. So, we did a lot there.
>
> **Candace:** I have chokecherries and saskatoons on my own property. And I have prunes. So, there's some things that we can get here, but we'll go to [a private location] for the wild strawberries, blueberries, chanterelles and morels, but normally just chanterelles.
>
> **Edith 5:** And we used to help Mom, like we used to go to go get chokecherries, not far from home, walking... And we spent afternoons picking cherries because we lived not too far. And mom would make chokecherry syrup. And we would spend hours there. We were fine, we would sit in the woods underneath the trees, and we would eat the chokecherries.

Gardening and Canning. Gardening and canning were also talked about as being important, both past and present to several participants:

> **Edith 6:** We had big gardens, we would go pick peas, and for me, it was a punishment because we didn't have a row of peas; we had almost half a mile of peas, and we picked it up in a big basin… And mom used to can. She canned deer, and she would put a little bit of lard in it.
>
> **Candace 3:** We have gardens, everything gets canned. I haven't bought pickles or tomato juice in years. And corn, we try to be as self-sustainable as we can... I even made a risotto with roasted vegetables from the garden.
>
> **Christine:** Mine [gardens] are mainly raised in square foot companion gardening. So, I feel like I don't have huge gardens, but I get a lot of yield out of my small spaces because of that.
>
> **Edith 7:** We still have gardens, we still can. Marie-Lynne cans, Gabrielle cans a little bit, Janelle cans (her three daughters).

In conclusion, *blawn* encapsulates the continuing significance of our connection to land and land-based activities in shaping Métis identity and culture, demonstrating a connection to the environment that persists across generations.

4.3 *Nwayr*: Climate Change Impacts and Land-Use Changes

Nwayr (black) has been recently added to many Métis sashes to represent the dark period of suppression and dispossession that the Métis have endured (Scott, 2021). For this section, the *nwayr* thread highlights the ongoing challenges and legacies of colonialism faced by the Métis, including the impacts of climate change and subsequent environmental and land-use changes. During the kitchen table conversations, participants identified various changes to their physical environment that are indicative of broader environmental shifts, along with identifying various land-use changes they have noticed and experienced.

4.3.1 Environmental Changes

Participants identified several impacts stemming from climate change, including changing seasons, impacts to plants, and shifting animal populations and diseases. Many participants wanted to make it clear that they are not “scientists” but that they have seen various environmental changes and changes to the land. As the previous sections have identified, the participants have a very deep connection to their physical environment and spend a lot of time on the land, whether it is hunting, harvesting plants, or even tending to their gardens. The participants had deep observations and experiences related to a changing climate and environment.

Changing Seasonality. Participants identified that the seasons are shifting or that seasonal patterns may be changing:

> **Edith 8:** I think we had more snow. That’s what I think.

> **Christine:** Remember April showers bring May flowers. And we used to have nice light rains now it feels like we get it all at once or nothing. We don't live in a flood zone. And my garden was flooding knee deep water because of the rain all at once. And then you have a drought the rest of the summer. This year has been a bit better, but in previous years, it's like where's the rain? Where's the rain? And then you get a month worth of rain all at once.

Changes to plants. Candace and Christine also discussed changes to plants as they both spend a lot of time harvesting plants and gardening, identifying both positive and negative changes:

> **Christine:** The berries were early, the chokecherries are almost done. And this is when I go pick chokecherries. So, I'm off kilter because my season's not in the regular order of doing things, right?

> **Candace 4:** And there's no fruit for the birds or the animals. You know, and I make rose hip tea, so I've got wild roses at the end of the driveway and I always pick up rosehips, but I don’t want to pick them all because there won’t be enough for the birds, you know, so, that kind of sucks. And even the deer that come in our yard to eat the pears, there's so many pears on the ground that they would be pawing at the snow to get to the pears then eat the pears. So, you know, yeah for

> sure, the wildlife will suffer if the berries aren't there, or the hazelnuts or whatever, you know?

Chronic Wasting Disease. Several participants also identified that they are concerned about Chronic Wasting Disease[12] in deer populations, as cases in Manitoba have recently been identified and are increasing. The Province of Manitoba has taken action on monitoring the spread of CWD by allowing hunters to submit samples for testing (Government of Manitoba, n.d), in which participants of this research have submitted samples. While none of the participants have been directly impacted by CWD, there is growing concern following the recent infections in white-tailed deer, the most commonly hunted deer by the participants:

> **Jesse:** It's not super crazy, but I mean, it is growing fairly quick. We went from zero cases our whole lives, detected obviously, but there's been zero detected to one, and then the next year 12. And it's kind of clustered a little bit here and there. It's not just all from one tiny, tiny town like Otterburne or something, it's like hundreds of kilometers in between. Yeah. It worries me a little bit. The deer that we're seeing at the shop and harvesting ourselves, we're in the southeast part of the province where there hasn't been anything yet.

> **Mike:** So, there's a lot of different cycles that occur. Disease cycles, right. And, for example, the Chronic Wasting Disease, we had to do a lot of testing last year, so everybody was asked to hand in their submissions of the white-tailed deer, for example, that they would take. This has been ongoing a lot. For example, in Saskatchewan, south of the border, a lot of US states have been doing it for a long time. So, I know a lot of those areas. And for me, what's very worrisome, is they've had to do some massive culling in some areas for the population not to overlap. It's only a matter of time that it's going to be all across Manitoba, unfortunately.

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[12] Chronic Wasting Disease (CWD) is "a fatal disease of the central nervous system of deer, elk, moose, and caribou, members of the cervid (deer) family" and the disease can be spread either from direct animal contact or through indirect transmission from prions from an infected animal in the environment (Government of Manitoba, n.d.). There is no direct evidence that CWD can be spread to humans, however, there is the potential that this disease can lead to decreases in deer populations as it is an extremely fatal disease (Government of Manitoba, n.d.). The Province of Manitoba has been surveying CWD since 1997, and the province saw its first CWD-positive case from a mule deer in 2021 near Lake of the Prairies in the western side of the province (Government of Manitoba, n.d.). Since 2021, there have been 26 CWD detections in Manitoba, which includes 22 mule deer and four white-tailed deer, with the majority of these cases found near the Saskatchewan border (Shebahkeget, 2024).

As identified by the participants throughout this chapter, hunting deer is a major part of their lifestyles and their diet. There is reason to be concern about the impact that CWD and other diseases could have on the health of deer populations.

Shifting Animal Populations. Participants also discussed how some animal populations are shifting and are being found in areas not previously seen. In line with CWD, there is worry about the potential impact that these shifting populations could have. Participants also discussed animal populations, notably deer populations, and factors that may impact these populations, such as increasing hunting pressures. The participants were aware of and able to identify abnormal shifts in populations, observations that are relevant to scientific research, but also other considerations linked to harvesting and family life. For example, multiple participants identified a new elk herd near Vita, MB, which has never been seen previously:

> **Christine:** And now there's lots of elk in Vita. There's a herd of elk in Vita. There's a big population in Vita, it's been a few years now.
>
> **Edith 9:** Well, south of here, Vita and by the border, there's a herd, a herd of elk.
>
> **Gabrielle 2:** All around the pig barn, there must be around twenty that always hang around there.
>
> **Mike:** There's elk in Vita now.

And, Déric identified that he has now been seeing mule deer (the most common carrier of CWD in Manitoba) around Ste-Agathe, which he identified is not normal in that area:

> **Déric:** It's been two years now that we've been seeing mule deer in the area.

Participants also discussed shifting deer populations, and participants identified that this is possibly from increasing hunting pressures, whereas other animal populations, such as coyotes, have been identified by Janelle to be increasing in Otterburne:

> **Janelle 3:** I've been having to harvest later and later in the year because I'm out longer, because I can't get anything. Like the last deer I got, I got it the last day of the [hunting] season, twenty minutes before it closed. Like it's been crazy. That was the first deer I saw all year [where she usually hunts]. And when I was little, they were everywhere. All the time. You couldn't go out without hitting a deer. So yeah. Which is why I started harvesting on our land, but it's just dried up completely… The coyotes, not normal! Not normal. They're everywhere right now. Like we always had a den in our yard. But they've never been like a huge problem. I mean, this year, I don't know it's like they're not acting the way they usually do. The coyotes are supposed to be scared of people, they're supposed to hunt for their food, but they're not doing that anymore, because a) the deer are gone, and they're not moving through anymore. But the coyotes are in the roads all the time, like I've almost hit five coyotes this year.
>
> **Darrell:** But the only thing I really noticed is that like, now that I'm paying attention to hunting and notice the deer population, but I'm not like a scientist, but it's I just noticed that like, there used to be 30-40 deer in the field next to us. And now there's like, 10-15. So, it's like, there's just less and I don't know if that's because during COVID people hunted more. I know I did, but I only got one.
>
> **Jesse 4:** The hunting pressure has really grown from not that long ago. Like, there were trails that I could go hunt 10 years ago that I wouldn't even dare stand there now. I don't know if either people have found it, or I think hunting has grown. Like it took a dip there for a while. But then people love eating organic, people love being attached to their food again, but it got axed there for a while. Like it wasn't cool to do, right. But now people are realizing that it's the best meat to eat and it's a fun thing to do with your family.
>
> **Mike:** And unfortunately, the moose populations, there's been a lot of work being done trying to get them to start repopulating. Hunting has been closed in lots of different areas. And that's great. But it's going to take many, many years. And this has been ongoing for a long time already, that's why I haven't been hunting moose. Where I can, in the areas that I could, but yeah, that's a sad one, and I'm not sure if I'm gonna see it bounce back like I've seen it in my younger years, unfortunately.

And, in terms of fishing, Jesse mentioned that he has also noticed increasing angling pressures on Lake Winnipeg:

> **Jesse:** Yeah, I've had a couple of slower bites more recently than I did earlier on. But I think the angling pressure has quite like quadrupled now like, I don't really know, in the 1000s, right. We went from "holy smokes I think I'm the only guy out today" some days, and that actually would happen to now you go on the east

> side there's 2000 tents and you go on the west side and it's the same. But what's to blame, we all love it.

Participants have noticed environmental changes, such as changing seasonal patterns, changes to plants, and shifts in animal populations and diseases, while also dealing with the increasing threat of CWD in deer populations. These collective and parallel observations referenced by the participants underscore the value of recognizing and listening to Métis knowledges, as this intergenerational knowledge system is drawn from strong connections and intimate observations of the physical environment.

4.3.2 Land-Use Changes

Participants identified changes in landscapes and changes in land-use near their homes or where they may harvest, which is in line with the landscape changes identified in Chapter 2. From narratives of remembering areas being more forested, to rivers being rerouted, to draining activities that support agriculture, the participants have a clear understanding of the impacts of human activity on the environment. Participants also expressed concerns about the impacts of some of these changes, especially regarding water quantity and quality. Several participants highlighted agricultural drainage practices as a factor contributing to wetland depletion and increasing flooding events. Lastly, a few participants have expressed concern regarding agricultural runoff.

Landscape Changes. The participants' firsthand experiences illustrate their recognition of the landscape changes in their communities in the areas where they harvest, or areas where they may frequently travel to:

> **Christine:** And I remember when I was younger driving to the city, all these fields on the way to the city, they had shelterbelts built around them. So, they had lots of trees. And then slowly throughout the year, instead of planting new trees, they just took them all down. But those trees were there to help prevent soil

> erosion, keep due on water, and keep the snow in the fields and now it's all gone, just flatlands.
>
> **Edith 10:** Well yes, it was forested! Here it was all forest, I guess, and it all got cut to make room for the cows and they cleared the land.
>
> **Janelle 5:** So Otterburne… it's crazy, when they put in the railroad, they rerouted the river. So, the land that was owned by the different families and the way they built their houses, the way they built their yards, whatever it is, it was built for a river system that was different than what it is now. So, for us, we were directly on the river. And now it's been rerouted like that and we're on a diversion. And so, we don't have access to the water the way my ancestors did.
>
> **Mike:** But now, for us, for example, where we've got our place in the southeastern part of the province, the private landowners north of our property, we used to have a forest there. Over 640 acres of bush and that that all got bulldozed. Yeah, they cultivated all the trees…It takes away from the nice scenic wilderness that we're used to seeing, because now the trees are gone. But at this point, I don't see it impacting in a negative way our harvesting, because it's adding a food supplement for the animals that are there.

Impacts to Water Quantity and Quality. Many participants also noted land-use changes that impact both water quantity and quality. Several participants mentioned their experience with the impacts of draining and the removal of wetlands:

> **Jesse:** [Talking about the negative view of swamps] "Unusable land." They're just trying to find ways to make money. Like all those pig barns on the left, that whole [area by the highway] is just swamp, right? And that's a big one that got drained. Yeah, it should have never been touched.
>
> **Christine:** But the flooding, I think a lot has to do with drainage for farming, because that's why I flood, because of the drainage from the farm behind the way it goes through the field through our property. Like we'll have water a couple feet from our house, and we don't live in a flood zone.
>
> **Edith 11:** Yes, it's worse [flooding]. Yes, because they changed the drains, eh. Like they dried the wetlands to sow. But that's it, we are affected because when it floods, at Emerson there, well it's not just Emerson, it's all along the 75 [highway], then all of us this side along the river, we all struggle…. So it goes into the drains, then the drains go all the way to the river. So it floods quickly!
>
> **Mike:** …we used to have a cottage just outside of St. Malo by the Rat River. And this was before the Pansy swamps got developed into adding a lot of hog operations, adding roads, draining the swamps. So, after they added all that

> drainage…every time we'd have a fairly significant rainstorm, the water wouldn't be able to stay within its banks so there'd be flooding. In spring it'd be almost guaranteed overground flooding every spring, which we never saw before. So for sure by opening different areas, especially known as swamps, to basically drain the water and make it usable right, has a lot have negative impacts downstream.

Several participants also identified that extremes in water levels and precipitation are becoming more common, where some participants identify very low water levels, while they also mention the prevalence of flooding:

> **Candace 5:** It is bad. Like I'm right on the Rat River, and we could walk across the river to the peninsula. And before it used to be at least like hip height. Yeah, like 3-4 feet, but now it's centimeters.
>
> **Christine:** And now it's a normal pattern. And like the river dries out enough that we can walk on the river. Like my husband can drive on the quad, he can make it almost all the way to the lake. And then he's gone from the spillway and can go almost to the highway because there's no water.

Several participants also identified apprehension around water quality issues stemming from land-use and agricultural runoff, as exemplified by Christine:

> **Christine:** But for us on that property, it's the pig barn in the back and the spreading of manure. And the changes of the [St-Malo] lake, which I believe is because of that. And I see it firsthand. And we've spoke up and nothing's happening. But we see it in the weeds on the lake. Like even kayaking, now it might be hard to go from the lake up the river. And every year it gets worse and worse. We have to go canoe or pontoon into the middle of the lake to find a good swimming spot. And we're always concerned of the weeds.

Unintended Shifts from Land-Use. Increasing deer populations have been most noticeable. As Jesse explains, deer are not native to Manitoba, but as they are an agricultural animal, they migrated from south of the Canadian border:

> **Jesse:** There wouldn't be any deer if it wasn't for agriculture. Yeah, so that's kind of cool. It's not like oh, I wish I could have seen how many deer were here, 100 years ago, it was way less because they're an agricultural animal. They're not even native to here. They were from the States.

Marie-Lynne explains that the deer population in St-Malo has grown significantly, as her father used to go hunting in the eastern part of the province, but more recently he had started hunting closer to home:

> **Marie-Lynne 1:** Even my father, to hunt deer he often went out east when he was younger. But over time, there started to have more and more deer here, so he had recently started hunting deer here, on his property. But in the beginning, he didn't go here.

Hence, although most of the land-use changes have been identified as being negative, the increase in agriculture has brought an important food source to the Métis in this area, in which hunting deer has become a major harvesting activity, especially prevalent after the near extinction of the buffalo.

In conclusion, the *nwayr* thread represents the negative impacts of land-use changes and environmental changes. The participants identified various changes and impacts stemming from climate change, changes in seasonal patterns and changes in plant and animal life. Their relationship with the land, from hunting to gardening, illustrates the significance of intergenerational and experiential knowledge. Moreover, participants have also demonstrated great understanding of human-induced land-use changes and its subsequent negative impacts on the environment, notably on water quantity and quality. However, there was also the recognition that certain land-use changes have brought about less detrimental outcomes, such as the introduction of deer to Manitoba. The participants have recognized various environmental changes and shifts in land use, demonstrating their deep connection and relationship to their physical environment. This comprehensive knowledge emphasizes the important role that Métis knowledges play in informing climate change adaptation strategies to adapt to these various environmental changes.

4.4 *Zhounn*: Adapting

Zhounn (yellow) represents the prospect for prosperity in the Métis sash. As the final thread in this thematic framework, *zhounn* symbolizes the adaptability and strength of these Métis communities in response to environmental changes, highlighting their ability to navigate through these changes while finding innovative solutions that are rooted in Métis knowledges and culture. Moreover, it also acknowledges barriers and obstacles to adapting identified by the participants.

4.4.1 Valuing and Passing Down Métis Knowledges

When discussing adapting to environmental changes and asking what Métis people bring to navigating climate change, many participants answered this question by referring to the importance of Métis knowledges. Participants identified the importance of passing down our knowledges to the next generations as well as having Métis knowledges valued. Candace identifies the importance of passing down knowledges to Métis youth, who will be the next guardians, while Janelle and Christine mention that our knowledges have and continue to be undervalued or not listened to:

> **Candace 6:** We have to make the youth of today aware because you know, that's their future. The Earth is their future, the ways to preserve the Earth, the animals, the people, and that symbiotic relationship, they need to learn that because they are the guardians now or they will be the guardians. So, if they don't learn the teachings that are important to preserve and to have respect, you know, that all things are alive and they all have a spirit, that changes the way you look at things. even the stones have a spirit, you know, so when you have that really ingrained respect for what things really are. I think you're a little bit more aware of your surroundings, you know?
>
> **Christine:** Listening to Métis would be beneficial, but I also feel like our culture has been under credited for too long.
>
> **Janelle 6:** It's just not recognized [Métis knowledges]. According to the education systems that are built and that are followed by government and by policy and whatever, right. So, it’s not just that the information is not there, it’s that we don’t

> want to access them because it's not backed by what we think it should be backed by. And that's frustrating.

4.4.2 .Participants' Current and Proposed Adaptation Actions

Many participants talked about what adaptation actions they are currently undertaking or believe should be taken. However, the participants did not label these as "adaptation," and I would argue that this is because the general societal views on adaptation are focused on "hard" adaptation approaches, whereas individual and communal adaptation actions are not viewed in the same light. Participants identified several ways they are adapting, and how others, including communities, can adapt to climate change and its consequent environmental changes. For example, in response to stating that pollinators are declining, Christine started her own practice of hand pollination with her children for her garden:

> **Christine:** The last few years I've taught my kids how to hand pollinate all the squash and stuff like that. Because they weren't getting pollinated. So, we do a lot of hand pollinating, which growing up, we never did that. My mom said we never had to do that. So now I make sure to plant certain type of flowers and stuff within the garden to attract the pollinators. And luckily, we have a bee farmer that moved not far from us. So now it's helped.

Christine also mentioned the importance of gardening and growing our own food, not only as a way to bring in more pollinators, but also to reinforcing communal living:

> **Christine:** I think going back to the old ways more, even, let's say everyone had a garden. That changes the ecosystem too, it's bringing in different birds, different pollinators, helping with the air. If everyone had berry trees in their yard, and you have too many, but your neighbour who can't afford groceries could pick your berries or your apples. We need a more communal way of living.

Nicole also mentioned the importance of reconnecting with our knowledges, not only for the Métis, but for others to learn as well:

> **Nicole:** You could take a traditional wetland like the Tourond Wetlands, right, well it would be cool to have, I don't know if interpretive signs would be good, but more like, let's go take a trail walk and let's learn about this land, about this

> particular ecosystem, and how our ancestors would have lived, you know, that's cool.

Moreover, Christine, Janelle, and Jesse talked about the importance of documenting our knowledges and documenting our observations, such as Christine mentioning that a community member in St-Malo tracked the thawing of St-Malo Lake since 1987, and he also documented the different types of birds coming in and when they would leave. Documenting our knowledges and observations has been identified as a crucial way to understand changes in our environment and changes in seasonal patterns:

> **Christine:** I was telling my mom that today, it's time we start documenting things. I got cases of peaches, I get them from Ontario to can, that's our winter treat. And they're super hard. And we're trying to remember how many days does it takes to ripen and we said, we should start journaling, things like that, so we notice our pattern and how it all works together.
>
> **Janelle 7:** So, it sounds backwards, but to write down what we know, I think is number one. To get it black and white, so that people can actually read it and you don't have to rely on oral traditions. I know that's a stupid thing to say. Because that's literally what we are. It's what we do, our whole culture has been passed down orally. But it's adapting, it's working in a system that you were forced to work in. Which sucks. But even for a family like my mine where everyone passed away long before I was born, and it hasn't been passed on, but imagine if they had put it down, right? And then that makes it a lot easier for me growing into it, to change the way I do things and know what I'm doing from the get-go, right?
>
> **Jesse 6:** That kind of journaling stuff, that's really cool. The garden too, they write down when they got their first tomato, planted, and when they got stuff. It's good knowledge.

Although the participants did not identify these actions as "adaptation" it is clear that these actions are adaptive in nature, although they may not always be explicitly labelled as such. However, the participants' actions and perspectives demonstrate individual and communal adaptation strategies that are deeply ingrained in their everyday practices and perspectives and that are rooted in their lived experience as Métis. This nuanced understanding reveals the interconnectedness between the participants' actions,

community resilience, and the importance of Métis knowledges in addressing the impacts of climate change.

4.4.3 Barriers to Adapting

Many participants identified barriers to adapting to environmental changes, including financial constraints, access to traditional practices, and having access to people who can teach you traditional practices. For example, Janelle talked about financial constraints in adapting their family home and property from environmental changes:

> **Janelle 8:** We can't afford to put in whatever it is we need to mitigate and adapt. So, it's difficult, especially like we've been living here for a long time, we are in old houses, we are in old neighborhoods with old roads. So, it's really difficult to bring in things that you need for fixing up your house so it's easier on the environment, but it's just so much more expensive to do it. You just can't keep up because the weather is so much more extreme. We have so much more damages to deal with every year with the flooding and the dryness.

And, Darrell talked about how starting off harvesting can be expensive at first:

> **Darrell:** Like I'm not saying that it's cheap to go out hunting anymore. If your family's involved in it, it's a little easier.

Additionally, Christine mentions that the way our economy is set up makes it difficult for parents to pass on their Métis lifestyles to their children:

> **Christine:** But with bad inflation it makes it harder for people who live these lifestyles too. When we bought a house and all that stuff, we went according to one income, because I knew I wanted to focus on raising my own children and gardening and canning. And slowly, slowly, I don't want to be reliant on the grocery store, we always will be to an extent. But the more I can do at home, the more I can stay at home and raise my kids and teach them these lifestyles. If I worked full time, I wouldn't be teaching them these things. So, I've been lucky to work part time, but a lot of people can't. Most can't. Both parents have to work full time, right?

And, finally, Candace and Janelle talked about the importance of having access to people who can teach you how to harvest and to pass down traditional practices:

> **Candace 7:** You don't learn unless you have access to it [traditional practices].
>
> **Janelle 9:** It's hard to find someone who can teach me [traditional practices]. I know going to dig for it is always doable. But it's not the same.

In *zhounn*, participants identified that they know that they need to adapt, as seen throughout the various quotes in this section, however, various barriers have been identified as preventing adaptation actions. Nonetheless, many participants are taking adaptation actions and have great ideas for adaptation actions. It is important to consider the importance of Indigenous knowledges, and in this situation, Métis knowledges, in adaptation planning. This chapter shed light on the vast knowledge that the Métis participants hold from their time on the land and astutely observing their physical environment, while also understanding what changes need to happen in order to adapt to the various environmental changes identified throughout the chapter. The theoretical sash now encapsulates the various threads that came about from the kitchen table conversations, highlighting the importance of reclaiming who we are as Métis, reclaiming our knowledges and connection to the land, while also identifying climate change and land-use change impacts, leading to adaptation actions.

4.5 Climate Change Initiatives: Insights from the RM and Town Office Representatives

This final section of this chapter briefly discusses interviews conducted with one employee from the Rural Municipality of De Salaberry and two employees from the Village of St-Pierre-Jolys. Throughout this section, these employees will be referred to as the representative(s) of their respective entities. The goal of these two interviews is to understand local political planning around climate change and adaptation in the Rat River

area, as well as understanding how Métis knowledges are included or can be included in future planning endeavours. Questions revolved around current climate change concerns, top priorities for adaptation planning, current policies/programs/initiatives that address climate change adaptation, and how they see partnerships with Métis communities (see Appendix D for interview questions).

4.5.1 Rural Municipality of De Salaberry

The representative from the RM of De Salaberry identified the main climate change concern for the RM is flooding as it is something that they have experienced frequently. Additionally, drought is another major concern, with an increasing observation of both flooding and droughts in a single year. Other concerns identified include wildfires in the eastern part of the RM, as well as extreme storms, including 200-year storms. The representative from the RM also discussed that some of the top priorities regarding planning for climate change include ensuring the safety of residents in the RM of De Salaberry, which was identified as the top priority. In response to this, the representative from the RM said that they are currently looking to have cooling and heating centres where residents could go to in case of heat waves or cold spells. The representative stated that RM also has an emergency plan in response to this top priority of safety for residents in case of climate emergencies.

The representative of the RM also discussed climate change mitigation and adaptation as being a top priority, which was identified as an entirely different level of preparation. Some of the actions in response to this priority as of late include looking at alternate energy sources, fire breaks in forested areas, and creating a community well in case of water shortages. The representative of the RM also identified that the RM is

currently putting together a community energy efficiency program in regard to climate change mitigation. As climate change adaptation is often viewed as a long-term goal, the representative recognized that they want their longer-term goals to become shorter term goals. And, the representative for the RM also stated that climate change adaptation is a lens that they look through for every single project that the RM undertakes. The representative also identified that at the moment, they are not acting on an emergency basis; however, there are short-term climate risks, such as flooding and droughts, that the RM has to deal with.

When it comes to engaging with the local communities, the representative identified that it can be difficult to get residents involved in planning. The representative stated that they hold open houses, put out surveys, and use their notification program to directly communicate with residents and ensure that residents are included in decision-making processes. However, these are only effective if people participate, which has been identified as a challenge. To try to involve residents, the representative explained that the RM has also tried new engagement strategies, such as going to local hockey games and having a booth showing people what is going on in the RM.

For future climate change adaptation planning, the representative mentioned that there is new funding coming from the Province of Manitoba to support related projects. However, it was also identified that funding can be difficult to come by, the applications can be lengthy and difficult, and the chances of being accepted are slim. Because the RM only has 4000 residents, which is quite small compared to other municipalities in Manitoba, the representative of the RM stated that it is very hard to get attention when it comes to getting funding for projects because it is not serving as many residents. Thus, it

was recognized that collaboration in these situations is extremely helpful, as funding tends to be greater if there is collaboration across municipalities, cities, and towns. This is also beneficial as the representative stated that opting for eco-friendly projects that deal with climate change tends to be more expensive. Nonetheless, the representative acknowledged the long-run value of these investments while also acknowledging that the expensive start-up costs can be a major barrier.

Finally, when it comes to collaborating with Métis citizens living in the municipality, the representative identified that the Manitoba Métis Federation is a major stakeholder and that since there is a large Métis population in the municipality, it is imperative that Métis voices and knowledges are included. The recent establishment of an MMF regional office in St-Malo has enabled easier communication and engagement with citizens from the RM's perspective. The representative also stated that Métis citizens will be included in their development plan that is currently being developed. It was also identified that incorporating Métis citizens and their knowledges will be done through the regional office in St-Malo, yet it was also recognized that this is a fairly new process of engaging with the MMF's regional office and the St-Malo Métis Local.

In summary, the interview with the representative from the RM of De Salaberry highlights the current climatic concerns of flooding, droughts, wildfires, and extreme storms, while emphasizing that the safety of residents is the RM's top priority. Although there are various challenges to adaptation planning, such as limited funding, the RM of De Salaberry is taking on a climate change adaptation lens in all their current and future projects. The representative also recognized the importance of including Métis voices and

knowledges in the RM's future climate planning and also identified the importance of collaborating with the Manitoba Métis Federation via the St-Malo regional office.

4.4.2 Village of St-Pierre-Jolys

Similar to the interview with the RM of De Salaberry, the representatives from the Village of St-Pierre Jolys also identified that flooding is one of the biggest climate change threats. The representatives explained that the town had experienced very heavy rain events the last few years in which stormwater was overflowing the sewer systems and consequently flooding streets in St-Pierre. And, as a response, the Village of St-Pierre-Jolys enacted a drainage retrofit program with funding from the Province of Manitoba, while also collaborating with the Seine Rat Roseau Watershed District on other aspects of this project. Another concern mentioned in the interview includes tornadoes, as there had previously been a tornado over a decade ago, along with power outages from storms. The representatives from the Village of St-Pierre-Jolys then discussed working on things such as battery backups and designating reception areas in case of emergencies or for people to cool down in extreme heat events. Another main concern mentioned was water shortages, which have not occurred yet, but have been on the radar as a future possibility. The representatives stated that the Village of St-Pierre-Jolys has also undertaken emergency preparedness and said that they attend trainings as they are offered, such as a recent climate change adaptation training in St-Pierre for municipalities in Manitoba. The representatives also identified that the Village of St-Pierre-Jolys recently undertook a climate resiliency study to identify where future problem areas may be.

Similar to the RM of De Salaberry, the representatives stated that the Village of St-Pierre-Jolys engages with the local community through open houses, surveys, and

their Connect platform. However, the representatives stated that it can be difficult to get people to engage through these avenues, and they mentioned that they are trying to find different ways to engage residents. The representatives also mentioned trying to go to the local schools to talk with the children there, with the recognition that the decisions made today will impact them in the future. However, the representatives mentioned that the school curriculums do not always allow flexibility for engagement projects outside of what is built in the curriculum.

The representatives from the Village of St-Pierre Jolys stated that climate change is being considered in all planning activities; however, it was discussed that it is not always necessarily at the forefront of everything the town does. Furthermore, when it comes to prioritizing short-term and long-term planning, the representatives stated that much of this depends on federal and provincial grants and growth, and that enacting climate change adaptation actions can be restricted due to lack of funding, whereas shorter term priorities, such as broken roads, become the main priority. In terms of funding, the representatives expressed that a lot of the federal funding is geared towards large urban areas, and that large urban areas tend to receive the majority of funding in comparison to rural areas. The representatives said that this can be extremely frustrating, especially as rural municipalities and towns may not have the same capacity as larger urban areas, who may have an engineer on staff, for example. The Village of St-Pierre-Jolys representatives mentioned that they spend a lot of time and money into grant applications, and it becomes frustrating when they see that the majority of those awarded the grants are from urban areas.

Lack of communication across various bureaucratic levels was also discussed. An example given by the representatives was the lack of communication between Manitoba Transportation and Infrastructure and the Village of St-Pierre-Jolys. For instance, while the province may repair the highway that goes through St-Pierre, the Village of St-Pierre-Jolys might also find itself needing to excavate that same area four years later to fix underground infrastructure. In this situation, collaboration could have yielded greater benefits while simultaneously offering a more cost-effective solution for both parties involved. Regarding the involvement of Métis citizens, the representatives recognized that as the St-Pierre MMF Local is very new and still getting its footing, clearer and more robust communication channels between both parties is vital for effective engagement. Nonetheless, the Village of St-Pierre-Jolys did state that they generally have very good communication with the Manitoba Métis Federation.

In summary, similar to the RM of De Salaberry, the representatives communicated that the Village of St-Pierre-Jolys considers flooding as its major climate change threat. In response to this, the Village of St-Pierre-Jolys has enacted a drainage retrofit program and the Village of St-Pierre-Jolys administrators are collaborating with the Seine Rat Roseau Watershed District on this project. Other threats were identified, such as tornadoes, power outages, and potential water shortages. The representatives of Village of St-Pierre-Jolys also discussed engagement with community members and with local schools, albeit some difficulties in getting residents engaged along with curriculum constraints in getting local school-aged children involved. Climate change considerations were recognized as often competing with short-term priorities, mostly due to funding limitations and communication gaps within various levels of government. Efforts to

engage Métis citizens are ongoing, with improved communication serving as the major goal in facilitating engagement.

4.6 Chapter Summary

This chapter recounted the participants' stories and knowledges from the kitchen table conversations, highlighting conversations around four theoretical sash threads, *roozh* (reclaiming who we are as Métis), *blawn* (reclaiming our knowledges and our connection to the land), *nwayr* (climate change impacts and land-use changes), and finally, *zhounn* (adapting). Together, these strands are woven together to paint a holistic and comprehensive picture of the conversations with the research participants. This chapter also presented the results of the interviews with the RM of De Salaberry and the Village of St-Pierre-Jolys focusing on local climate change adaptation initiatives, along with engagement of Métis citizens for these initiatives. The following chapter will take into consideration the conversations in this chapter along with the literature on this topic to conceptualize adaptation recommendations based on these various insights.

Chapter 5: Discussion and Conclusions

5.1 Rethinking Adaptation: Reclaiming is Adapting

"Our actions today are cyclical performances; they are guided by our reflection on our ancestors' perspectives and on our desire to be good ancestors ourselves to future generations" (Whyte, 2017, p. 160).

The previous chapter illustrates that it is important to rethink how we approach climate change adaptation, particularly regarding Indigenous peoples and Indigenous communities. I recognize that I have thought about adaptation from Western spaces and perspectives, where the focus tends to be on "hard" adaptation efforts, which favours infrastructure and technological solutions "over more socially integrative approaches that attend to structural inequalities, social vulnerabilities and institutional barriers" (Sauchyn et al., 2020, p. 46). I brought along these views of climate change adaptation into the kitchen table conversations but quickly realized that this was not a priority for participants, but rather that reclaiming our culture, traditions, identity, connection to the land, and knowledges are prioritized and identified as ways to adapt.

Furthermore, it is important to prioritize and recognize other adaptation efforts that would be considered "soft" adaptation practices in Western adaptation discourses. For example, Christine identifying that she started hand pollinating due to a decline in pollinators is not only extremely innovative, but it also benefits gardening practices, which ultimately can contribute to enhancing food security. Thus, what might be considered "small acts" such as hand pollinating or even visiting with one another can have multiple beneficial impacts, while also contributing to reclaiming and revitalizing Métis knowledges in the Rat River area. By reclaiming and revitalizing adaptive practices that are deeply rooted in our knowledges, we not only strengthen our resiliency and our connection to the land, but there is also potential to introduce innovative

approaches to our connection to the land and the associated knowledges. This connection also enables us to be more observant of the changes around us, drawing on our knowledges to navigate and respond to these changes. The kitchen table discussions revealed that reclaiming our knowledges and connection to the land serves as both an important adaptation action and a means of ensuring cultural continuity for future Métis generations.

Furthermore, communities need to be able to experiment with various adaptation actions that are based in local needs, cultures, traditions, values, and norms (Christianson et al., 2012; Pisor et al., 2022; Veland et al., 2013). The experimentation part is important, as needs and priorities might change throughout time, especially considering the uncertainty of some of the ramifications and impacts of climate change. Indigenous peoples see their knowledges as not being static, but rather, as living entities that are subject to renewals and adapting, which is crucial to navigating and adapting to climate change (Whyte, 2017).

Moreover, it is also important to consider that we will not only need to adapt to the environmental impacts of climate change, but that climate change impacts will be intersectional, impacting political, economic, and social climates as well. This was identified by participants who highlighted how increasing costs of living and larger societal structures can impact traditional activities. Hence, it is crucial to think about built-environment responses to climate change, but we also need to be looking at behavioural changes that will facilitate adaptation. Looking at behavioural adaptation can help address the multifaceted nature of social needs and responses to evolving and increasing climate challenges.

There is no doubt that the Métis have adapted throughout history from forced relocation, dispossession, cultural suppression, and navigating discriminatory colonial policies. This is exemplified in the Rat River area as well, where the first Métis families had to adapt to colonial

efforts to dispossess the Métis of their land by picking up their lives in what is now Winnipeg and deciding to permanently move to their wintering sites on the Rat River. However, similarly to the criticisms of the term resilience – which highlight the tendency to place the burden of adaptation on communities rather than addressing systemic drivers of climate change – it is important that we do not solely rely on Métis people as being adaptable. Although Métis people embody adaptability, the responsibility should not be on communities to adapt to climate change while many governments and corporations continue on a path of inaction.

That being said, there are ways in which Métis citizens, MMF Locals, and the MMF can enhance their adaptive capacity by focusing on reclaiming and reconnecting to Métis culture, traditions, languages, knowledges, and connections to the land, as outlined in this chapter. Additionally, the following section also identifies policy considerations for Rural Municipalities and the Provincial Government in the development and implementation of adaptation policies that are rooted in Indigenous knowledges, including Métis knowledges and priorities.

5.2 Strengthening the (Thematic) Sash: Recommendations

In Chapter 4, the sash served as a thematic framework signifying the diverse strands of knowledges and stories from the kitchen table conversations. These strands, represented by *roozh*, *blawn*, *nwayr*, and *zhounn*, were woven together to create a more holistic understanding of the various narratives shared in the conversations. Just as many Métis people wear their sash with pride, I carry forward the insights gathered from the previous chapter into this chapter, symbolizing a commitment to advancing with pride and strength the knowledges shared. Carrying forward the same coloured strands, this chapter offers actionable recommendations for Métis citizens, MMF Locals in the Rat River area, the MMF, municipalities, and finally, the

Provincial Government, to advance climate change adaptation that is based on Michif knowledges and lived experiences presented in the previous chapter. However, it is important to recognize that many of these recommendations may fall under various threads, and it is crucial to acknowledge the interconnectedness of these threads. Just as the sash may weave different colors and patterns, these recommendations also weave different aspects of Métis knowledges, culture, identity, connections to the land, and adaptive capacities. By understanding these interconnections, we can develop more effective approaches to climate change adaptation drawing upon Métis knowledges.

5.2.1 Recommendations for Métis citizens in the Rat River area (and beyond):

1. **Continue to reclaim and revitalize your own Métis identity, history, and relationships:**

There is not a one-size-fits-all approach to reclaiming, revitalizing or strengthening one's identity, history, and relationships. However, there are various avenues where one can learn more about Métis identity, history, and relationships, such as:

- seeking out community members or family members who can help deepen your understanding of your own family history, the history of the Rat River Settlement, Métis knowledges, etc.;
- visiting traditional sites that hold cultural meaning, such as the Crow Wing Trail;
- taking Michif language classes if they are available to you;
- attending cultural events and gatherings to learn and connect with others;
- engaging in cultural crafts, such as beading, and;

- seeking out resources and educational opportunities[13]
- Furthermore, consider exploring literature written by present/past community members, such as *Au Temps de la Prairie*, which recounts Auguste Vermette's upbringing in St-Pierre.

While this is not an exhaustive list, it is important to reclaim and revitalize who we are as Métis from the Rat River area, which in turn will also keep our culture alive for future generations. On a personal note, I also wanted to share that as I was writing this section, I took a break to go visit with my grandparents, who told me stories about the "Métis rides" that they did. They participated in a three-week long "Back to Batoche" ride, along with many other rides, where they would go horseback riding pulling Red River carts with other Michif folks. Looking through their photo album, I could not help but smile in awe of their stories. They showed me pictures of the scenery, of people fixing Red River carts, of ceremonies, and of Métis flags waving in the wind. Looking at these pictures makes me feel even prouder to be Métis, and I learned new stories about my grandparents. Ask your family about their stories, feel pride in these stories, and share these stories for generations to come.

2. Talk about your family history and your stories with others:

When learning more about your family history, talk to others about this. This can help foster connections between different generations and different Métis families. Learning and teaching others about our family histories can help instill a sense of pride and belonging in who we are as Métis from the Rat River area. Talking about our family histories can also contribute to building

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[13] Such as the Louis Riel Institute, which hold Red River Métis Presentations, Traditional Art Workshops for Red River Métis, and many other programs. Visit https://www.louisrielinstitute.ca/cultural-programming for more information.

resiliency in our communities by highlighting stories of survival, adaptation, and resistance in the face of challenges our ancestors have experienced.

3. **Uplift stories about Métis Women and Two-Spirit people:**

As identified by the research participants and supported by the literature (see Adese, 2014; Ferland, Gaudet, 2019; Hitomi and Loring, 2018; Hodgon-Smith and Kermoal, 2016; Kermoal, 2016) Métis women's and Two-Spirit people's stories have been silenced and disregarded, stemming from settler colonialism that prioritized heteronormative and male-centred narratives. However, as identified throughout this research, Métis women and Two-Spirit people have contributed so much to our Nation, and many Métis women and Two-Spirit people remain extremely tied to the land; something which has and continues to be, more commonly associated with Indigenous men. It is important to give a voice to our Métis women and Two-Spirit people and to honour their stories and their knowledges, which have not always been listened to.

4. **Support Community-Based Efforts**

It is important to support community-based efforts of reclaiming and revitalizing Métis identity, history, and relationships. For example, the JOLYS Regional Library is undertaking research on the traditional river lots on the Rat River, and it is important to support and uplift these grassroots efforts to reclaim our history. Also, seek opportunities to participate in other cultural events, such as those organized by the MMF and MMF Locals, or other Métis organizations/groups.

5. **Take time to visit one another:**

Relationships and visiting were identified in Chapter 4 as being extremely important and prevalent in the participants' lives, especially when it comes to harvesting. Continuing these visiting practices is extremely important, especially to instill these values amongst younger

generations who will continue these traditions. It is also important to continue visiting in harvesting settings, such as getting together to process a deer. As identified in Chapter 4, this was said to be the most important and exciting part of the hunt by several participants. It is an avenue for knowledges to be shared, while also instilling lessons to younger generations about respecting and being grateful for the harvest. Overall, reinforcing familial and communal bonds will help foster communal solidarity, which is not only important for revitalizing and reclaiming who we are as Métis, but which is also crucial to adapt to climate change. By cultivating communal solidarity, communities can better adapt to environmental challenges by drawing on collective resources and support networks

6. **Rethink how our knowledges are passed down:**

Finding opportunities to share and learn Métis knowledges is key to strengthen *blawn*. Because many Métis had to hide their identity and their knowledges, some intergenerational and traditional ways of sharing knowledge may not be viable, as exemplified by Janelle's stories of her grandparents passing away when she was young and thus not passing down their knowledges to her. Hence, it is important to reconsider how our knowledges are passed down as a way to share and preserve these ways of knowing for future generations. For example, a few participants had identified that they learned how to hunt from friends and family, who helped them learn knowledges associated with this land-based practice. That being said, it is important to share your own knowledges and land-based practices with youth and individuals who want to learn more and may not have access to people who can teach them. On the flip side, seek opportunities and make connections with people who are able to teach you new knowledges. Look for events that may enhance your environmental knowledge and land-based practices, talk to others about your knowledges and land-based practices, and be open to learning new things.

7. **Question, document, and talk about the changes you see around you:**

Be reflexive and think about the changes you might notice around you. Ask yourself if it is something you may have noticed or experienced before, or if this is something new. Document these changes and talk to others about these changes. As Nathalie Kermoal states, "the Métis recognize the necessity of documenting the knowledge, practices, and land uses that will in turn allow them to think about the revitalization and sustainable development of their distinct culture" (2016, p. 131). Remain open-minded and receptive when others share their observations, even if they differ from your own.

8. **Continue to think long-term and look out for one another:**

Continuing to think long term not only empowers our communities to navigate current challenges, but it enhances adaptive capacity for generations to come. By continuing to embrace the enduring knowledges of our ancestors who recognized the importance of generational thinking, we can also think about how our actions today can preserve our culture, identity, knowledges, and traditions, while also ensuring a livable and healthy environment for future generations.

9. **Taking care of your mental health:**

A few participants identified that they were worried about the future, especially regarding the future for today's youth. It is important to take care of your mental health in culturally relevant ways. It can be difficult to remain hopeful when the future is changing and seems increasingly uncertain. We do not experience the same emotions regarding climate change, and our emotions can vary day to day. While this is not an exhaustive list, there are steps you can take, such as talking to others about your emotions, searching for peace through traditional ceremonies, or accessing various supports and services that may help you. Appendix E lists additional resources

that might be helpful if you may be struggling with dealing with emotions related to climate change.

This section further strengthened the sash by providing recommendations based on the kitchen table conversations for Métis citizens, by arguing that reclaiming Métis culture, knowledges, and connection to the land has the potential to enhance Métis communities' adaptive capacity. Although this is not a complete list of actions Métis citizens can take, it is a starting point to provide guidance on reclaiming and revitalizing Métis identity, Métis knowledges, connection to the land, and finally, how to adapt to a changing world. However, it is also important to remember that each individual might partake in reclamation and revitalization in diverse and unique ways. The next sections will highlight other recommendations based on the kitchen table conversations and interviews with the representatives from the municipalities for the MMF Locals, Municipalities, and finally, the Province of Manitoba.

5.2.2 Recommendations for MMF Locals

These recommendations revolve mostly around activities that the St-Pierre and St-Malo locals could do to support citizens and the communities to revitalize and reclaim their history, identity, knowledges, and connection to the land, based on what the participants said in the kitchen table conversations. Although these recommendations are rooted in the Rat River area, they can possibly be relevant to other MMF Locals. However, it is also important to recognize that because the executive members on the MMF Locals are volunteers, there may be limited capacity to enact these recommendations. These recommendations are not exhaustive, but rather, they focus on reclaiming Métis knowledges and connections to the land that stem from the kitchen table conversations.

1. **Community Harvesting Opportunities**

Multiple participants identified that they learned to hunt with the guidance of mentors, who were often family members or friends. They emphasized that without these connections, they might not have the opportunity to get involved with hunting. Furthermore, as identified throughout this thesis, many participants may not have had access to people who can teach them to harvest due to various factors including family members hiding that they are Métis, the older generations not being taught to harvest, or absence of intergenerational knowledge transfer. Having activities like hunting camps presents an opportunity where knowledgeable and experienced Métis citizens can mentor other Métis citizens, especially youth, who may lack access to knowledgeable mentors. This could potentially bridge the gap for those who are eager to learn but lack direct access. Other harvesting opportunities such as medicinal plant harvesting would be beneficial for Métis citizens to relearn and reclaim knowledges about plants. Similar to the hunting camp idea, someone knowledgeable could teach others how to harvest medicinal plants; rooted in Métis teachings of respectful harvesting.

Land-based camps provide an ideal setting for these teachings, where community members can teach one another to deepen their knowledges. Not only would this allow participants of these camps to reconnect with land-based knowledges, but it would also facilitate forging meaningful relationships, strengthening communal bonds and visiting with Michif kin. Thus, these opportunities can also reinforce the importance of sharing and relationships when it comes to harvesting, in which multiple participants had discussed.

2. Gardening and Canning Opportunities

As gardening and canning were identified as an important way to connect with the land along with the upsides of becoming less reliant on grocery stores and cost saving opportunities, bringing these practices back to our communities can have multiple benefits. Gardening and

canning foster self-sufficiency and enhance local food systems while also offering access to nutritious foods. Reducing dependence on grocery stores that source some produce from distant locations in turn also helps mitigate climate change by decreasing reliance on long-distance food transportation networks, thus reducing carbon emissions. Although gardening and canning provide multiple benefits, it was identified by participants that gardening and canning is becoming less common. Offering resources such as canning workshops and gardening groups for Michif citizens can help others start the process by sharing their knowledge. Establishing a community garden could also serve as a valuable resource for individuals who lack space for a garden while also possibly providing surplus produce to be shared with Elders or those in need.

3. Michif Lessons

Although this recommendation was not brought up in the conversations, it stems from my personal reflections on the important role of language in transmitting knowledges. According to Statistics Canada, in 2021 there were only 1,845 people able to speak Michif, the majority of whom learned Michif as a second language (Statistics Canada, 2023). Notably, only 40 of those individuals live in Manitoba (Statistics Canada, 2023). Although this represents a 57.7 percent increase in the number of speakers from 2016 to 2021 (Statistics Canada, 2023), which is quite significant, it is clear that Michif is an extremely endangered language, and it is crucial to revitalize this language. Revitalizing Michif not only helps preserve our Michif culture and identity, but it is also significant in the context of climate change adaptation since Indigenous languages, including Michif, are rooted in the land. Ferguson and Weaselboy describe the importance of language for reconnecting with the land as “language, while at first glance may seem unrelated to discussion of environmental sustainability, is deeply central to both Indigenous epistemologies and ontologies, and thus understandings of life on earth” (2020, p. 1). Fostering

the revitalization of Michif will further contribute to the crucial connection between land and language and enhance adaptability.

5.2.3 Recommendations for the MMF

The following two recommendations outline strategic steps that the MMF can take to support Métis Citizens and MMF Locals across Manitoba to ensure that the Métis are able to adapt to the challenges posed by climate change while safeguarding our culture, language, connection to the land, and knowledges.

1. **Support MMF Locals and Métis citizens across Manitoba in their own adaptation efforts:**

It is important to support MMF Locals across Manitoba in their own efforts to address climate change adaptation, including financial assistance, access to resources, and other necessary provisions. This collaborative approach would help ensure that adaptation efforts are tailored to the specific needs and priorities of the various Métis communities across Manitoba. As there are 136 MMF Locals across Manitoba (Manitoba Métis Federation, 2023b), Métis citizens in the southeastern part of the province may face different climatic threats than citizens living in northern Manitoba, for example. Thus, a local-regional approach would be appropriate.

2. **Enhance collaboration between MMF citizens and Indigenous kin – provide a platform where knowledges can be exchanged:**

There needs to be increasing opportunities for Métis citizens across Manitoba to collaborate and share knowledge of our physical environment, especially given the fast-changing evolving impacts of climate change. Furthermore, there also needs to be opportunities for collaboration with our First Nations kin in this province. A pertinent and recent example of this cross-cultural collaboration is exemplified by Déric, who shared that he learned how to set a net for fishing

from a Cree man in northern Manitoba. Déric then shared this knowledge, with permission from the Cree man, with other Michif kin at a recent land-based fishing camp on Lake Winnipeg organized by the Métis Harvesting Collective. This example of cross-cultural knowledge sharing will be crucial to adapt to climate change because it fosters diverse perspectives and deep-rooted knowledges of local ecosystems. This is especially important considering the fast-paced changes that are likely to occur in the (near) future. Collaboration amongst Métis citizens and other Indigenous kin in this province needs to be encouraged and fostered by the MMF.

Moreover, Indigenous kin may have had some similar experiences, such as the impact of animal rights movements on harvesting and trapping activities. For instance, the Inuit have faced significant challenges due to various campaigns aimed at banning seal hunting in the Arctic (Wenzel, 1991). Participants in this study similarly observed that the animal rights movement has greatly reduced trapping activities in the research communities. By incorporating these shared experiences into collaborative efforts, we can further enrich our understanding and enhance our collective response to environmental challenges.

3. **Provide guidance and financial support for MMF Citizens who want to harvest:**

The start-up costs to commence harvesting can be a major barrier and deterrent for some people to harvest. As identified by Darrell, if you have family that is already involved in hunting then they might have all the equipment needed. But, if you are just starting from scratch, acquiring equipment, such as firearms or fishing rods, can be quite expensive. To address this barrier to harvesting, the MMF can implement initiatives aimed at reducing the financial burden of the start-up costs. Additionally, having some mentorship programs at both the MMF level and at the MMF Local level would be crucial for guiding new harvesters through the process, such as

having hunting courses available where knowledgeable citizens can also teach others about their harvesting knowledges.

4. **Sustain and enhance current programming:**

It is important to continue MMF programs and enhance programs that address the topics covered in this chapter focused on reclamation and revitalization. These include the Elders and Youth Gathering, the MMF Climate Symposium, various cultural programming, environmental monitoring programs, and Michif language programs. And, some current programs could be expanded, such as possibly expanding the MMF First Time Home Purchase Program (FTHPP) to also include funding for Métis citizens who may want to purchase land for harvesting purposes. As identified by the participants in this research, hunting on Crown Land is not only difficult, but it can also be dangerous due to high volumes of hunters during the regular season. Several participants identified that they much prefer to hunt on private Métis-owned land as they face less judgement from non-Indigenous hunters. In conclusion, sustaining and enriching MMF initiatives that are geared towards reclamation and revitalization are vital.

MMF Climate Change Symposium

The Climate Change Symposium, initiated by the MMF two years ago, is an annual gathering which has the goal of bringing together Métis citizens, Youth, and Elders to discuss climate change. Having attended both annual Climate Change Symposium events, I have heard fellow participants emphasize the importance of continuing this event to enable and foster dialogue amongst Métis citizens and communities. Therefore, it is evident that the MMF must continue to host this event, while also actively seeking and heeding citizens' feedback, recognizing that goals and priorities within communities may evolve over time. This event also embodies the momentum that is being developed for Métis-led and Métis-specific climate

change action. It is recommended to continue to highlight the voices and knowledges of Michif citizens and communities at events like these to align Métis knowledges with climate action.

I also had the privilege to present my research to the larger MMF community as well as MMF leadership at the second annual Climate Change Symposium. Presenting my research at this event demonstrates my commitment to reciprocating the knowledge gained from this research with the wider Michif community. I received extremely positive feedback from attendees, many of whom expressed pride and happiness in seeing Michif researchers giving back to their community while also reclaiming our identity and our knowledges. In brief, events like the Climate Change Symposium serve as crucial platforms for advancing collective action and addressing the challenges posed by climate change to Michif communities.

Figure 9

Presenting at the second annual MMF Climate Change Symposium

5.2.4 Recommendations for Municipal Governments

The interviews with the RM of De Salaberry and the Town of St-Pierre-Jolys revealed various opportunities and barriers for incorporating Métis knowledges in climate change

adaptation planning. Although these recommendations are more specific to the research area, the hope is that these recommendations can be applicable to other municipalities across Manitoba and across the Métis homeland. The recommendations for incorporating Métis knowledges in municipal adaptation planning and endeavours are as follows:

1. **Enhance collaboration and communication between the municipality and Métis community members:**

Communication was identified as a challenge and a barrier to include Métis community members in municipal affairs. As there is limited capacity within the St-Malo Métis Local and the St-Pierre Métis Local as the executive positions are volunteer positions, it might be beneficial to have a representative from the municipality attend MMF Local meetings that can be identified as a point of contact. At times, it is easier to get a hold of people at meetings and discussing in person rather than through email communications, for example. This would also enhance relationship building and trust between the MMF Locals and the municipalities, hopefully leading to Métis community members having a seat at the table and feeling as though their concerns vis-à-vis climate change and environmental changes are not only heard, but taken into consideration. Moreover, the MMF Locals should be seen as partners to the municipalities, where the Locals can represent Métis citizens in the communities they serve.

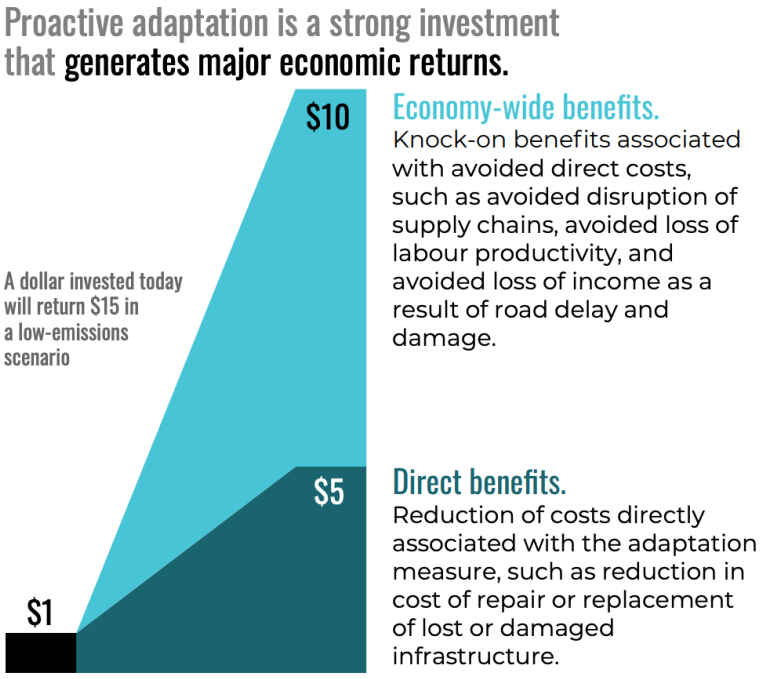
2. **Plan proactively by balancing short-term and long-term goals:**

As identified in the interviews, rural municipalities may not have the capacity and funding to effectively plan for both short-term and long-term goals. Short-term goals are important, but it is important to consider how today's actions will impact our future. With that being said, it would be key to integrate climate change adaptation into existing and future policies. Although there may not be a climate adaptation plan in place, due to the intersectional nature of climate change adaptation, it is ideal to have a climate change adaptation lens in all undertakings. This ensures

that climate change adaptation is embedded into everyday decision-making processes, making it easier to balance short-term needs with long-term objectives. Moreover, although the upfront costs may be large, there can be major economic benefits to investing in proactive and preventative measures today. According to the Canadian Climate Institute's report *Damage Control: Reducing the Costs of Climate Impacts in Canada*, they argue that for every $1 spent on adaptation measures, $13-$15 will be returned in both direct and indirect savings and benefits (see Figure 10) (Canadian Climate Institute, 2022). However, beyond potential economic benefits, it is important that our actions today reflect how we want the future generations to thrive in a healthy and viable environment, especially in rural areas.

Figure 10

Depiction of positive economic impacts of climate change adaptation



Note. From Canadian Climate Institute. (2022). *Damage Control: Reducing the costs of climate impacts in Canada.* Canadian Climate Institute. https://climateinstitute.ca/wp-content/uploads/2022/09/Damage-Control_-EN_0927.pdf

3. **When conducting studies, ensure that Métis knowledges are included:**

When hiring external companies to conduct studies, such as land-use planning studies, for example, it is crucial to ensure that Métis knowledges are included. As identified in this thesis, Métis people in the Rat River area have a deep connection to their physical environment and are very attuned to noticing changes or understanding environmental processes. Including Métis knowledges can further enhance the effectiveness and relevance of research and policy development, leading to more sustainable outcomes. It is also important to move from passive acknowledgement to active inclusion. This means valuing Métis knowledges with the same weight as scientific data, while also seeing where these two can collaboratively yield the best results. Moreover, it would be beneficial to hire Indigenous-based companies (preferably Métis) that may be better suited for understanding the importance of Métis knowledges.

4. **Adopt innovative engagement approaches:**

Both the RM of De Salaberry and the Village of St-Pierre-Jolys identified that engaging with community members can be challenging, as their current engagement strategies, which include surveys and open-houses, do not yield the best results. The RM of De Salaberry mentioned that they have recently started going to local hockey games and setting up a booth at the arena so that they can chat with community members. This initiative demonstrates that by meeting community members where they already are, such as at sporting events, can make engagement and participation more accessible and convenient. Although this is beneficial for all community members, it will also be beneficial to Métis community members who may value face-to-face engagement, as it can sometimes be difficult to convey our knowledges, for example, using online surveys. By embracing and enacting innovative approaches tailored to the needs and

preferences of Métis community members, municipalities can foster more inclusive and effective dialogue, ultimately leading to more culturally relevant adaptation efforts.

5.2.5 Recommendations for Manitoba Government

The following recommendations were informed by the conversations with participants, the literature review on climate change adaptation in Chapter 2, and the interviews with the municipalities. Although these recommendations apply specifically to the Province of Manitoba, the hope is that these recommendations can be used as guidance for the Federal Government's adaptation efforts, which have been severely lacking in Métis perspectives and knowledges. Moreover, this is not an exhaustive list, but rather, a starting point to creating more equitable adaptation planning that considers Indigenous knowledges, including Métis knowledges.

1. **Embrace local cultures, values, priorities, and needs:**

Avoid a one-size-fits-all approach to climate change adaptation and do not homogenize Indigenous peoples' cultures, values, priorities, and needs when it comes to climate change adaptation. As mentioned in Chapter 2, Métis knowledges are often pan-Indigenized, thus, it is important to move away from homogenizing all Indigenous peoples and their knowledges. That being said, funding should be reflective of how communities want to adapt to climate change, and the local context and priorities need to be taken into consideration (Pisor et al., 2023). Each community may have different priorities that are rooted in their own cultures, traditions, knowledges, and languages, and it should never be assumed what their priorities may be. Moreover, there should also be support for grassroots and community-based adaptation. Instead of creating new programs, there must be the recognition that many communities and grassroots groups are already contributing to climate change adaptation, and these must be supported.

2. **Integrate interconnected climate change impacts into province-wide adaptation planning:**

Participants in the kitchen table conversations established that they harvest in various parts of the province, and the Métis have been very mobile for hunting for a very long time, as exemplified by the bison hunts. It is important to consider the interconnectedness of environmental impacts, such as the recent large sewage spill of over 228.4 million litres into the Red River in Winnipeg from the South End Treatment Sewage Plant (Unger, 2024). This spill, although geographically distant from the research communities in this thesis, has far-reaching impacts, such as increasing phosphorus levels in Lake Winnipeg, which in turn can lead to more blue-green algae growth. These algal blooms risk the entire health of Lake Winnipeg and threatens fishing activities on Lake Winnipeg (Hashmani, 2023). As the Métis participants identified, many of them do harvest on Lake Winnipeg, and although they do not live in this area, the effects of a sewage spill in Winnipeg impacts Métis citizens' livelihoods and the ecological health of an important harvesting area. Although this example pertains to Manitoba, it is important to consider this at a federal level as well, particularly considering the historical imposition of provincial, territorial, and national borders on Indigenous territories. It is important to acknowledge that many ecosystems, species ranges, watersheds, etc. cross these arbitrary boundaries.

3. **Ensure fair climate change adaptation funding:**

Interviews with municipal representatives showed that they feel as though larger municipalities and/or larger urban areas tend to be the recipients of grants for climate change adaptation. Much of this stems from increasing urbanization and depopulation in the Prairie provinces, which has decreased funding for rural municipalities (Sauchyn et al., 2020). It is

imperative to recognize that smaller municipalities and communities may not have the capacity or resources that larger municipalities or urban areas may have to adapt to climate change. By ensuring fair and proportionate funding decisions, we can better address and support the unique needs of smaller municipalities and communities regarding climate change adaptation. Rural and remote communities have not been prioritized for both policy development and funding (Vodden and Cunsolo, 2021), and this needs to change both for provincial and federal climate change funding opportunities.

4. **Recognize Métis knowledges as science and rethink adaptation efforts:**

As identified at the beginning of this chapter, it is important to rethink adaptation efforts and move away from thinking solely about infrastructure and technological solutions to adapting to the climate crisis. As identified, Métis individuals and communities reclaiming their knowledges is an important adaptation effort, and this must be uplifted. Furthermore, it is essential to recognize Indigenous knowledges, including Métis knowledges, as having an equal footing as Western science in climate change adaptation efforts. With recent pushes for using Two-Eyed Seeing frameworks or braiding Western science and Indigenous knowledges, it is important to understand that to truly and equitably bring Indigenous knowledges into climate change discourses, both knowledge systems must be considered as having equal weight (Wale, 2022). Manitoba currently does not have a climate adaptation plan or framework, and so there are opportunities to equitably bring Indigenous knowledges, including Métis knowledges, into adaptation planning. However, caution is warranted against the superficial inclusion of Indigenous knowledges while also homogenizing these knowledges, which, as identified in Chapter 2, has been common in government-led climate change adaptation thus far.

5. **Educate the general public about Métis use of crown land for harvesting:**

The participants in this research identified that there is a lot of judgement from other hunters regarding Métis harvesting, specifically regarding the Métis Laws of the Harvest in Manitoba. Education for non- Métis hunters about the Métis laws of the Harvest is an important step to hopefully move from judgement to understanding. Amending the annual provincial hunting guide, or working in partnership with the Manitoba Wildlife Federation to include these laws in their policies or website would be a good start. Although this recommendation is specific to Manitoba, there might be similar experiences across Canada where this could help generate understanding and tolerance. Fostering public understanding and education is an important step to ensure that the Métis can continue their respectful harvesting practices without facing judgement.

6. **Include Indigenous-led land-based education in the K-12 education curriculum:**

Although there have been recent pushes to include Indigenous knowledges, cultures, and histories in the education curriculum in Manitoba, including various toolkits and resources for educators, there needs to be more opportunities for land-based learning in schools. According to Wildcat et al., "settler colonialism has functioned, in part, by deploying institutions of Western education to undermine Indigenous intellectual development through cultural assimilation and the violent separation of Indigenous peoples from our sources of knowledge and strength – the land" (2014, p. II). It is crucial to provide educational opportunities that are led by Indigenous peoples and that are rooted in land-based learning for students to understand Indigenous knowledges and perspectives while fostering decolonization efforts (Zurba et al., 2023). Indigenous-led land-based educational opportunities can "re-engage Indigenous youth in their own education, build community connectedness, and revitalize Indigenous languages and practices" (Cherpako, 2019).

Furthermore, having opportunities for youth to learn in an outdoor environment also has other benefits, including "enhanced resiliency, increased sense of connection to culture, strengthened relationships to land, improved physical and mental health outcomes, increased educational outcomes, improved food security, and positive environmental outcomes" (McDonald, 2023). Land-based education can also provide important connections between youth and traditional knowledge holders and/or Elders while also improving youth's connection to their physical environment, teaching them how to be good stewards of the land (Cherpako, 2019). As Robin Wall Kimmerer states, "it's not just land that is broken, but more importantly, our relationship to land" (2015, p. 9). Thus, Indigenous-led land-based educational opportunities can hopefully lead to healing this relationship while fostering many other positive benefits. However, once again, it is important to avoid pan-Indigenizing and ensure that all Indigenous peoples in Manitoba are included and represented, including the Métis.

7. **Enhance collaboration and coordination:**

As identified in Chapter 2, lack of coordination across various governments and with local groups can impede action on climate change adaptation, which was especially emphasized in responses to the National Adaptation Strategy (see Ness and Miller, 2022; Ness, 2023). Haque et al. (2018) also found that in Manitoba there is a lack of coordination among different government departments and between provincial and local authorities. Furthermore, this should also be extended to meaningful collaboration with Indigenous governments, communities, and individuals. By embracing diverse perspectives through collaboration and coordination, adaptation planning and strategies are not only prone to being more resilient, but they are also more reflective and representative of the needs, values, priorities, cultures, knowledges, and

traditions of as many citizens as possible. Métis citizens, communities, and governments can enrich these efforts with the unique knowledges they hold.

8. **Be proactive instead of reactive:**

Similar to the recommendation for municipalities to take proactive approaches, it is imperative to take a proactive approach to planning for climate change at a governmental level as well. Haque et al. (2018) found that in Manitoba, although there were significant policy changes in response to extreme weather events, the responses were mostly reactive. With the emerging threats of climate change impacts, taking proactive measures at both the provincial and federal level can help anticipate the impacts of climate change more effectively, which in turn helps safeguard communities and ecosystems for the future.

9. **Promote restoration and rehabilitation of wetlands and grasslands:**

As identified in both the literature review and with conversations with participants, some land-use changes have had serious consequences, including the loss of wetlands and native Prairie grass ecosystems. Although it is known that wetlands are important for sequestering carbon (Were et al., 2019), there also needs to be the recognition of the importance of grasslands in sequestering carbon (Bai and Cotrufo, 2022; Lark, 2020). Similar to wetlands, restoring and rehabilitating grasslands also contributes to increasing and supporting biodiversity, providing habitat for various species, enabling pollination, reducing erosion, and offering food and medicines (Bengtsson et al., 2019; Ducks Unlimited Canada, n.d.). Not only will rehabilitating and restoring these ecosystems contribute to both mitigating and adapting to climate change, but these ecosystems also provide an array of positive benefits to Métis communities, such as supporting important animal and plant species or even holding cultural and social importance.

Finally, it is important to seek Indigenous knowledges, including Métis knowledges, for activities that support rehabilitating and restoring the aforementioned ecosystems.

5.3 Chapter Summary

This chapter highlighted the need to rethink climate change adaptation in policy discussions, particularly concerning Indigenous communities such as the Métis from the Rat River area. Reclaiming Indigenous knowledges and connections to the land is an important step towards prioritizing community needs and enabling effective climate change adaptation. Furthermore, it was identified that it is important to shift from solely relying on Western technological and infrastructural solutions to climate change adaptation towards supporting Indigenous communities in revitalizing and reclaiming their knowledges and connection to the land to ensure a healthy environment for future generations. This chapter also provided multiple recommendations based off the kitchen table conversations, interviews with the municipal representatives, and the literature review (Chapter 2). This chapter provided recommendations for Métis citizens in the Rat River area by building upon the thematic framework of the sash by now strengthening the various strands. Recommendations were also provided for the MMF Locals, the MMF, municipalities, and the Manitoba Government (while also being applicable to the federal government). Finally, the chapter circled back on the importance of the kitchen table in fore fronting Métis culture, identity, histories, knowledges, and connection to land for climate change adaptation policies. My hope is that we can now move forward while wearing this theoretical sash with pride and strength.

5.4 Implications and Suggestions for Future Research

This thesis has explored the diverse threads of knowledges and stories told by the participants in the kitchen table conversations, recognizing the importance of the *roozh*, *blawn*, *nwayr*, and

zhounn threads in shaping Métis perspectives of climate change and climate change adaptation, rooted in the Rat River area. By carrying forward these insights, this chapter has proposed actionable recommendations for Métis citizens, MMF Locals, the MMF, Rural Municipalities, and finally, the Provincial Government. These recommendations are based on the results and the literature review of this thesis. Just as the strands of a sash can form different patterns and colours, this chapter presented the results from the previous chapter as interconnected threads that may be weaved differently with the overall goal of moving forward with climate change adaptation that is rooted in Métis knowledges. As you, the reader, engage with these threads, consider how they may be woven with your own knowledges and experiences, forming a unique pattern that contributes to the larger collective effort of addressing climate change. Finally, the next section reflects on the vital role of the kitchen table in fostering dialogue on climate change adaptation. It also provides a summary of the thesis, outlines potential directions for future research, and discusses approaches for knowledge dissemination.

5.4.1 Circling Back to the Kitchen Table

"Visiting may seem on the surface to be a passive and apolitical activity, but it is, in fact, political, re-centring authority in a way of relating that is itself rooted in a cultural, spiritual, and social context" (Gaudet, 2019, p. 53)

As I am currently wrapping up this chapter sitting at kitchen table, I hold with me the importance of the kitchen table in Métis communities. Our kitchen tables were the sources of resistance planning, where our beadwork came to life, where humorous stories filled the room with laughter, where food was eaten, where tea was drunk, and where our knowledges were passed on. As the kitchen table can be viewed as a familiar and intimate space, it can foster

meaningful dialogue about climate change, as exemplified in this research. As Métis, we need to continue to gather around kitchen tables and continue to share our knowledges amidst our changing physical environments. The values underlying the kitchen table conversations such as empathy, mutual respect, trust, and openness can inform more inclusive, participatory, and effective climate change adaptation policy development processes across various levels, whether it is individual, communal, municipal, or provincial. This research has initiated dialogue of the vital role of Métis knowledges in shaping and responding to climate change adaptation, sparked by visiting around a kitchen table.

Throughout this thesis, I hope to have brought forth the voices and knowledges of the Red River Métis, who have been extremely underrepresented in climate change literature, and specifically those of the Métis from the Rat River. This research has addressed the research objectives, in which it contributed to 1) reclaiming and documenting Métis identity and history in the Rat River area; 2) reclaiming and documenting Métis knowledges and connection to the land; 3) documenting and examining climate change impacts in the region along with land-used changes over time; 4) developing a nuanced and holistic understanding of current adaptation efforts at the individual, communal, and local political level; 5) developing constructive, holistic, and culturally-relevant recommendations for adaptation actions that are tailored to the specific needs and priorities of Métis communities in the Rat River area; and 6) bringing Métis knowledges into the climate change adaptation landscape.

Chapter 1 discussed my relation to this thesis along with the purpose of this thesis, the background and context of the research area, and the research objectives, as stated above. This chapter contributed to reclaiming and documenting the history of the Rat River area, setting the stage for understanding the cultural and historical context for this research. Chapter 2, the

literature review, reviewed climate change in the Prairies, its disproportionate impacts on Indigenous communities, as well as land-use changes stemming from colonial policies. Additionally, the chapter discussed Indigenous knowledges and climate change, while also highlighting Métis knowledges. Furthermore, the chapter examined previous and existing climate change adaptation policies in Canada while also looking at Indigenous-led adaptation programs. Chapter 2 underscored the importance of recognizing and including Métis knowledges in climate change adaptation efforts to address the unique challenges that Métis communities may face in responding to climate change. It further emphasized the need to ensure that this is done in a way that uplifts Métis identity, culture, language, knowledges, and connection to the land.

Chapter 3 described community-based research and Indigenous research methodologies, including the emergence of Métis-specific methodologies. The Métis-specific methodology used for this research – the Métis Kitchen Table Methodology – was then explained, along with the methodology for transcription and analysis of the conversations with participants. Chapter 4 presented the results of the kitchen table conversations, which was portrayed through the thematic framework of the Métis sash, using the colours *roozh*, *blawn*, *nwayr*, and *zhounn*. This chapter also presented the results from the interviews with representatives from the RM of De Salaberry and the Village of St-Pierre-Jolys. Chapter 4 painted a holistic picture of the kitchen table conversations with Métis citizens, contributing to documenting and revitalizing Métis identity, history, culture, knowledges, and connection to the land while also describing observations of environmental change and current adaptation practices.

Finally, Chapter 5 provided recommendations based on the literature review and the conversations and interviews. The chapter started by explaining the need to rethink adaptation in Indigenous communities, notably Métis communities. The chapter emphasized the importance of

understanding that reclaiming and revitalizing Métis knowledges is a form of climate change adaptation. Recommendations to strengthen the threads discussed in chapter 4 were provided for Métis citizens, MMF Locals, the MMF, Municipal Governments, and the Provincial Government. Finally, it circled back to the importance of the kitchen table, arguing that the kitchen table is an important space to foster meaningful, culturally relevant, and holistic dialogue on climate change adaptation.

5.4.2 Research Implications

This research is the first thesis project to bring Métis knowledges into the climate change adaptation discourse – a knowledge system that has been severely underrepresented thus far. Métis knowledges have not only been extremely underrepresented in climate change adaptation literature, but also in climate change adaptation policies at numerous governmental levels. This research framework has made substantial contributions to both empirical understandings and methodological advancements, notably by increasing and shedding light on Métis-specific methodologies in academia. Although I did not create the Métis Kitchen Table Methodology, its application in climate change adaptation research presents a new culturally appropriate and holistic approach that has not been previously explored. Moreover, not only has this research filled a gap in climate change adaptation literature, but this research has also contributed to returning sovereignty to the Métis from the Rat River by reclaiming and revitalizing our histories, identity, knowledges, connection to the land, and stories. This research has hopefully paved the way for the recognition and inclusion of Métis knowledges in climate change discourses.

5.5 Further Research

This research barely scratches the surface of the history and identity of the Métis in the Rat River area, their knowledges and connection to land. As this is the first thesis to look at how Métis knowledges can contribute to climate change adaptation, much more research is needed in this specific academic field. There is much potential for continuing research of this nature, while also inspiring other Michif communities to undertake community-based and community-led reconnection and revitalization to become more adaptable to climate change. Furthermore, there is the possibility to delve deeper into the importance of decolonial and Métis-specific methodologies for climate change research, as exemplified through the Métis kitchen table methodology. Due to the time constraints of a master's thesis, this research represents a mere glimpse in exploring the vast and diverse knowledges and experiences of Michif citizens in this area. Additionally, more research can be conducted to assess the importance of "soft" adaptation approaches for climate change adaptation. This shift from Western-centric approaches to climate change adaptation towards recognizing the importance of reconnection, particularly for Indigenous peoples, represents a crucial avenue for future inquiry, essential in the context of climate change adaptation.

5.6 Knowledge Sharing

As a way to make this research accessible for community members, the Red River Métis Nation, and the wider public, I am committed to summarize the research findings in an accessible and culturally relevant format that is agreed upon by the St-Pierre and St-Malo MMF Locals. The findings from this thesis will also be shared with the research participants and community members, the St-Pierre and St-Malo MMF Locals, the municipalities involved, and the Manitoba Métis Federation. And, as many community members have said that they would like to read the full thesis, I will ensure that a physical and/or digital copy will be available to

share with them. I am committed to sharing my research with the wider Michif community, as exemplified by my recent presentation at the MMF's Climate Change Symposium. Moreover, in following Wahkootowin, the responsibility to all my relations, I bear responsibility to share the knowledges at the base of this research, not only for the following years, but as a lifelong commitment. I commit to being a good community member and bolstering Michif pride in Rat River Michif histories, identity, connection to the land, and knowledges.

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Appendix A

THE UNIVERSITY OF WINNIPEG | Vice-President, Research and Innovation

PROTOCOL APPROVAL

TO: **Annie Martel (Graduate Student)**
Principal Investigator

Dr. Ian Mauro and Dr. Ryan Bullock
Supervisors

FROM: **Rob Pryce, Chair**
University Human Ethics Research Board (UHREB)

Re: **Protocol # HE19048**
Métis Knowledge, Climate Change Risk Assessment, and Adaptation Planning in Michif Communities in Southeastern Manitoba

Effective: 26-Apr-2023 **Approval Period**: 1-Year **Expiry:** 26-Apr-2024

University Human Research Ethics Board (UHREB) has reviewed and approved the above research. UHREB is constituted and operates in accordance with the current version of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.* This approval is subject to the following conditions.

1. Approval is granted only for the research and purposes described in the application.
2. Any modification to the research must be submitted to UHREB through WebGrants for approval before implementation.
3. Any deviations to the research or adverse events must be submitted to UHREB immediately.
4. This approval is valid for one year only and may be renewed for one additional year by submitting a renewal request through WebGrants ("Post Approval Activity" form) by the above expiry date.
5. Any unanticipated issues or events during this project that may increase the level of risk to participants, or has other ethical implications that may affect participants' welfare, must be reported to UHREB without delay.
6. Investigators must also be aware of other policies and procedures that may apply to their research (e.g. PHRPC; UW vulnerable sector checks for work involving minors; Tri-Agency Research Data Management Policy).
7. A Status Report must be submitted through WebGrants to UHREB when the research is complete or terminated.
8. The University of Winnipeg may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Winnipeg UHREB policies and procedures.

Signed:

Chair, UHREB

April 26, 2023
Date

Appendix B

MANITOBA MÉTIS FEDERATION
300 - 150 Henry Ave., Winnipeg, Manitoba R3B 0J7
Phone: (204) 586-8474 Fax: (204) 947-1816 Website: www.mmf.mb.ca

David Chartrand, LL.D. (hon), O.M.
President

July 27, 2023 ***VIA E-MAIL***

Ms. Annie Martel
Graduate Student
University of Winnipeg – Department of Environmental Studies
515 Portage Avenue
Winnipeg, MB R3B 2E9

Dear Ms. Martel:

Re: Métis Knowledge, Climate Change Risk Assessment, and Adaptation Planning in Michif Communities in Southeastern Manitoba

It is with great pleasure that I write this letter of support for your research involving the Red River Métis in your project entitled *Métis Knowledge, Climate Change Risk Assessment, and Adaptation Planning in Michif Communities in Southeastern Manitoba.*

The Red River Métis transcend any common, on-site specific "brick and mortar" community such as a village or a town and are made up of many settlements where Métis people reside. The historic Red River Métis are comprised of a common identity, culture, history, as well as interconnected political, social, entrepreneurial, economic, and kinship networks.

The Manitoba Métis Federation (the "MMF") is the Government of the Red River Métis and, as such, promotes and protects the political, social, cultural, and economic interests and rights of the Red River Métis. Founded in 1967, the MMF joined together existing Métis community organizations and local associations across the Province. Some of these had direct roots with traditional self-governance systems and self-determination traditions originating at the Birthplace of our Nation – *the Nouvelle Nation* – the National Homeland of the Red River Métis. Today, the MMF's governance structure includes over 120 Locals and more than 360 elected volunteer executives distributed across seven Regions. The MMF has an elected Cabinet consisting of twenty-three elected Members.

The MMF employs a centralized approach to engaging its Citizens in research and other activities in order to ensure the collective Métis interest is understood and respected. The MMF manages Métis data and research activities under the principles of the Red River Métis Community Research Ethics Protocol ("RMMCREP"). The MMF's Home Office is the first point of contact for researchers.

The MMF maintains a commitment to working within an ethical research environment that:

- Protects the privacy and confidentiality of Métis Citizens
- Oversees proposed research to ensure its Métis-specific cultural integrity
- Supports a process to engage Citizens, Locals, and Regions in research effectively
- Employs the principles of the RMMCREP

The MMF is committed to increasing both the number of Métis researchers and more specifically, research involving the Red River Métis. You have displayed a genuine intent to honour and respect the centralized research and ethical protocols outlined by the MMF in order to represent the distinction of Métis scholarship, unique to that of First Nations and Inuit. We appreciate your willingness to continue working with the MMF to conduct ethical research with the Red River Métis and we look forward to working with you in fulfilling your research endeavours.

Please feel free to contact me at research@mmf.mb.ca if you have any questions regarding the RMMCREP, the contents of this letter, or to discuss next steps.

Kind regards,

Jasmine Langhan, Director
Engagement and Consultation

Appendix C

Guiding questions for kitchen table conversations:

- Do you currently or have previously spent some time on the land in this area?
    - If so, what activities do you participate in?
- Have you noticed any changes in the environment over the years?
- Have you noticed or felt the impacts of climate change in your community? If so, how?
    - Does/would this impact your day-to-day livelihood?
    - Does/would this impact any harvesting activities?
    - *(If they are a harvester):* Do you find that you can adequately hunt/ harvest in your community, or are you having to travel elsewhere for these activities?
    - Have you noticed any changes in those areas?
- In your opinion, what are the biggest challenges in adapting to the effects of climate change (such as flooding, extreme storms, etc.) in your community?
- Is climate change affecting your Métis identity and culture? If so, how?
- What unique skills and knowledge do Métis people bring to navigating change and adapting to climate change?
- How can Métis knowledges support your community to adapt to climate change?

Appendix D

Interview questions for Municipalities:

1. Can you highlight any specific climate-related challenges or impacts that your community has experienced or anticipates facing in the future?
2. What are the top priorities for your town/rural municipality concerning climate change adaptation and mitigation?
3. How do you prioritize between short-term and long-term climate action goals?
4. How do you involve the local community in the decision-making processes related to climate change planning and adaptation?
5. Are there specific initiatives, policies, programs that are currently in place to address current and/or future climate change impacts?
    a. How do you approach emergency preparedness in the context of climate change-related events such as extreme weather events or natural disasters?
6. How does climate change factor into the planning and development of town/ municipal infrastructure projects?
7. Are there any specific infrastructure vulnerabilities identified due to climate change, and how are these being addressed?
8. How do you see partnerships with Métis communities or knowledge holders contributing to your climate change adaptation efforts?

Appendix E

Mental Health Support Line:

- ⇒ Manitoba Métis Federation Mental Health Support Line: **1-833-390-1041 Ext. 1** (7am to 11pm daily)

Books:

- ⇒ A Field Guide to Climate Anxiety by Sarah Jaquette Ray
- ⇒ Hope is a Verb: Six Steps to Radical Optimism When the World Seems Broken by Emily Ehlers
- ⇒ Hope Matters: Why Changing the Way We Think Is Critical to Solving the Environmental Crisis by Elin Kelsey

Websites:

- ⇒ "Taking Action on our Climate Emotions" from the *Climate Atlas of Canada* (https://climateatlas.ca/taking-action-our-climate-emotions)
- ⇒ "Your heart may be breaking, but please take care of yourself" from the *Canadian Climate Institute* (https://climateinstitute.ca/climate-anxiety/)

Videos and Podcasts:

- ⇒ Video: Why Hope Matters (https://climateatlas.ca/video/why-hope-matters)
- ⇒ Podcast: What to do about climate anxiety (Front Burner, CBC News)
- ⇒ Podcast: Navigating Climate Emotions with Dr. Britt Wray (My Climate Journey)

Appendix F

Darrell 1: We didn't grow up with it [being Métis]. When I was about 15, my great grandma made an off comment to my grandmother and her sisters about oh, je suis chanceuse que ton père m'a jamais traité de petite Métis, and that's when they started uncovering and they learned that we're Métis.

Dolores 1: Moi, j'ai appris que j'étais Métis seulement dans ma quarantaine, parce que memère Perreault, elle voulait pas nous dire qu'on était Métis. Et puis vraiment les jeunes Métis à l'école, ils se faisaient abusés, puis ils se faisaient tapocher. Alors je pense que dans un sens, tu sais, ma mère puis ma grand-mère elles voulaient nous protéger, mais aussi c'est que, bein ma grand-mère elle ne parlait jamais qu'elle était Métis. Parce qu'après, qu'ils ont pendu Riel, les Métis se sont cachés. Je sais qu'il y en a qui ont continué à s'affirmer comme Métis, mais il n'y en a pas tant que ça. Mon grand-père puis ma grand-mère ne disaient pas qu'ils étaient Métis parce que, bein y'étaient appelés des "half-breeds."

Candace 1: Ma grand-mère, elle avait honte. Yeah, so she did not announce it.

Dolores 2: Mais ma grand mère, elle faisait quand même des smudges. Mais elle nous disait pas que c'était un smudge, elle nous disait, "je fais de la boucane." Puis quand j'ai fait un smudge pour la première fois, j'ai senti, puis là j'ai dit, "Oh, memère Perreault!" Juste là que j'ai réalisé qu'elle faisait des smudges. Puis nous autres on disait, "bein memère, pourquoi tu fais la boucane? Et puis elle disait, bein parce que je suis malade. Mais elle n'était pas vraiment malade physiquement, tu sais, parce que le smudge, c'est pour libérer les énergies négatives. Alors pour elle, les énergies négatives, elle appelait ça malade, mais elle ne voulait pas nous expliquer c'était quoi un smudge.

Dolores 3: Tu sais, moi, je fais des cérémonies des Premières Nations. Des fois il y a des gens qui vont me dire bein, ça c'est pas la tradition Métis, mais moi je les fais parce que mes grands-mères, on leur a défendu de le faire, alors je veux les ramener. Puis mes grand-mères, c'étaient des femmes autochtones, tu sais. Il faut les respecter, eux autres, ça fait partie de qui on est, nous autres, les Métis.

Nicole 1: Yeah, well, you know, St-Pierre, this area along the Rat River, c'était les hivernants, right. So, they had land here. They had their cabins they had little houses and homesteads. But as winterers, they weren't here all year. Some of them would lease it to other people, they would let other families live on their land. And that's when a lot of these things were disputed when the surveyors came.

Edith 1: La drave. Bein pepère Desrosiers, tu sais dans le livre de la paroisse, parce qu'ils ont parlé de la drave. Ça venait eux autres sur la rivière avec les logs. Mais c'était cette rivière icitte, là. ils arrivaient au coin icitte là sur notre terrain, à pointe, puis c'est là qu'ils arrêtaient, puis ils débarquaient. En tout cas, il y avait un saw mill, puis ils faisaient des planches, puis ça c'était envoyé à Dufrost au train. Je sais pas comment il faisait ça avec leurs chevaux puis leur wagon puis toute ça. Ils appelaient ça la drave.

Janelle 1: Right around the time that the Rat River settlement started working its way out, mon grand-père y'a bâti le chemin de fer. Like that's when they came in, lui il s'est marié à une Carrière, that's like this whole area, la famille Métis.

Edith 2: La Crow Wing Trail elle, elle sort comme dans le champ de [membre de communauté], je pense là qu'elle sortait. Puis après ça, tu t'en va à grotte, t'as toute ça à la grotte, là, parce qu'il suivait la rivière pour s'en aller au Red River Settlement, qu'ils appelaient ça là, ça c'était à Fort Garry.

Dolores 4: Et puis elle raconte une histoire, ma grand-mère, puis elle me l'a pas raconté à moi, mais elle l'a raconté à une de mes cousines, parce que eux autres ils vivaient sur le bord de la Rivière aux Rats, au sud de Saint-Pierre. Puis elle raconte que, elle a dit quand j'avais sept-huit ans, il y a un homme qui est venu chez nous, pis il restait quatre ou cinq jours. Puis cet homme-là, c'était Louis Riel. C'est tout ce qu'elle a conté, elle n'a pas parlé de qu'est-ce qu'il avait l'air, Louis Riel, qu'est-ce qu'il racontait, là, tu sais. Des petits morceaux d'histoires qu'on découvre!

Jesse 1: Yeah et puis des fois c'est plus proche que tu penses, comme t'as des cousins que t'es vraiment proche avec, comme chaque jour, chaque semaine tu les vois, puis t'es comme troisième, quatrième cousins, des fois il y a une partie de ta famille que quelqu'un est décédé jeune, you never connected avec eux autres puis c'est ton deuxième cousin, right? Especially small town, right, tout le monde feel comme de la famille.

Dolores 5 : Et puis je me dis, les vieux dans le temps, ils allaient à la chasse, ils savaient quel chevreuil avait accepté de donner sa vie pour nous nourrir. Alors s'ils voyaient un chevreuil, « ah non, pas lui. » Ils attendaient. Alors ça aussi ou a perdu cette motion de communiquer avec les animaux.

Jesse 2: On suivait les saisons, we learned to respect the seasons, it's not always go go go take all you can, you gotta have rules within the rules. Comme moi je ne suis pas un pour aller tué des mères orignales parce que je sais que leur population est pas bonne. So you got to have your own limitations or your own personal rules within.

Jesse 3: Lakes that can sustain it [fishing pressures] like Lake Winnipeg like off number six highway where everyone goes walleye fishing, it can sustain it. Tu vas pas à des petits lacs comme St-Malo puis essayer de poigner ton 50 livres, des petits lacs they just can't sustain it. And you also got to put the big fish back in my eyes, I'm rambling on but these are all my personal rules and values on harvesting. It's never a number to hit, you're never trying to max out all the time, but yeah il y a des fois que tu vais aller à pêche 5-6 fois puis tu reviens avec rien. Puis y'a des fois que t'es dans le bon trou le bon temps de l'année, puis je pense que c'est correct puis c'est beau de prendre ton 30 livres, donner ça à tes parents, donner ça à tes membres de la famille or very close friends, comme tu m'as fait aujourd'hui, un vraiment beau cadeau, that is a Métis way of saying thanks or just looking out for each other.

Dolores 6: On est toutes reliées, les oiseaux, les animaux, les arbres, les plantes. Comme moi, je dis pas qu'on a des mauvaises herbes, je dis que toutes les plantes sont là pour une raison.

Dolores 7: Dans mon esprit à moi, la terre nous appartient pas. La terre c'est à tout le monde, et tout le monde doit en prendre soin.

Dolores 8: J'ai une cérémonie autour du feu parce que le feu, c'est important. J'ai une cérémonie à la terre pour aider aux gens à connecter avec la terre. Puis j'ai une cérémonie à la rivière. Pour moi ça fait tout parti de l'environnement.

Candace 2: I pick stinging nettle every year on my property because it grows here. Yeah, je fais du pesto avec, puis de la soupe. Yeah, it's super good for you, it's your first like, spring tonic, super high in antioxidants. Another thing that I do is I'll pick plantain here si je me sens mal, ou comme mosquito bites or you know stuff like that and sometimes like medicinal plants.

Nicole 2: Yes, you could chew the [plantain] leaf to kind of open it up, and then you put it on your sores. You put it on your bobos and stuff. Nos grand-mères faisaient ça. I could show it to you, it's outside on the sidewalk, it's everywhere. But that's not a weed. It's a medicinal plant. (Nicole)

Edith 3 : Mais dans le temps, il n'y avait presque pas [de chevreuils]. Ça fait qu'ils allaient dans l'est, comme Piney, c'est là qu'ils poignaient. C'est là qu'ils allaient plus à la chasse, partait pour une couple de jours dans le temps. Je me rappelle mon père, il se faisait une boite là, et puis du mangé, puis je sais pas qu'est-ce qu'il avait besoin, mais en tout cas, puis il s'en allait à la chasse.

Edith 4: Bein c'est parce que le prix a tombé. Parce que dans le temps, quand ils ont commencé à se révolter contre le monde qui tuait des animaux pour faire de la fourrure, mais ça l'a arrêté les trappeurs de faire de l'argent.

Janelle 2: I harvest on our land at home, we grow all the food on the land at home. So, and like I said, we're in the woods, on est isolé, so I grew up in that, I plan to stay in that, I love that. C'est ça ma vie comme je peux pas m'imaginer anywhere else, so I feel very connected to the land.

Gabrielle 1: Y'a un petit pepère qui a les bouts de doigts tout noir, ils sont mourant, comme ils vont tomber. Mais des fois quand ça lui fait mal, il va poigner du bear fat puis il met ça dessus. Healing, bear fat. Puis ça y aide!

Edith 5: Et on aidait à maman, comme allait aux cerises, nous autres, pas loin de chez nous là, en marchant… Puis on passait des après-midis à ramasser des cerises parce qu'on ne restait pas loin. Puis maman elle faisait du sirop de cerise. Puis on passait des heures là. On était bien, on s'assissaient dans le bois, puis en dessous des arbres, puis on mangeait des cerises.

Edith 6: On avait des grands jardins, aller ramasser des pois, pour moi, c'était une pénitence parce que on avait pas ainque un rang de pois, on en avait quasiment un demi-mile de pois, puis on ramassait ça à grosse cuvette… Puis maman elle cannait. Elle cannait du chevreuil, puis elle mettait un petit peu de lard avec.

Candace 3: On a des jardins, everything gets canned. I haven't bought pickles or tomato juice in years. Et du blé dinde, like we try to be as self sustainable as we can… I even made a risotto with roasted vegetables from the garden.

Edith 7: Puis aussi, bein encore, on fait des jardins, on fait du cannage ! Marie-Lynne elle canne, Gabrielle elle canne un peu, Janelle elle canne (ses trois filles).

Edith 8 : Je pense qu'on avait plus de neige. Moi je pense.

Candace 4: Puis there's no fruit for the birds or the animals. You know, puis I make rose hip tea so I've got wild roses at the end of the driveway puis je ramasse toujours des rosehips, mais je veux pas toute les ramasser parce que y'en a pas pour les oiseaux, you know, so like, that kind of sucks. And like even the deer that come in our yard to eat the pears, there's so many pears on the ground that they would be pawing at the snow to get to the pears then eat the pears. So you know, yeah for sure the wildlife will suffer if the berries aren't there, ou les noisettes or whatever, you know?

Edith 9: Bein dans le sud d'ici là, Vita puis aux frontières, il y a un herd, comment tu dis ça, de elk. Un troupeau.

Gabrielle 2 : Tout autour de la pig barn, il doit n'en avoir une vingtaine qui se tienne toujours toujours là.

Janelle 3: So I've been having to harvest later and later in the year because I'm out longer, because I can't get anything. Comme le dernier chevreuil que j'ai poigné, j'ai poigné la dernière journée de la saison, vingt minutes avant que ça ferme. Like it's been crazy. C'était le premier chevreuil que j'ai vu toute l'année. That was it. Puis comme quand j'était petite, they were everywhere. All the time. Tu ne pouvais pas sortir sans frapper un chevreuil. So yeah. Which is why I started harvesting on our land, but like it's just dried up completely.

Jesse 4: The hunting pressure has really grown from not that long ago. Like, y'avait des trails that I could go hunt 10 years ago that I wouldn't even dare stand there now. I don't know if either people have found it, or I think hunting has grown. Like it took a dip there for a while. But then people love eating organic, people love being attached to their food again, but it got axed there for a while. Like it wasn't cool to do, right. But now people are realizing that it's the best meat to eat and it's a fun thing to do with your family.

Janelle 4: The coyotes, not normal! Not normal. They're everywhere right now. Comme on a toujours eu un den dans notre cour. But they've never been like a huge problem. I

mean, cette année, I don't know it's like they're not acting the way they usually do. Les coyotes sont censés d'avoir peur du monde, c'est censé de chasser sa nourriture, but they're not doing that anymore, because a) the deer are gone. They're not moving through anymore. But les coyotes sont dans les routes tout le temps, like I've almost hit five coyotes this year.

Edith 10: Bein oui, c'était du bois! Icitte c'était toute du bois, ça j'imagine, puis ça l'a toute été coupé pour faire du package pour les vaches, puis y'ont défricher le terrain.

Janelle 5: Puis Otterburne c'est crazy, when they put in the railroad, they rerouted the river. So, the land that was owned by the different families and the way they built their houses, the way they built their yards, whatever it is, it was built for a river system that was different than what it is now. So, for us, we were, we were directly on the river. And now it's been rerouted like that and we're on like a diversion, whatever. And so, we don't have access to the water the way my ancestors did.

Edith 11: Oui, ça l'est pire [flooding]. Oui, parce qu'ils ont changé les drains, ein. Comme they dried the wetlands pour semer. Mais c'est ça, nous autres on est affecté de même parce que quand ça flood, à Emerson là, bein c'est pas ainque Emerson, c'est tout du long de 75, puis toutes nous autres là ce bord icitte là du long de la rivière, on a toute la misère. L'eau est haute, on flood. Avant t'avais plus comme de wetlands qui pouvaient en endurer. Mais là il y a plus de wetlands, là, ils les ont drainés pour faire des champs. Fait que ça va dans les drains, puis les drains ça va toute à la rivière. Fait que ça flood vite!

Jesse 5: But for me, like I've known that flooding thing for a while. On a un petit camp a family camp, pas trop loin d'ici, and all of a sudden, they drained a bunch of big swamps made this little ditch, and we've flooded every year since.

Candace 5: It is bad. Like I'm right on the Rat River, and we could walk across the river to the peninsula. And before it used to be at least like hip height. Yeah, comme 3-4 pieds, mais là c'est des centimètres.

Janelle 6: Yeah. So where I harvest it's low, very low. And like I said, the river runs through it. So it's been drying up, A lot. A lot a lot. Cette année c'est vraiment bad mais comme l'année passée c'était comme the opposite extreme, c'était comme floodé quasiment jusqu'à la maison. It hasn't been steady for a very long time. So yeah, it's up and down all the time. Which, climate change extremes. Yeah.

Marie-Lynne 1 :
Même mon père, comme pour chasser le chevreuil, il allait souvent lui aussi dans l'est, quand il était plus jeune.Avec le temps, il a commencé d'avoir plus puis plus de chevreuil ici, alors en dernier il allait juste ici, dans son terrain, là. Mais au commencement, il allait pas ici.

Candace 6: We have to make the youth of today aware because you know, that's their future. La Terre c'est leur future, les façons de préserver la Terre, les animaux, l'entregent, that symbiotic

relationship, they need to learn about that parce que they're the guardians now or they will be the guardians. You know what I mean? So if they don't learn the teachings that are important to preserve and to have respect, tu sais, que toute les choses sont vivantes et ils ont toute un esprit, ça c'a change la façon que tu regardes les choses. You know what I mean? Yeah, like, I mean, even the stones have a spirit, you know, so like, when you have that really ingrained respect for what things really are. I think you're a little bit more aware of your surroundings, tu sais?

Janelle 6: It's just not recognized [Métis knowledges]. According to the education systems that are built and that are followed by government and by policy and whatever. Right. So c'est pas que les informations sont pas là, c'est qu'on veux pas les accesser parce que it's not backed by what we think it should be backed by. And that's frustrating.

Janelle 7: So, it sounds backwards, mais comme d'écrire ce qu'on connait, I think is number one. To get it black on white, so that people can actually read it and you don't have to rely on oral traditions. I know that's a stupid thing to say. Because that's literally what we are. It's what we do, toute notre culture a été passé oralement. But it's adapting, it's working in a system that you were forced to work in. Which sucks. But like even for like a family like my mine où tout le monde est décédé longtemps avant que je suis née, and it hasn't been passed on, but like imagine if they had put it down, right? And then that makes it a lot easier for me growing into it, de changer la façon que je fais les choses and know what I'm doing from the get-go, right?

Jesse 6: That kind of journaling stuff, that's really cool. Le jardin aussi, they write down when they got their first tomato, planted, and when they got stuff. It's good knowledge.

Janelle 8: We can't afford to put in whatever it is we need to mitigate. So c'est difficile, especially comme ça fait longtemps qu'on vit ici, on est dans des vieilles maisons, on est dans des vieux quartiers, des vieilles routes. So, c'est vraiment dificile à faire entrer les choses que t'as besoin pour, tu sais, comme, arranger ta maison so it's easier on the environment, but it's just so much more expensive to do it. You just can't keep up because the weather is so much more extreme. We have so much more damages to deal with every year with the flooding and the dryness. So to first of all, keep up with that so you're safe physically. And then on top of that goal, I need to go get these things I need to be able to adapt to it. It's just too much. And yeah, we just can't keep up with it.

Candace 7: T'apprends pas au moins que t'as accès.

Janelle 9: C'est dûr de trouver quelqu'un qui peux m'enseigner. I know going to dig for it is always doable. But c'est pas pareil.