Indigenous Food Sovereignty in Canada: Exploring Practices, Intersections, and Lessons for Policy

by

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Statement of Position

Personal Reflections

I was born and raised on the unceded territories of the Songhees, Esquimalt, and W̱SÁNEĆ peoples. I am the fifth-generation descendent of settlers from England and Norway. I received my Bachelor of Arts degree in History from the University of Victoria in 2016. Since 2018, I have been working to complete a Master of Public Administration degree, also at UVic. I have been an employee of the Government of Canada since 2019, where I currently work as a policy analyst in the Department of Crown-Indigenous Relations and Northern Affairs.

The focus of this project is research on Indigenous peoples in Canada. Historically, social science research on Indigenous peoples has been extractive in nature, has been framed around the perceived deficits of communities, and has largely discredited Indigenous voices, experiences, and ways of knowing (Brown & Strega, 2005, p. 11). I recognize that the Western academic setting in which my research is taking place has been directly and indirectly harmful to Indigenous peoples and communities. I am also aware of my personal positionality with respect to this work. As a non-Indigenous person conducting research without direct partnership or consultation with Indigenous people, my capacity to fully and appropriately interpret information related to Indigenous food sovereignty is limited by my external position and worldview.

To the extent feasible within the constraints of this project, I have attempted to account for my positionality within the methodology and methods selected for this research. Despite its grounding in Western social sciences, the chosen methodology of meta-aggregation is intended to aggregate (rather than re-interpret) the existing research on Indigenous food sovereignty. It is my hope that the findings of this paper can, to the furthest extent possible, reflect the voices of Indigenous participants and communities as presented in the existing body of research.

My positionality is also reflected in the objective of this project: to inform policy makers on how to better engage with Indigenous food sovereignty in their work. The intent of this project is not to attempt to advance the literature on Indigenous food sovereignty, which is beyond the scope of my knowledge and experience, and which is instead the work of the many Indigenous scholars and community experts whose work I draw from in this paper. Instead, as a student researcher and government policy analyst, my intent is to draw together the existing work on Indigenous food sovereignty as evidence to broadly inform policy development and implementation.

My thinking has evolved significantly throughout the research process for this project, as I have realized the complexity of the subject matter and the limitations of my own worldview. I have brought many of these lessons into my role as a public servant, where I work in modern treaty and self-government implementation. This research has also profoundly impacted how I understand my own life and relationships to the world around me. I remain deeply grateful for the opportunity to explore this subject and committed to lifelong learning and self-reflection.

Reflections on the Use of Language in this Report

Throughout the development of this report, I have grappled with the appropriate use of terminology to describe the subject matter at hand. As a settler graduate student conducting social sciences research, I am aware that scholars in my position have historically used their research to (intentionally or unintentionally) exploit, misrepresent, and devalue Indigenous peoples, communities, cultures, experiences, and knowledge systems. I am also aware that, in carrying out this project independently, I risk replicating these harms in my own work.

In particular, the language used to describe phenomena of interest and to characterize the knowledge and experiences shared by Indigenous research participants poses a challenge in the context of Indigenous research. The language of Western academic research is limited in its ability to fully and accurately convey concepts that originate in Indigenous paradigms and worldviews. Furthermore, the use of Western terms to convey Indigenous concepts has been criticized as reinforcing and legitimizing colonial paradigms.

For example, Alfred (2001) questions the appropriateness of the term "sovereignty" to describe contemporary Indigenous political movements, arguing that the "discourse of sovereignty" is rooted in Western colonial power and engaging with it risks legitimizing settler state sovereignty (p. 23). Furthermore, scholars have noted that the Western concept of "sovereignty" does not reflect Indigenous worldviews, which are rooted in understandings of a shared responsibility to uphold reciprocal and interdependent relationships with all of creation, rather than in concepts of ownership and control (Daigle, 2019, p. 300). In the context of Indigenous food sovereignty, Morrison (2011) reconciles this disparity by "[rejecting] a formal universal definition of sovereignty in favour of one that respects the sovereign rights and power of each distinct nation to identify the characteristics of our cultures and what it means to be Indigenous" (p. 98).

Similarly, the use of the word "traditional" to characterize Indigenous cultural knowledge and practices has been criticized in the context of Western social sciences for perpetuating harmful and essentialist stereotypes about Indigenous peoples. Samoan writer and scholar Albert Wendt, who has criticized the use of the word "traditional" by museum exhibitions since the 1970s, outlines the problems with the conventional Western framing of Indigenous cultures:

> "I came to feel very uncomfortable with terms such as traditional, folk history, folk art… Colonial scholars and researchers used them whenever they referred to us but not to their cultures. Such terms I concluded were part and parcel of the Euro-centric colonial vocabulary. Traditional inferred our cultures were/are so tradition-bound they were static and slow to change and fixed in history they were 'simple and easy to understand.' Traditional also had implications about how we were viewed as people even to the extent that, because we were tradition-bound, we behaved out of habit and past practice and [were] slow to adapt to other ways or change our own ways, that we didn't want to think for ourselves, or were incapable of individual thinking and expression." (Mallon, 2016).

Many Western dictionary definitions confirm that tradition is often understood and interpreted as something confined to the past. “Traditional” is defined by Merriam-Webster (n.d.) as “following or conforming to tradition; adhering to past practices or established conventions,” and by the Cambridge Dictionary (n.d.) as “following or belonging to customs or ways of behaving that have continued in a group of people or society for a long time without changing.” Employed uncritically in the context of Western scholarship and social science research pertaining to Indigenous peoples, the term “traditional” may therefore serve to reinforce harmful stereotypes of Indigenous cultures as homogeneous, simplistic, unchanging, and fixed in history.

However, the word “traditional” has also been used by Indigenous communities, collectives, and organizations to characterize their cultural knowledges and practices. For example, while acknowledging the absence of a universally accepted definition, the Assembly of First Nations (n.d.) defines “traditional knowledge” as:

> “[The] collective knowledge of traditions used by Indigenous groups to sustain and adapt themselves to their environment over time. This information is passed on from one generation to the next within the Indigenous group. Such Traditional Knowledge is unique to Indigenous communities and is rooted in the rich culture of its peoples.” (p. 1)

By contrast to conventional Western definitions that confine tradition to a static, homogenous and historical phenomenon, this definition encompasses a much broader understanding of tradition. Under this definition, ‘tradition’ remains rooted in deeply rooted in culture, history, and the intergenerational transmission of knowledge; however, it also encompasses a diversity of cultural contexts and knowledge systems, which have continually adapted and evolved over time.

In writing this report, I have grappled with the use of words such as “sovereignty” and “traditional.” I am aware of their origins in colonial constructions of history and relationships, and of their problematic use by researchers in Western academic institutions. However, I am also aware that Indigenous scholars, activists, and community research partners may choose to employ these words in specific contexts to explore concepts and describe their knowledge and experience. Furthermore, I am concerned that attempts by researchers from Western academia to reinterpret or recharacterize the knowledge and ideas shared by these voices—even when the intent is to avoid using terms that may be problematic—may replicate the colonial tendency to erase, decontextualize, and devalue the knowledge and experiences of Indigenous people.

Given this context, my approach has been to adhere as closely and faithfully as possible to the language used by Indigenous scholars and participants in describing the concepts and phenomena presented in this report. This includes common descriptors such as “food sovereignty,” “traditional knowledge,” and “traditional practices,” which appear in the literature more frequently than other synonymous terms. In choosing to use these words, I maintain my awareness of their history in the context of social sciences research while respecting and deferring to the Indigenous voices that have chosen to claim and redefine them.

Executive Summary

In the context of ongoing efforts to advance truth and reconciliation and commitments to uphold and implement the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), governments in Canada have increasingly undertaken to engage with Indigenous food sovereignty in policy development. These attempts have been criticized by scholars and activists who cite a lack of adequate engagement with Indigenous peoples and a persistent unwillingness to acknowledge the ongoing impacts of government policy on Indigenous food systems. Given this problem, this project identifies the need to develop an understanding of Indigenous food sovereignty among policy makers that captures: (1) what Indigenous food systems look like and how they interact with policy; (2) barriers and enablers affecting Indigenous food sovereignty; and (3) strategies to advance and support Indigenous food sovereignty.

The objective of this research is therefore to explore the meanings and practices of Indigenous food sovereignty in Canada, including its linkages and intersections with other policy issues, in order to inform the perspectives of policy makers regarding how to recognize and engage with Indigenous food sovereignty.

The primary research question for this project is: *How is food sovereignty expressed and practiced by Indigenous peoples in Canada?* **Five secondary research questions** are also posed to directly explore specific aspects of the nature and context of Indigenous food sovereignty, including: (1) definitions and features; (2) barriers and enablers; (3) benefits; (4) linkages to gender and climate change; and (5) the role of policy and relevant lessons for policy makers.

Literature Review

The general literature review explores both empirical and theoretical work on Indigenous food sovereignty in the Canadian context. Sources were located and retrieved using a range of academic databases and search methods; both academic and grey literature were included.

The review finds that Indigenous food systems can be broadly understood as a "contact zone" characterized by longstanding and continually evolving interactions and power dynamics among Indigenous peoples, the environment, government, and settler society. Various aspects of these relationships are traced across three foundational themes emerging from the literature: (1) core features of Indigenous food systems; (2) barriers to Indigenous food sovereignty; and (3) strategies to advance Indigenous food sovereignty. The review also explores how intersections of gender and climate change interact with Indigenous food sovereignty, finding that the existing literature appears to contemplate these linkages only to a limited extent.

A conceptual framework for this research project is presented at the end of chapter three, which outlines the researcher's understanding of Indigenous food sovereignty as unfolding within a network of relationships among various actors, whose interactions are shaped by the convergence of diverse worldviews, power imbalances, and environmental forces.

Methodology and Methods

The methodology used for this project is a systematic review of qualitative evidence, specifically a meta-aggregation of previous research findings. The review process occurred in five stages. First, inclusion criteria were defined to assess studies that appeared during the search process. Second, a comprehensive search strategy was conducted to identify sources of potential relevance, including articles, book chapters, theses and dissertations, and grey literature. A total of 1,517 unique sources were identified through these searches. Third, a two-stage screening process was employed to assess sources against the inclusion criteria defined in the first stage. Seventeen sources representing 16 unique studies were ultimately identified for inclusion in the systematic review. Next, data was collected from each source, including general details on the design of each study, as well as the original findings of previous research. Finally, the data was analyzed using a meta-aggregative approach to synthesis, through which 86 themes from the included studies were aggregated into 16 categories and four synthesized findings.

Findings

This report presents the findings of three sets of analysis conducted on the studies included in the systematic review: (1) characteristics of the included studies; (2) meta-aggregation of the original research findings; and (3) supplementary content analysis regarding the role of gender and the presentation of recommendations in the existing research.

The systematic review finds that existing research on Indigenous food sovereignty encompasses a range of interconnected fields of research, including health and environmental and social justice. The analysis of research design reveals that existing community-centered research on Indigenous food sovereignty has predominantly used community-based research methodologies. Ongoing collaborative relationships with communities and participants are important at multiple stages of the research process, including data analysis. This analysis also reveals that the existing research is limited in cultural and geographic scope, with most of the included studies based in British Columbia and Manitoba and most participants being First Nations.

The meta-aggregation yields four synthesized findings on Indigenous food sovereignty: (1) Practicing and sustaining Indigenous food systems through relationships; (2) Navigating barriers and challenges to Indigenous food sovereignty; (3) Defining and enacting Indigenous food sovereignty; and (4) Transforming relationships and imagining food sovereign futures.

Through these themes, aspects of the complex and interconnected web of relationships in which Indigenous food sovereignty unfolds are further explored and illuminated. Indigenous food systems are found to be grounded in ongoing physical and spiritual relationships among people and the natural world. These relationships are rooted in Indigenous histories and traditions, guided by values of responsibility and reciprocity, and underpinned by Indigenous worldviews passed down through generations. However, these Indigenous ways of being and knowing continue to be threatened and devalued by colonial forces that have damaged natural ecosystems

and Indigenous peoples' relationships to them, altered and impacted Indigenous community structures and well-being, and influenced the lives and identities of individual people. In confronting these challenges, Indigenous people have articulated an understanding and practice of food sovereignty that takes many forms, but which is fundamentally rooted in the maintenance and restoration of relational food systems, and which is driven by community strengths, needs, and priorities. Implementing food-related initiatives has allowed communities to articulate their priorities and begin to imagine and realize decolonized and food sovereign futures.

A supplementary analysis of the role of gender in the context of Indigenous food sovereignty finds that gender considerations are not fully addressed by the literature. An analysis of recommendations from previous studies further highlights the ubiquitous principle that activities and initiatives must be community-driven in order to support food sovereignty.

Recommendations

Drawing from the insights developed in earlier sections, this project concludes by presenting foundational principles and recommendations to policy makers. This chapter suggests ways that governments can work to uphold the rights of Indigenous people with respect to food systems in the context of UNDRIP and truth and reconciliation by supporting local self-determination, addressing barriers, and creating space for greater participation in decision-making.

First, **three core principles** are offered to articulate a vision and provide guidance for policy that is sensitive and responsive to Indigenous food sovereignty:

1) *Policy and programming are informed by Indigenous paradigms and responsive to work being done at the local level to advance food sovereignty.*

2) *Policy articulates a commitment to understand and address barriers to Indigenous food sovereignty and to support local food systems resurgence and decolonization.*

3) *Policy reflects an openness to explore and embrace the transformative potential, opportunities, and wide-ranging benefits offered by Indigenous food sovereignty.*

Second, **three short-term recommendations** are proposed to (i) help policy makers understand and address the impacts of existing government policies and programs, and (ii) improve consideration of Indigenous food sovereignty in decision-making moving forward:

1) *Revisit and re-design existing policy frameworks to address the limitations of recent policy approaches intended to support Indigenous food sovereignty*.

2) *Re-evaluate current programmatic approaches to address the shortcomings of programs that are constrained by a narrow focus on food security and economic objectives*.

3) *Develop an analytical tool, building on existing approaches such as IGBA+, to assess food sovereignty impacts and incorporate Indigenous perspectives in policy work.*

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1.0 Introduction

Food systems are defined by the Government of Canada as "the way food is produced, processed, distributed, consumed, and disposed of" (Agriculture and Agri-Food Canada, 2020, para. 7). Indigenous food systems, however, encompass far more than the mechanics of food production and consumption. They include all of the land, water, earth, plants and animals within the boundaries of traditional territories, and are sustained by active and reciprocal relationships to uphold responsibilities among people and the natural world (Morrison, 2008, p. 5).

Food systems relationships constitute a foundational aspect of Indigenous identity, and remain critically important to the physical, social, cultural, and spiritual health and well-being of Indigenous peoples in Canada (Settee & Shukla, 2020a, p. 4). Indigenous peoples also have specific rights with respect to food systems relationships, as articulated by Article 25 of the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP):

> "Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard." (United Nations, 2007, p. 19)

The concept of Indigenous food sovereignty has emerged as a framework for articulating, preserving, and revitalizing relational food systems in the face of ongoing social and environmental harms and barriers resulting from historical and contemporary colonial policies and processes (Morrison, 2020a, pp. 24-25). Given ongoing commitments by governments across Canada to renew relationships with Indigenous peoples grounded in their inherent right to self-determination, policies and programs should be informed by an adequate understanding of Indigenous food sovereignty and the role of government and policy in relation to it.

1.1 Defining the Problem

Despite its importance to Indigenous peoples' rights to well-being and self-determination, mainstream rights and reconciliation discourse has been largely silent on the subject of Indigenous food sovereignty. Furthermore, recent attempts by governments to engage with the concept of Indigenous food sovereignty in policy development have been limited to narrow discussions of food and food security, and have been criticized for failing to reflect Indigenous paradigms or acknowledge the ongoing negative impacts of policy on Indigenous food systems.

In light of these challenges, and given its importance to conversations about Indigenous rights, sovereignty, and self-determination, there is a need to develop an understanding of Indigenous food sovereignty among policy makers that captures: (1) what Indigenous food systems look like and how they interact with a range of policy areas; (2) barriers and enablers affecting Indigenous food sovereignty; and (3) strategies needed to advance and support Indigenous food sovereignty.

However, the field of Indigenous food sovereignty is relatively new and attempts to understand and address an array of culturally and geographically diverse Indigenous food and knowledge systems across Canada, each accompanied by their own characteristics, challenges, needs, and opportunities. As such, a lack of structure and cohesion across the existing literature with respect to key considerations may inhibit the development of a deeper and appropriately nuanced understanding of Indigenous food sovereignty among policy makers.

1.2 Project Objectives and Research Questions

The purpose of this project is to explore the meanings and practices of Indigenous food sovereignty in Canada, including its linkages and intersections with other policy issues, in order to inform the perspectives of policy makers regarding how to understand and engage with Indigenous food sovereignty. In pursuit of this objective, the following global research question is posed: *How is food sovereignty expressed and practiced by Indigenous peoples in Canada?*

To support an answer to this question, the following sub-questions will also be interrogated:

1) *How is the meaning of Indigenous food sovereignty articulated and what are the features of its practice, including both commonalities and differences?*
2) *What conditions are identified as barriers or enablers to Indigenous food sovereignty?*
3) *What are the benefits associated with local practices of Indigenous food sovereignty and how do they support and improve the well-being of Indigenous peoples?*
4) *In what ways, and to what extent, is community-based work on Indigenous food sovereignty linked to gender, and climate change?*
5) *What lessons can governments learn from this work with respect to: (i) the role of policy in supporting or undermining Indigenous food sovereignty, and (ii) how to understand and engage with the concept of Indigenous food sovereignty in policy work?*

The following deliverables will be completed as an outcome of this project:

- *Systematic literature review:* Meta-aggregation of previous qualitative studies on Indigenous food sovereignty from across Canada.
- *Recommendations:* Key considerations and recommendations for policy makers respecting how to understand and engage with Indigenous food sovereignty in their work.

1.3 Organization of Report

This report is organized in eight chapters. Chapter two provides an overview of relevant background, including historical context and the emergence of the Indigenous food sovereignty movement. Chapter three is a literature review that discusses core themes emerging from previous work and presents a conceptual framework for this project. Chapter four describes the systematic review methodology and methods employed for this project. Chapter five delivers an overview of findings from three analyses of the included studies. Chapter six provides further discussion of these findings and directly addresses each research question. Chapter seven offers lessons and recommendations for policy makers, and chapter eight presents conclusions.

2.0 Background

This section provides an overview of the historical background and current context informing this project. A historical perspective reveals that the legacy of government policies and processes has been to damage and obstruct Indigenous food systems, the effects of which are ongoing. The current policy context is characterized by contradictions and tensions between the popular discourse of rights and reconciliation, inadequate attempts by governments to engage with the concept of Indigenous food sovereignty, and the continued perpetuation of barriers to Indigenous food systems. Within this context, a movement for Indigenous food sovereignty has emerged.

2.1 Historical Context and Contemporary Realities

In order to understand the significance and challenges of Indigenous food sovereignty, the issue must first be contextualized with respect to historical and contemporary interactions between Indigenous food systems and government policy. Historical colonial policies dispossessed Indigenous peoples of their land and attempted to sever the relationships at the heart of Indigenous food systems (Grey & Patel, 2015, pp. 437-439; Muller, 2018, p. 7). The contemporary food systems of Indigenous peoples often include both traditional and Western market foods, though the ongoing legacies of colonialism have resulted in high rates of food insecurity, poor health outcomes, and weakened cultural connections in many communities.

Indigenous Food Systems and Colonial Legacies

Given the diversity that characterizes the lands and cultures of Indigenous peoples across Canada, it is no surprise that their food systems are also manifold. Traditional foods and the practices used to secure them vary widely across Canada. However, commonalities within and between food systems can be identified. For example, fish have occupied a central place in the diets, cultures, and social practices of nearly every Indigenous society in Canada (Islam & Berkes, 2016, p. 816). Relationships with the marine environment have been particularly important among coastal peoples, with salmon playing a critical role in the cultural, spiritual, and social lives of many nations in the Pacific Northwest (Coté, 2016, p. 11; Cisneros-Montemayor et al., 2016, p. 1). In British Columbia, other important sources of food have included wild game, shellfish, seaweed, berries, and medicinal herbs, all of which have been prepared using skilled methods passed down through generations (Muller, 2018, p. 6). In the north, Indigenous peoples have hunted large and small game and harvested berries on a seasonal basis (Islam & Berkes, 2016, p. 816). On the arctic coast, beluga whales and seals have also formed an essential part of food and trade systems (Todd, 2016, p. 195). In many interior nations, wild rice and other plant foods have provided a significant source of nutrition for thousands of years (Native Women's Association of Canada, 2018, p. 1). Each of these foods, as well as the methods and knowledge systems through which they have been harvested, prepared, and used, has provided an essential source of nutritional, cultural, and social sustenance for Indigenous peoples in Canada.

The relationships that sustain Indigenous food systems have been undermined, obstructed, and damaged by colonial processes that removed Indigenous peoples from their lands and attempted to sever their ties to culture and tradition. In the nineteenth century, the displacement of Indigenous peoples onto reserves, where they were confined to small areas of land, disconnected them from critical food sources and created dependencies on colonial authorities and systems for access to food (Muller, 2018, p. 7). Settler activities also contributed to the eradication of much of the food stock on which Indigenous peoples relied. On the Prairies, the extinction of the bison resulted in extensive famine among Plains Indigenous peoples (Kepkiewicz & Dale, 2019, p. 9). The operation of commercial salmon fisheries and canneries on the Pacific coast similarly caused lasting damage to salmon populations (Turner, Berkes, Stephenson, & Dick, 2013, p. 565).

Furthermore, the forced removal of Indigenous children from their homes, families, and communities and into residential schools by the federal government during the nineteenth and twentieth centuries severed important cultural connections and disrupted the intergenerational transfer of knowledge relating to food systems (Muller, 2018, p. 7). While not addressed in detail by this project, the impacts of residential schools are discussed at length in the final report of the Truth and Reconciliation Commission of Canada (TRC). The goal of the federal government's residential school system, which operated between 1883 and the late 1990s, was to destroy Indigenous children's connections (both tangible and intangible) to their communities, culture and identity (TRC, 2015, pp. 2-3). By forcibly removing Indigenous children from their homes, families, and communities and forbidding the use of Indigenous languages and cultural practices, the residential school system formed part of the federal government's longstanding policy of assimilation and cultural genocide against Indigenous peoples (TRC, 2015, pp. 1-3). Furthermore, Indigenous children were often the victims of abuse and neglect perpetrated by teachers and administrators at residential schools (TRC, 2015, pp. 3-4). The trauma inflicted by these experiences has had lifelong and intergenerational impacts that continue to affect Indigenous people and communities today. These impacts include the loss of Indigenous language and culture (TRC, 2015, p. 152), as well as ongoing effects on the physical and mental health and well-being of Indigenous peoples across Canada (Wilk, Maltby & Cooke, 2017).

Contemporary Realities

Contemporary Indigenous food systems have been shaped by both traditional food practices and the colonial policies and processes outlined above. Traditional systems of fishing, hunting, and gathering have continued to hold varying levels of importance in the lives of Indigenous peoples (Morrison, 2008, p. 13). Furthermore, the rights of Indigenous peoples to engage in these traditional practices were established in the *Constitution Act* of 1982 (Turner & Clifton, 2009, p. 180) and have been affirmed by subsequent Supreme Court cases (Grey & Patel, 2015, p. 441). As a result, contemporary food systems are often mixed, combining traditional foods obtained through hunting, fishing, and gathering with store foods purchased in the consumer market (Beaumier & Ford, 2010, p. 196). These systems are often characterized by a duality of Indigenous traditional methods, practices, and values and participation in the Western market

economy (Manson, 2019, p. 12). However, particularly in the north, a recent decline in the consumption of land foods and an increase in the availability of highly processed store foods has resulted in health crises in many communities (Rudolph & McLachlan, 2013, p. 1079). Furthermore, Indigenous peoples in Canada experience high rates of food insecurity compared with the population average (Islam & Berkes, 2016, p. 815). These rates are higher among northern Indigenous peoples, women, and those living in poverty (Islam & Berkes, 2016, p. 815).

Food insecurity in Indigenous communities is the result of ongoing processes of neocolonialism and industrial capitalism, which prevent Indigenous peoples from exercising food sovereignty and accessing adequate amounts of nutritious, culturally appropriate foods. Common barriers to food sovereignty include: government regulations prohibiting the use of traditional methods; decreased accessibility of food sources resulting from urban development and land privatization; contamination of food sources resulting from industrial activity; and the challenges of balancing traditional food systems with the demands of contemporary urban life (Muller, 2018, pp. 8-9). On the Pacific coast, salmon farming by multinational corporations threatens salmon populations and human health (Turner et al., 2013, p. 566). In the north, land access barriers and environmental degradation have been accompanied by a shortage of affordable, high quality perishable store foods, resulting in crisis levels of food insecurity among the Inuit population (Rudolph & McLachlan, 2013, p. 1087). Particularly among women, factors including increased participation in the wage economy and high hunting costs have further impacted the ability of northern Indigenous peoples to access traditional food systems (Beaumier & Ford, 2010, p. 199; Bunce et al., 2016, p. 1420). These issues are compounded by other systemic barriers faced by Indigenous peoples across Canada, including poverty, unemployment, and mental health issues (Beaumier & Ford, 2010, p. 196). Therefore, although traditional food systems continue to play an important role in the lives of Indigenous peoples, ongoing processes of industrial capitalism and colonialism continue to impact their ability to engage in traditional foodways.

2.2 The Indigenous Food Sovereignty Framework

In practice, Indigenous peoples have long resisted the colonial policies and processes that have damaged their relationships to the land by maintaining and preserving traditional strategies and practices of harvesting, preparing, and distributing food (Morrison, 2011, pp. 97-98). The current Indigenous food sovereignty movement has emerged more recently in the context of expanding conversations surrounding food sovereignty in Canada and internationally. This section briefly outlines the concept of food sovereignty as it emerged internationally and describes the origins of the Indigenous food sovereignty movement in Canada.

With beginnings among peasant farmers in the Global South, the international food sovereignty movement emerged in the 1990s in response to the failure of the global corporate agri-food system and government policy to provide food security and eradicate hunger (Trauger, 2015, pp. 1-2, 4). By contrast to the top-down control over food systems exerted by transnational corporations and supported by nation states, food sovereignty presents an alternative paradigm

based on the rights of food producers at the local level to define and control their own food systems (Trauger, 2015, pp. 1, 4-5). The most widely used definition of food sovereignty, from the 2007 Nyéléni International Forum for Food Sovereignty, is "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (Via Campesina, 2007, p. 1).

Participation by Canadian organizations in such international fora on food sovereignty galvanized a movement for food sovereignty within Canada centered on Food Secure Canada, a national alliance of organizations committed to advancing food security and food sovereignty (Desmarais & Wittman, 2014, p. 1154). The most notable outcome of the mainstream food sovereignty movement in Canada has been the People's Food Policy Project (Desmarais & Wittman, 2014, p. 1154), which began in 2009 and culminated in the publication of a policy framework based on food sovereignty and rooted in principles of localization, ecological sustainability, poverty reduction, and public participation in food system decision-making (Food Secure Canada, 2011, p. 2). Since that time, food sovereignty discourse has been employed by diverse groups across Canada to articulate distinct concerns and interests related to food systems at local, regional, national, and international levels (Desmarais & Wittman, 2014, p. 1167).

The current movement for Indigenous food sovereignty in Canada emerged within this context, through local and regional engagement by non-governmental organizations. In 2006, members of the BC Food Systems Network created the Working Group on Indigenous Food Sovereignty to bring Indigenous perspectives into conversations about food security and food sovereignty (Morrison, 2011, p. 101). The early activities of the working group included engaging with the BC Food Systems Network to facilitate information-sharing and cross-cultural coalitions and organizing outreach events with Indigenous communities across the province to identify key issues and strategies related to Indigenous food sovereignty (Morrison, 2008, pp. 7-11).

Drawing from these engagements, Morrison (2011) developed a commonly cited framework that both locates Indigenous food sovereignty in existing practices and strategies used by Indigenous peoples to sustain their relationships with the land and also highlights its transformative potential as an alternative paradigm to the global industrial food system (pp. 97-98). This framework articulates four guiding principles of Indigenous food sovereignty, as identified by Indigenous practitioners and knowledge holders: (1) sacred sovereignty and responsibility; (2) participation; (3) self-determination; and (4) policy and legislative reform (Morrison, 2011, pp. 100-101). By promoting the reclamation and application of Indigenous knowledge, values, and practices in contemporary contexts, Indigenous food sovereignty presents an alternative paradigm for improving outcomes for Indigenous peoples in areas of health, food security, and community development, and building new cross-cultural connections that can heal relationships between Indigenous peoples, settlers, and ecosystems (Morrison, 2011, p. 100).

In 2011, Indigenous food sovereignty formed a core pillar of the policy platform emerging from the People's Food Policy Project led by Food Secure Canada. The platform advanced four key

recommendations with respect to Indigenous food sovereignty that called on policy makers to: (1) commit to land reform and redistribution; (2) include Indigenous knowledge and methodologies in environmental assessment and decision-making; (3) address the social determinants of health that impact food sovereignty; and (4) promote renewed relationships and cross-cultural understanding among Indigenous and non-Indigenous people, organizations, and governments in Canada (Food Secure Canada, 2011, pp. 11-12).

2.3 Current Policy Context and Criticisms

The contemporary policy context in Canada is characterized by tensions between the proliferation of mainstream discourse on Indigenous rights and reconciliation and an ongoing failure to understand the significance of Indigenous food systems or acknowledge the ongoing harm caused by neocolonial policies and processes. The current discourse has origins in the late twentieth century, when the rights and title of Indigenous peoples were enshrined in the *Constitution Act* of 1982 and increasingly upheld by Canadian law. In recent decades, many court decisions have had important implications for Indigenous food sovereignty, affirming their rights to access traditional food sources, practice Indigenous foodways, and protect their ecosystems from harmful land development and resource extraction (Morrison, 2011, pp. 108-110). However, this legalistic rights-based approach has been criticized due to the adversarial nature and cultural biases of the Canadian court system, and the burden placed on Indigenous communities when engaging in legal proceedings (Morrison, 2011, pp. 107-108). Furthermore, despite the de jure acknowledgement of Aboriginal rights and title, they continue to be impeded by the actions and interests of corporations and governments and cannot be fully implemented without more foundational reforms (Morrison, 2011, pp. 107, 111).

Twenty-first century discourse on Indigenous rights in Canada has been grounded in the demands of UNDRIP and the TRC Calls to Action, which recognize the historical and ongoing oppression of Indigenous peoples and call on governments to uphold their rights to sovereignty and self-determination (United Nations, 2007, p. 8; TRC, 2015, p. 5). The Government of Canada declared unconditional support for UNDRIP in 2016 (Indigenous and Northern Affairs Canada, 2017, para. 7) and introduced legislation to implement UNDRIP in December 2020 (Department of Justice Canada, 2020, p. 3). In 2019, the Government of British Columbia passed the *Declaration on the Rights of Indigenous Peoples Act*, which commits the government to reconciling provincial laws with UNDRIP (Government of British Columbia, n.d., p. 1).

The discourse of rights and sovereignty has clear connections to Indigenous food systems. UNDRIP affirms the right of Indigenous peoples to own and control their traditional territories and resources and maintain their spiritual relationships with their lands and waters (United Nations, 2007, p. 19). However, Indigenous food systems are not explicitly mentioned in either UNDRIP or the TRC Calls to Action. When they are considered in the context of government policy making in Canada, they are often constrained within narrowly defined discussions of food security that fail to understand the nature and significance of Indigenous food systems.

Contemporary approaches to improving food security among Indigenous peoples have been criticized for their failure to address core issues of land rights and self-determination. In the north, government-funded responses to food insecurity have focused on providing Indigenous communities with food rather than addressing the critical underlying political and cultural dimensions of the crisis (Rudolph & McLachlan, 2013, pp. 1094-1095). Furthermore, much of the government programming intended to support Indigenous peoples in becoming food secure and self-sufficient has been culturally inappropriate, overemphasizing commodity and economic aspects of food production and failing to acknowledge the cultural, spiritual, and relational dimensions of Indigenous food systems (Rudolph & McLachlan, 2013, p. 1093). This narrow, programmatic approach has made government interventions both ineffective and inaccessible.

In 2019, both the Government of Canada and the Government of British Columbia independently made attempts to engage with Indigenous food systems from a rights and self-determination perspective. That year, the Government of Canada released the *Food Policy for Canada*, which is intended to guide food-related policy development and decision-making across the federal government (Agriculture and Agri-Food Canada, 2019, p. 4). The policy identifies "strong Indigenous food systems" as a priority outcome (p. 7) and establishes reconciliation as a guiding principle for all food-related policies and actions (p. 10). Underlying this approach is a commitment to "acknowledging how historic government policies have disrupted [Indigenous] food systems" and ensuring that future decision-making is holistic, supportive of Indigenous food self-determination, and considerate of Indigenous knowledge and practices (pp. 10-11). However, Indigenous scholars and activists have criticized the food policy approach for its failure to address the ongoing harms embedded in contemporary food systems and policies and support Indigenous food and land sovereignty (Rotz & Kepkiewicz, 2018, pp. 254-255).

Also in 2019, the British Columbia Centre for Disease Control attempted to consider Indigenous food sovereignty in developing a conceptual framework for provincial food security indicators (Seed, Kurrein, & Morrison, 2019, pp. 7-8). Consultations with an Indigenous expert revealed that the framework was grounded in colonial, agriculture-centric understandings of food systems, and was therefore incapable of reflecting Indigenous perspectives or aligning with the principles of Indigenous food sovereignty (Seed, Kurrein, & Morrison, 2019, p. 3). Provincial officials concluded that further collaboration would be needed to decolonize the framework and ensure that policy development is grounded in Indigenous paradigms, rather than attempting to include them as a secondary consideration later in the process (Seed, Kurrein, & Morrison, 2019, p. 3).

These examples demonstrate that, while policy makers in Canada have begun to engage with the concept of Indigenous food sovereignty, these approaches have failed to encompass an adequate understanding of what it is and how to address it in policy development and implementation. In the context of ongoing government commitments to truth and reconciliation and new promises to implement UNDRIP, and given the relationship between food sovereignty and self-determination for Indigenous peoples, work to address these shortcomings and build improved awareness and understanding among policy makers is urgently needed.

3.0 Literature Review

The purpose of this literature review is to develop a foundational understanding of Indigenous food sovereignty that will frame and inform the analysis phase of this project. Based on a thorough review of the relevant literature, this chapter presents an understanding of Indigenous food systems as a contact zone characterized by longstanding and evolving interactions among Indigenous peoples, the environment, the colonial state, and settler society. These relationships include both spatial and epistemological dimensions (Halls, 2014, pp. 4-5) and often involve power imbalances. In the context of these relationships, the framework and current practices of Indigenous food sovereignty both offer existing alternatives and envision long-term solutions.

This chapter discusses the ways in which these relationships continually unfold in the contact zone of Indigenous food systems by reviewing four key themes emerging from the literature: (1) the framing of Indigenous food sovereignty; (2) core features of Indigenous food systems; (3) barriers to Indigenous food sovereignty; and (4) strategies to advance Indigenous food sovereignty. It also situates and rationalizes the work of this project by identifying missing links in the literature related to the role of gender and climate change within this contact zone. Finally, a conceptual framework is presented to situate the work of this project, outlining a network of consequential relationships that unfold in the contact zone of Indigenous food systems.

The search strategy for this review was conducted using five databases (Google Scholar, the Indigenous Studies Portal, Web of Science, Academic Search Premier, and ProQuest), supplemented by searches through the University of Victoria's Summon 2.0 portal and the Google search engine. Both academic and grey literature was surveyed. Various permutations of the following Boolean search were used to capture the relevant literature: "'food sovereignty' and (indigenous or aboriginal or 'first nations' or metis or inuit) and canada". Reference lists of sources located through these searches were also scanned to ensure that a comprehensive body of relevant literature was captured. The search for this literature review confirmed that the study of Indigenous food sovereignty in Canada is a relatively young and still-emerging field of research, with most sources published within the last ten years.

3.1 Framing Indigenous Food Sovereignty: Relationality and Power

This section discusses how Indigenous food sovereignty has been framed in the literature and emphasizes its consistent positioning as a tool to facilitate relational thinking. As discussed in chapter two, Desmarais and Wittman (2014) describe the emergence of Indigenous food sovereignty frameworks as a response to the growth of mainstream food sovereignty movements in Canada, which prioritized agriculture-centric alternatives to the global industrial food system (pp. 1154-1155). In this context, the movement for Indigenous food sovereignty emerged to reflect and respond to the unique worldviews, realities, and needs of Indigenous peoples. Specifically, the movement highlighted the importance of protecting and restoring traditional food systems (rather than building new ones) and centering underlying questions of land,

sovereignty, and decolonization (Desmarais & Wittman, 2014, pp. 1155, 1165). Desmarais & Wittman (2014) therefore characterize the emergence of Indigenous food sovereignty as a response to mainstream food sovereignty movements, positioning it within a broader discourse of food sovereignties articulated by diverse communities across Canada in order to express distinct concerns and interests related to food systems based on identity and "relationships to political and institutional authority" (p. 1167). In this way, the Indigenous food sovereignty movement is positioned as fundamentally relational.

The early work emerging from the Indigenous food sovereignty movement speaks directly to the importance of relationships as a tool to encourage discussion and networking among Indigenous communities and non-Indigenous activists pursuing food-related work. The First Annual Interior of BC Indigenous Food Sovereignty Conference, held in 2006 and representing the earliest published engagement on Indigenous food sovereignty in Canada, had a stated purpose of "support[ing] and facilitat[ing] the development of regional networks, community-based action plans, and culturally relevant learning plans" (Morrison, 2006, p. 5). Furthermore, the activities of the Working Group on Indigenous Food Sovereignty in 2007 and 2008 centered on outreach and engagement with the purpose of building relationships and networks among Indigenous communities and cross-cultural alliances with non-Indigenous activists (Morrison, 2008, pp. 7-9). The result of these engagements was the development of a well-cited framework for Indigenous food sovereignty articulated by Morrison (2011), which positions Indigenous food sovereignty as a "restorative framework" for cross-cultural work to build and "heal our relationships with one another and the land, plants and animals that provide us with our food" (p. 100). These early engagements and the resulting framework make clear that relationships form the heart of Indigenous food sovereignty.

Subsequent work has expanded on this notion to conceptualize Indigenous food sovereignty as a contested space in which colonial power relations unfold. Morrison (2011) states that the work of Indigenous food sovereignty will involve addressing the power imbalances caused by colonial governance and land regimes (p. 106). Halls (2014) characterizes the Indigenous food sovereignty movement as a cross-cultural contact zone with both spatial and epistemological dimensions, in which both commonality and contention can be found (pp. 4-5). By invoking Pratt's (1991) concept of the contact zone, which refers to "social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power" (p. 34), Halls draws a clear link between Indigenous food sovereignty and power relations. Grey and Patel (2015) further advance this connection by positioning Indigenous food sovereignty as a contemporary "continuation of anti-colonial struggles in ostensibly postcolonial contexts" (p. 433). Indigenous food sovereignty is clearly positioned within the realm of power relations.

In framing Indigenous food sovereignty through the lens of relationships and introducing the dimension of power, the literature begins to sketch out a network of relationships within which the discourse and practice of Indigenous food sovereignty operates. For example, Morrison's (2011) framework articulates a place within this network for relationships between Indigenous

peoples and the land (p. 100), as well as places for settler communities and governments (p. 107). Similarly, Grey and Patel (2015) state that the experiences and identities of Indigenous peoples are shaped by relationships with the natural environment and colonial and capitalist institutions (p. 435). They position Indigenous food sovereignty as a space in which relationships with traditional foods are "resurrected" and the "oppositional forces" of capitalist modernity are confronted (Grey & Patel, 2015, pp. 439-440). Building upon these works, the remainder of this chapter explores key themes emerging from the existing literature on Indigenous food sovereignty through a relational lens, and concludes by presenting a conceptual framework that positions Indigenous food sovereignty as unfolding within a complex network of relationships. These relationships are characterized by ongoing power imbalances, and by acts of resistance and resurgence by Indigenous peoples working to achieve balance. These interactions occur in both spatial and epistemological realms and operate at localized and systemic levels.

In synthesizing the findings of thirteen chapters from their 2020 collection on Indigenous food systems, editors Settee and Shukla (2020b) identify three core themes: (1) features of Indigenous food systems; (2) challenges to Indigenous food systems; and (3) strategies to revitalize Indigenous food systems (p. 274). This chapter finds that these three themes also characterize the broader literature on Indigenous food sovereignty. In the following sections, each of these themes is discussed through the lens of relationships. First, this chapter finds that discussion of the features of Indigenous food systems primarily concerns relationships between Indigenous peoples and their distinct territories, cultures, and communities. Second, barriers and challenges to Indigenous food sovereignty are primarily characterized in terms of historical and contemporary relationships among Indigenous peoples, their territories, and settler governments and society. Finally, strategies for advancing Indigenous food sovereignty center on ways to reconstruct these relationships in more equitable and sustainable ways; however, the best ways to achieve this end is the subject of ongoing scholarly debate.

3.2 Features and Practices of Indigenous Food Systems: Relationships with Land, Culture, and Community

The literature on Indigenous food sovereignty devotes considerable attention to exploring the features and practices of Indigenous food systems. Relationships are consistently at the heart of how Indigenous food systems are described and discussed. For example, Morrison (2008) describes Indigenous food systems as encompassing "all of the land, soil, water, air and culturally important plant, fungi and animal species that have sustained Indigenous peoples over thousands of years of participating in the natural world" (p. 5). Furthermore, these components "are inseparable and ideally function in healthy interdependent relationships" (Morrison, 2008, p. 5). An exploration of these relationships is a key theme in research on Indigenous food sovereignty, frequently characterized in terms of the guiding values, features and attributes, and outcomes of Indigenous food systems practices.

With respect to values, respect, reciprocity, responsibility, and sustainability are commonly identified as guiding principles of the relationships that comprise Indigenous food systems (Morrison, 2011, p. 99; Coté, 2016, p. 11; Timler & Sandy, 2020, p. 1). Furthermore, these relationships are defined as sacred and spiritual in nature (Coté, 2016, p. 11; Morrison, 2011, p. 100; Cidro, Adekunle, Peters, & Martens, 2015, p. 34). The respectful, reciprocal relationships with the natural environment that guide the healthy functioning of Indigenous food systems are often contrasted to the ideals of control and management underlying Western capitalist perspectives toward land (Morrison, 2011, p. 99; Timler & Sandy, 2020, pp. 7-8).

These values guide the practices of Indigenous food systems and underpin systems of uniquely Indigenous knowledges and worldviews. A key feature of these knowledge systems and practices is that they are based in active, everyday participation in maintaining relationships with the land and natural ecosystems (Morrison, 2011, p. 100). Furthermore, these actions are deeply embedded in place. Morrison (2008) describes Indigenous food as "one that has been primarily harvested, cultivated, taken care of, prepared, preserved, shared, or traded within the boundaries of their respective territories" (p. 5). This definition outlines a range of land-based practices that characterize Indigenous food systems and emphasizes their shared grounding in place.

In addition to its importance to food sovereignty (Halls, 2014, p. 13), land itself is defined as foundational to Indigenous knowledge and identity through its role as a teacher containing Indigenous language, stories, and histories (Martens, 2015, pp. 43, 46). Through storytelling and land-based practices, these teachings are transmitted from Elders to youth (Kamal, 2018, p. 174). Therefore, Indigenous food systems are about much more than procuring food, but also involve practices of environmental maintenance (Grey & Patel, 2015, p. 439) and foster connections to past, present, and future generations (Martens, 2015, p. 43; Cidro et al., 2015, pp. 34-35). In these ways, Indigenous food systems and practices involve the maintenance of sustainable relationships with the natural world, which are fundamentally tied to place, and which generate and reflect systems of Indigenous knowledge, wisdom, and teaching.

The benefits of Indigenous food systems are multifaceted and holistic. Indigenous food sovereignty has the potential to improve food security and nutrition for Indigenous communities (Cidro et al., 2015, p. 37; Kamal, 2018, p. 206). It also contributes to well-being more broadly by nurturing family and community relationships (Timler & Sandy, 2020, p. 7; Martens, 2015, p. 47; Cidro et al., 2015, p. 35; Cidro & Martens, 2015, p. 12; Beaudin-Reimer, 2020, p. 238). Furthermore, it strengthens cultural connections and identity (Martens, 2015, p. 51; Cidro et al., 2015, p. 36; Cidro & Martens, 2015, p. 4; Grey & Patel, 2015, p. 439). Therefore, the practices and outcomes of Indigenous food systems involve not only relationships between Indigenous peoples and the land, but also networks of relationships within and among families and communities. Recognizing these networks and the guiding values that underpin them is key to developing an adequate and comprehensive understanding of Indigenous food sovereignty.

3.3 Barriers to Indigenous Food Sovereignty: Relationships with Colonial Governments and Settler Society

Grey and Patel (2015) characterize the interaction between industrial capitalism and Indigenous food systems as a process of dispossession and destruction enacted through direct violence as well as "more subtle technologies of governance" designed "to break Indigenous food systems" (p. 437). Discussion of the barriers to Indigenous food sovereignty, both historical and contemporary, is largely framed in terms of the legacies of historical violence and ongoing power imbalances within relationships between Indigenous peoples and settler governments and society. Commonly identified barriers include: (1) the legacy of direct historical damage to Indigenous communities and food systems; (2) the harms of the development paradigm and industrial activity; (3) the failings of contemporary government approaches to Indigenous food systems; and (3) the perpetuation of colonial norms and structures by settler society, including purported allies. This section discusses each of these barriers through a relational lens.

Legacies of Colonialism

Over the course of several centuries, governments within Canada deployed policies and processes designed to systematically erase Indigenous culture and identity through direct violence and assimilation (Grey & Patel, 2015, p. 437; Coté, 2016, p. 3). These policies caused profound harms to Indigenous food systems and communities that persist today.

Initially, the confinement of Indigenous peoples to reserves and the depletion of traditional food systems by white settlers created dependency on government rations and severed the connections to the land that formed the core of Indigenous cultures and knowledge systems (Grey & Patel, 2015, p. 437). State policies also weakened governance within Indigenous communities, replacing traditional governance structures with the imposed elected band council system, which has fostered a divisive and adversarial politics and weakened the capacity of Indigenous communities to reconcile internal differences, leaving traditional territories more vulnerable to continued exploitation (Morrison, 2011, p. 103). The forced removal of Indigenous children from their families into residential schools by the federal government over the course of more than a century worked to sever their connections to home, community, culture, and language (Coté, 2016, p. 3). This policy was accompanied in the twentieth century by the so-called "60s scoop," when government social workers removed Indigenous children from their homes and into white foster homes, often without the consent or even knowledge of parents (Robin & Dennis, 2020, p. 3). The violence inflicted through these processes resulted in collective trauma that continues to affect Indigenous families and communities today (Coté, 2016, p. 3).

The impacts of these historical actions continue to resonate in the present. The erosion of Indigenous knowledge systems and cultural values has continued as a result of interrupted intergenerational knowledge transmission and the breakdown of family and community structures that maintained Indigenous food systems (Morrison, 2011, p. 103). The impacts of settler colonialism have not only been physical, but epistemological, altering Indigenous

peoples' understandings of community and relationships (Timler & Sandy, 2020, p. 6). The result of these historical processes of dispossession and violence has included a legacy of persistent high poverty rates, poor health outcomes, and food insecurity within Indigenous communities (Morrison, 2011, p. 102).

With respect to historical policies and processes, barriers to Indigenous food sovereignty are therefore clearly framed in terms of relationships with the colonial state and represent the outcomes of power imbalances and oppression. Situating these interactions within the network of relationships that constitute Indigenous food systems, state policies targeted at Indigenous peoples had profound implications for the spatial and epistemological relationships between Indigenous peoples and the natural ecosystems of their traditional lands and territories, as well as for the physical and social structures and dynamics of Indigenous communities.

Industrial Activity

In addition to the direct impacts of state policies, barriers to Indigenous food sovereignty are also commonly discussed in terms of the effects of industrial activity, including ongoing land development and resource extraction. Ongoing industrial development practices such as mining, hydroelectric projects, forest management, and unsustainable fishing have continued to negatively impact traditional food systems in numerous ways, contaminating natural ecosystems and depleting food sources (Morrison, 2011, pp. 103-104). For example, Kamal (2018) discusses how the construction of a hydroelectric dam in Northern Manitoba in the 1970s impacted food sovereignty for O-Pipon-Na-Piwin Cree Nation in multiple ways (p. 7). First, the community was forcibly relocated from their ancestral territories to enable project construction (Kamal, 2018, p. 7). Furthermore, the dam itself caused flooding that damaged the local food ecosystem and jeopardized fishing practices that sustained the community (Kamal, 2018, p. 7). Rudolph & McLachlan (2013) similarly discuss hydroelectric development in Northern Manitoba and its profound impacts on the structure of the local food system (p. 1084). Jonasson (2019) discusses how contemporary energy projects may force Indigenous peoples to confront trade-offs between food sovereignty and health equity, as the continuation of traditional food practices carries the health risks associated with environmental contamination (p. 507).

Food Secure Canada (2011) has characterized land development and industrial activity as a continuation of the historical processes that have constrained Indigenous peoples' access to their traditional food systems (p. 11). These interactions have both spatial and epistemological dimensions. For example, in addition to the physical separation of Indigenous communities from the places and practices that sustain Indigenous food and knowledge systems, Morrison (2011) states that industrial economic development has diminished the importance of Indigenous land and food systems to their economic value in the global market system (p. 103). The interactions between government, industry, and natural ecosystems have therefore continually affected Indigenous food systems in manifold ways, causing damage to traditional food sources and impeding Indigenous peoples' ability to maintain critical relationships with natural ecosystems.

Failings of Contemporary Policy Approaches

Barriers to Indigenous food sovereignty are also discussed in terms of contemporary relationships between government and Indigenous peoples, specifically with respect to the failure of policy approaches to understand and address Indigenous needs and priorities with respect to food systems. These interactions are commonly framed as representative of ongoing power imbalances, which are characterized by the restriction of access to culturally important food sources, the avoidance of structural issues in favour of surface-level policy interventions, and the imposition of Western cultural values and knowledge paradigms on Indigenous food systems.

First, Indigenous food systems continue to be negatively impacted by government regulations. Hunting and trapping practices have been limited by quota systems (Daigle, 2019, p. 306), licensing requirements (Beaudin-Reimer, 2020, p. 239), contamination-related harvesting bans (Jonasson et al., 2019, p. 507), and restrictions on the distribution and monetization of country foods (Rudolph & McLachlan, 2013, p. 1088). Even where these regulations are eased to allow exemptions for Indigenous peoples, these practices often remain subject to state-imposed management and administration regimes, which can be time- and resource-intensive for Indigenous peoples (Daigle, 2019, p. 306).

Shortcomings in policy approaches intended to address food security and food sovereignty for Indigenous peoples are also discussed in the literature. From a programmatic point of view, Martorell (2017) highlights common weaknesses in food-related policy interventions targeted at Indigenous communities, including inadequate resourcing, policy and governance gaps, and lack of integration of cultural foods (p. 17). Policy approaches intended to address food security have been criticized for their attempts to address problems of food access without confronting underlying structural issues and inequalities (Settee, 2020, p. 29). Weiler et al. (2015) similarly discuss the shortcomings of health initiatives targeted at Indigenous peoples, which are characterized by narrow mandates and short-term funding cycles that fail to address the structural changes demanded by a food sovereignty approach (p. 1080). Structural issues related to environmental governance are also discussed, including inconsistent protection of natural resources and participation by Indigenous peoples in decision-making (Martorell, 2017, p. 17).

Much of the inadequacy of policy approaches is attributed to the cultural biases embedded in government mechanisms, which fail to accommodate Indigenous knowledge and relational worldviews. This includes contemporary approaches specifically intended to address Indigenous perspectives and interests. For example, Fazzino, Loring and Ganna (2019) criticize policy practices of stakeholder analysis and consultation for failing to recognize the cultural values that motivate these processes (p. 349). This ethnocentrism extends to resource co-management processes, which are often restricted to technical and procedural issues and stop short of fully acknowledging alternative ways of knowing (Fazzino, Loring, & Ganna, 2019, p. 348). Furthermore, Jonasson et al. (2019) levy a similar criticism on the federal Environmental Impact Assessment process, which they characterize as politically motivated and narrow in scope,

failing to consider the impacts of environmental contamination on Indigenous health and food sovereignty (p. 511). Finally, Dawson (2020) discusses how government food policy perpetuates discourses that serve to reinforce settler colonial power relations by imposing Western cultural values concerning food and nutrition onto Indigenous communities and failing to account for integrated and relational conceptualizations of health (p. 85).

Settler Complicity in Neocolonialism

A final barrier to Indigenous food sovereignty discussed in the literature involves the perpetuation of colonial paradigms and structures by settlers, including settler allies within the food sovereignty movement. Kepkiewicz and Dale (2019) draw attention to the failure of the mainstream food sovereignty to question paradigms of land ownership and private property regimes (p. 983). This, they argue, constitutes an "ongoing erasure of Indigenous presence," and thereby perpetuates the discourse and practices of settler colonialism (Kepkiewicz & Dale, 2019, p. 990). Halls (2014) further comments on the failure of the food sovereignty movement to acknowledge and uphold the land-based knowledge and practices of Indigenous peoples as highly sophisticated alternatives to the globalized industrial food system (pp. 13-14). Although this issue is less frequently discussed than relationships between Indigenous peoples and government, it nonetheless highlights the role that settler citizens, academics, and activists play in the network of relationships that surround and impact Indigenous food systems, and how these interactions may perpetuate existing power imbalances.

3.4 Advancing Food Sovereignty: Strategies to Rebuild Relationships

Food sovereignty is defined as "the present day strategies that enable and support the ability of Indigenous communities to sustain traditional hunting, fishing, gathering, farming and distribution practices" (Morrison, 2011, pp. 97-98). This definition characterizes Indigenous food sovereignty as something already occurring at the local level in Indigenous communities. Furthermore, it suggests that Indigenous food sovereignty is achieved when Indigenous communities are able to maintain their relationship to the land and the social and cultural connections that sustain Indigenous food systems (Morrison, 2011, p. 98). This section discusses strategies to advance Indigenous food sovereignty emerging from the literature, which are framed as strategies to reclaim, reshape, and rebalance relationships with the land, within communities, and with government and settler society. There is widespread consensus within the literature that Indigenous food sovereignty is best advanced through local action and initiatives. However, some tension emerges with respect to the accommodation of distinctions and diversity among communities within the food sovereignty movement, as well as the role of relationships with government and settler society in advancing Indigenous food sovereignty.

Advancing Indigenous Food Sovereignty through Local Action

Community-level activities and initiatives that leverage and strengthen local connections to land and community are consistently characterized in the literature as the best way to advance

Indigenous food sovereignty. In keeping with the principle of active participation as foundational to Indigenous food systems, Morrison (2011) emphasizes that continuous everyday action at the individual, family, community, and regional levels are foundational to Indigenous food sovereignty (p. 100). Furthermore, Rudolph & McLachlan (2013) argue that food-related decision-making must be designed and controlled by communities at the local level in order to adequately reflect local priorities and knowledge systems (p. 1094). Leveraging local resources to build food programs at the community level has also been identified as a strategy to overcome the inadequacies of government food security programs (Kamal & Ithinto Mechisowin Program Committee [IMPC], 2020, p. 131). Indigenous food sovereignty is therefore best advanced at the local level, through approaches that build on community strengths and reflect local needs, priorities, and land-based knowledge systems.

Some tension emerges in the literature with respect to reconciling a broad movement for Indigenous food sovereignty with diverse local circumstances and needs. Morrison (2011) states that definitions of sovereignty may vary between Indigenous peoples due to their distinct cultures and languages, but that commonalities also exist, originating from the similar worldviews and common values that underpin relationships to the land and therefore lie at the core of Indigenous food systems (p. 98). However, recent research has identified a need to account for the differences between Indigenous peoples, and how these differences shape the realities of Indigenous food sovereignty in the context of diverse geographies, cultures, and political structures (Daigle, 2019, p. 297). For example, researchers have identified a need for greater consideration of Métis perspectives and positions (Beaudin-Reimer, 2020, p. 231) as well as the unique challenges and needs of urban Indigenous peoples (Robin & Cidro, 2020, p. 136) within the research and discourse on Indigenous food sovereignty.

Contending Paradigms of Resurgence and Recognition

The question of the role of relationships with provincial and national governments in advancing Indigenous food sovereignty is a significant source of tension in the literature. Local, community level actions to advance food sovereignty are situated by many scholars (e.g., Coté, 2016; Kepkiewicz & Dale, 2019; Kamal & IMPC, 2020) within the theory and practice of Indigenous resurgence. Resurgence theory calls on Indigenous peoples to reclaim their Indigenous identities and engage in decolonization through "everyday practices of renewal" rather than relying on state-constructed ideals of rights and reconciliation (Corntassel, 2012, p. 86). According to scholars such as Alfred and Corntassel (2005, p. 598) and Coulthard (2014, p. 66), approaches based in state mechanisms and epistemologies, including the negotiation of modern treaties and the recognition of Aboriginal rights, do not strengthen the sovereignty of Indigenous peoples, but instead represent the continued imposition of colonial structures and normalize state power over Indigenous peoples. In this context, the only meaningful path to decolonization is at the level of individual action, which builds strength at the family and community levels (Alfred & Corntassel, 2005, p. 614).

Many criticisms of government policies and processes in the context of food sovereignty are framed by resurgence theory. For example, Kepkiewicz and Rotz (2018) problematize the discourse of "inclusion" and "giving voice" to Indigenous perspectives in food policy development, which is based in pre-determined government frameworks and structures that, by nature, cannot facilitate decolonization or structural change (p. 19). However, Pawlowska-Mainville (2020) characterizes the inclusion of Indigenous perspectives in Canada's new food policy as a positive step toward protecting Indigenous self-determination over food systems (p. 77). Indeed, several scholars call for a rights-based approach to advancing Indigenous food sovereignty that may not align with the principles for resurgence. For example, Settee (2020) suggests that the settlement of outstanding land claims would support Indigenous food sovereignty by ensuring sustained access to traditional food sources and territories (p. 215).

These contradictions demonstrate that there is considerable tension between the principles of resurgence and the position of government recognition in terms of advancing Indigenous food sovereignty. However, Elliott (2018) argues that, while the "inward-looking focus" of the resurgence movement may appear to reject engagement with government structures and mechanisms, it instead calls for a "renewal of dialogue based on genuine mutual respect and reciprocity," which requires unsettling the norms and power imbalances that characterize current relationships (p. 70). Many scholars argue that Indigenous food sovereignty should be pursued at multiple levels, including policy, but that relationships with settler society and governments must be substantially changed and rebuilt. For example, Morrison (2011) acknowledges the shortcomings of a rights-based approach to advancing Indigenous food sovereignty within the current legal system and calls for comprehensive and coordinated policy reform in a range of areas, including forestry, fisheries, environmental conservation, health, agriculture, and rural and community development, as well as more meaningful participation in decision-making (pp. 101, 107-108). Food Secure Canada (2011) also advances a policy platform based on broad land reform as well as support that addresses underlying barriers in Indigenous communities, and which seeks to bridge cultural divides by including Indigenous perspectives in decision-making and build cross-cultural relationships (pp. 11-12). Within a resurgence-based framework, strategies for advancing Indigenous food sovereignty therefore necessarily involve significant changes to relationships between Indigenous peoples and government in Canada that address structural issues such as knowledge paradigms and land sovereignty.

Balancing Participation with the Protection of Indigenous Knowledges

Many scholars suggest that increased participation in decision-making processes impacting traditional territories and food systems is a key strategy for advancing Indigenous food sovereignty (Morrison, 2011, p. 106; Food Secure Canada, 2011, p. 8; Settee, 2020, p. 223). This involves inclusion in the decision-making processes and consideration of Indigenous knowledges as equally valid to Western scientific knowledge (Fazzino, Loring, & Ganna, 2019, p. 348). Furthermore, researchers emphasize the importance of strengthening cross-cultural dialogue between Indigenous peoples and settlers (Halls, 2014, p. 21) by recognizing ongoing colonial

practices (Robin & Cidro, 2020, p. 7; Matties, 2016, para. 1) and actively challenging state structures and processes (Kepkiewicz & Rotz, 2018, p. 14).

However, the literature also devotes attention to the risks and limitations involved in such cross-cultural dialogue and knowledge-sharing. When Indigenous perspectives and knowledges are included in current decision-making, the treatment of so-called "traditional ecological knowledge" is often tokenistic and not given equal weight to Western scientific knowledge (Matthews, 2019, pp. 74-5). At the same time, Indigenous knowledge is often extracted from communities and exploited research and policy contexts (Muller, 2018, p. 14). In light of these contradicting challenges of marginalization and exploitation, Grey and Newman (2018) identify both active sharing and mindful withholding of food and food-related knowledge as important political acts in the context of food sovereignty (p. 717).

Solutions to these challenges are often discussed in the context of Indigenous research methodologies. Skinner et al. (2018) argue that Indigenous research methodologies must be actively acknowledged and incorporated into food sovereignty research in order to avoid reproducing colonial relationships of extraction and marginalization (p. 4). Martens et al. (2016) also describe the benefits of adopting Indigenous research paradigms in the context of research on Indigenous food sovereignty, as they present the best opportunity to understand and honour the experiences of Indigenous peoples engaged in food sovereignty in appropriate ways that avoid non-contextual and extractive approaches to data collection and analysis (pp. 26-27). Furthermore, principles for cross-cultural research and engagement on Indigenous food sovereignty have been outlined by authors such as Lemke and Delormier (2018) and the Indigenous Circle of the People's Food Policy Project (2010).

3.5 Situating Gender and Climate Change in the Relational Network

The work of this chapter so far has been to outline how relationships between various actors shape Indigenous food systems and impact Indigenous food sovereignty. These relationships are characterized by cultural values and knowledge, as well as forces of colonialism and imbalanced power relations. This section draws on the literature to identify two further dimensions that influence and exemplify the dynamics unfolding within the interconnected web of relationships that surrounds Indigenous food systems. Climate change and gender inequality are both under-explored dimensions of research. However, they have important implications for Indigenous food sovereignty in terms of features, barriers, and opportunities.

Climate Change

The impacts of climate change on Indigenous peoples and their food systems has been identified as a gap in mainstream climate change research (Settee, 2020, p. 213). However, the subject of climate change is frequently discussed in the context of Indigenous food sovereignty with respect to the features of Indigenous food systems as well as barriers and opportunities for Indigenous food sovereignty. Through their close relationships with natural ecosystems, Indigenous peoples

are keepers of highly detailed and sophisticated ecological knowledge and closely attuned to changes in environmental and climatic conditions (Settee, 2020, p. 211). Historically, these knowledge systems have enabled Indigenous peoples to adapt to environmental changes and maintain functioning food systems throughout changing conditions (Morrison, 2011, p. 104).

However, climate change outside the range of historical variability has increased uncertainty and presented a challenge to Indigenous food sovereignty (Morrison, 2011, p. 104). A number of sources in the food sovereignty literature identify climate change as having a profound impact on Indigenous peoples' ability to maintain their traditional food systems in the twenty-first century (Morrison, 2011, p. 104; Chiblow, 2019, p. 2; Beaudin-Reimer, 2020, p. 239; Timler & Sandy, 2020, p. 1; Muller, 2018, p. 8). In this way, climate change is positioned as a force operating to disrupt the relationships between Indigenous peoples and their surrounding ecosystems that form the heart of Indigenous food systems. Climate change is also connected to broader social and environmental injustices perpetrated against Indigenous peoples and their food systems, as a product of the global industrial food system (Settee, 2020, p. 214).

Indigenous food sovereignty is presented as an important strategy for addressing the impacts of climate change. Given their unique and sophisticated knowledge, Indigenous peoples have an important role to play in addressing and adapting to climate change impacts at local, regional, national, and international levels, though their voices are often absent from decision-making (Settee, 2020, pp. 218-219). Additionally, practices of Indigenous food sovereignty represent alternative, sustainable paradigms for interacting with natural ecosystems that can contribute to addressing climate change (Settee, 2020, pp. 222-223). Woodman and Menzies (2016) identify Indigenous knowledges and practices as critical to rediscovering sustainable ways of living in the world (p. 36), while Loring (2017) argues that climate change provides an opportunity to rebuild relationships, foster cross-cultural learning, and take collective action to support Indigenous food sovereignty (para. 16). This suggests that while some linkages within the network of relationships surrounding Indigenous food systems are damaged by climate change, rebuilding them can provide opportunities to discover new and more sustainable ways forward.

Gender Inequality

Gender relations presents another lens through which to understand the network of relationships that surround Indigenous food systems. Although this lens is critical to deepening our understanding of Indigenous food systems (Kuhnlein, 2018, p. 2), it is often absent from the movement and discourse around Indigenous food sovereignty (Grey & Patel, 2015, p. 439; Matthews, 2019, p. 113). Grey and Patel (2015) attribute this silence on gender issues to a hesitation among scholars and activists to divide anti-colonial struggles along gender lines (p. 439). Gender is often mentioned in the literature (e.g., Martens, 2015; Cidro, Martens, Zahayko, & Lawrence, 2018; Rudolph & McLachlan, 2013), but is rarely the subject of rigorous analysis with respect to its place in Indigenous food sovereignty. However, by drawing together gender-related discussion from across the literature, the gender dimensions of relationships

throughout a network of relationships become visible with respect to the features, barriers, and possibilities of Indigenous food sovereignty.

Indigenous women have traditionally held important and distinct roles within Indigenous food systems as both practitioners and knowledge keepers (Grey & Patel, 2015, p. 438). These roles varied across diverse Indigenous cultures and landscapes, yet gender relations were often guided by the same values of reciprocity and responsibility that underlay relationships to the land (Timler & Sandy, 2020, p. 15). However, the damage caused to Indigenous food systems by colonialism impacted Indigenous women in unique ways, marginalizing their distinct roles and knowledge as Western gender roles were imposed on Indigenous communities (Grey & Patel, 2015, p. 428). Gender inequality and violence against women has also been identified as an outcome of energy projects that impact Indigenous food systems (Rudolph & McLachlan, 2013, p. 1085). Furthermore, women's voices are often missing from contemporary co-management arrangements between Indigenous peoples and government representatives (Todd, 2016, p. 196). The outcomes of the ongoing marginalization of women and perpetuation of gender inequality have included disproportionately high rates of food insecurity among Indigenous women (Islam & Berkes, 2016, p. 815).

Food sovereignty has been identified as an opportunity to empower Indigenous women and reclaim their distinct voices and knowledge in decision-making. Gilpin and Hayes (2020) discuss the positive impacts of a community garden project on women's sense of pride and personal agency, and how this represents a subversion of colonial power (pp. 110-111). Furthermore, the reclamation of Indigenous women's voices, knowledges, and experiences is positioned as a critical component of efforts to discover new and more sustainable ways forward in the context of climate change (Parlee & Wray, 2016, p. 186). The gender dimensions of strategies to advance Indigenous food sovereignty therefore involve strengthening women's personal relationships to the land and communities, as well as rebuilding relationships with settler society and government institutions. Lemke and Delormier (2018) state that addressing gender inequality and questioning patriarchal assumptions is critical to addressing food systems challenges (p. 9).

3.6 Conclusion: A Conceptual Framework for Research

Over the past decade, the study of Indigenous food sovereignty in Canada has emerged and undergone considerable development. The themes most commonly explored in the literature concern the features of Indigenous food systems, historical and contemporary barriers and challenges to Indigenous food sovereignty, and strategies for advancing Indigenous food sovereignty. Although it manifests most often at the local level in order to reflect the diverse knowledges and priorities of individual communities, the movement for Indigenous food sovereignty is fundamentally political and specifically anti-colonial in nature. As a movement centered on Indigenous resurgence, tensions emerge with respect to the role of government and settler society in supporting Indigenous food sovereignty.

This chapter has demonstrated that Indigenous food sovereignty is best framed and understood through a relational lens. Within the literature on Indigenous food sovereignty, the relevant context, features, barriers, and strategies are all situated within a network of relationships among Indigenous peoples, natural ecosystems, and settler society, including governments and industries. These relationships unfold in both spatial and epistemological realms and play out at multiple levels, from the local and individual to the structural. Furthermore, interactions within this network produce and reinforce power relations, which are shaped by social and environmental forces including colonialism, culture, climate change, and gender.

The conceptual framework for this research project (Figure 1) situates the researcher's understanding of Indigenous food sovereignty within a network of relationships among various actors in the realm of Indigenous food systems. The spider web shape was chosen to represent the complexity of the interactions unfolding within this network, including key actors and the forces of culture, nature, and power that shape the spatial and epistemological relationships among them. These relationships shape, impact, and interact with Indigenous food systems in numerous direct and indirect ways that carry implications for Indigenous food sovereignty.

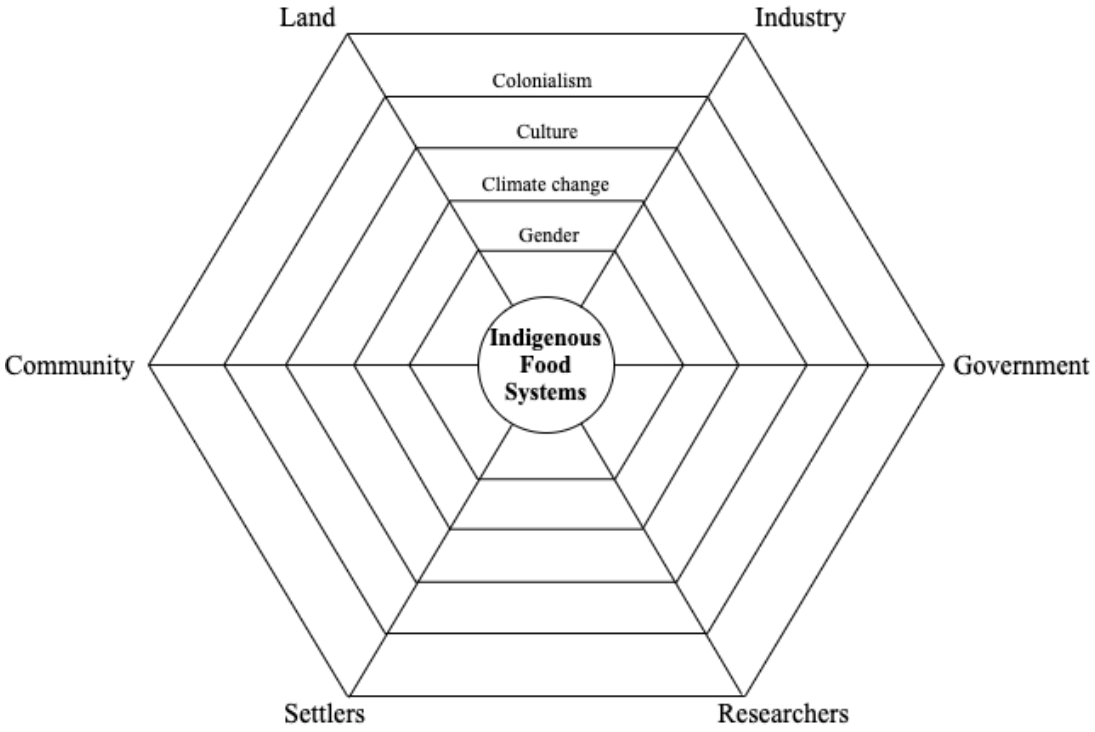

Figure 1: Situating Indigenous food sovereignty: a conceptual framework.

The six points around the edge of the web represent key agents identified in the literature as important actors whose actions, interests, and interactions shape, influence, or otherwise interact with Indigenous food systems. Relationships between different actors within the web bear various direct and indirect implications for Indigenous food systems. For example, the local knowledge and practices that shape Indigenous food systems are contained and expressed

through the relationships between Indigenous peoples and the surrounding natural environment, represented by the strands connecting "Community" and "Land" in Figure 1. In addition, as discussed in the preceding literature review, historical and contemporary relationships between Indigenous communities and settler governments have had profound implications for the relationships between Indigenous peoples and the land, and thus also contribute to shaping both tangible and intangible dimensions of Indigenous food systems. Furthermore, contemporary relationships among governments, industry, and the land have contributed to environmental contamination and degradation that continues to profoundly alter and impact Indigenous food systems. By carrying out activities on the traditional territories of Indigenous peoples, and through interactions with Indigenous communities, governments, and other actors, settlers also interact with and influence Indigenous food systems. Finally, researchers interact with Indigenous food systems through their relationships with Indigenous communities and governments, the nature of which is influenced by research methods.

The hexagonal strands connecting the points within the web represent selected social, cultural, and environmental forces that shape the interactions between these key actors. These interrelated forces operate within the web of relationships to influence various aspects of Indigenous food systems. They furthermore produce particular configurations of power that impact Indigenous food sovereignty. Culture and colonialism emerge from the literature as key forces that have shaped historical and contemporary manifestations of Indigenous food systems with respect to both features and barriers. Gender and climate change represent forces that have been explored less frequently in the context of Indigenous food sovereignty, but which also influence the interactions among various actors within the web and thereby impact Indigenous food systems. The forces that affect Indigenous food systems are not limited to the four identified in this framework, which represent only those most commonly addressed by the literature or those specifically identified in the research questions for this project.

In considering the nexus of relationships among these actors and the forces that shape their interactions, this project is also influenced by the work of Wiebe (2020), who outlines a "sensing policy" approach to socially engaged research to inform decision-making (p. 181). This approach consists in four key principles: (1) connecting with lived experiences; (2) multilayered analysis of broad structural forces and contexts: (3) engaging geopolitical location, relationality and reflexivity; and (4) bearing witness to situated bodies of knowledge and appropriately communicating local expertise (Wiebe, 2020, pp. 185-190). As discussed further in chapter four of this report, direct partnerships with Indigenous communities were not possible given the constraints of this project, and so a true sensing policy approach to research was not engaged. However, the sensing policy framework influenced the development of a relational and intersectional conceptual framework for this research. It also informed the researcher's understanding of her own role within this relational network as part of a "connective triad between academics, communities and policy-makers" (Wiebe, 2020, p. 191).

In light of the highly diverse, contextual, and place-based nature of Indigenous food systems knowledge and practices across Canada, a more accurate conceptualization of Indigenous food systems would depict dozens (or possibly hundreds) of overlapping webs, each with its own set of actors, relationships, and power dynamics. Given a desire to achieve high-level synthesis and to be as clear and concise as possible, a single web integrating common themes from the literature was chosen for the purposes of this project. Despite this limitation, this conceptual framework bears important implications for this project's analysis of Indigenous food sovereignty in Canada. A relational understanding of Indigenous food systems situates Indigenous food sovereignty as the product of interactions between actors operating within a network, which often reproduce power imbalances. This perspective will inform the project's analysis of the current state of Indigenous food sovereignty as well as the nature of future possibilities for strengthening Indigenous food sovereignty, as it implies that future work must be directed toward addressing power imbalances and rebuilding relationships in better ways.

For example, the understanding of Indigenous food systems presented in this conceptual framework will inform this project's efforts to comment on the role of policy makers with respect to Indigenous food sovereignty. This project is informed by an understanding of the power imbalance that continues to characterize interactions between Indigenous peoples and government, and the ways in which colonial structures, cultural ideals, and gender inequality are perpetuated through contemporary policies and processes. Therefore, although the on-the-ground work of Indigenous food sovereignty is located in the local maintenance and revitalization of place-based Indigenous food systems by Indigenous communities, government policy necessarily occupies an important role in addressing underlying structural issues and alleviating barriers to Indigenous food sovereignty within this relational framework. Furthermore, the network of interlinked relationships surrounding Indigenous food systems and the reverberation of direct and indirect impacts throughout this web suggests that government interactions with Indigenous food sovereignty cannot occur only at the level of agricultural and food-related policy, but must encompass a wide range of subject areas that affect Indigenous peoples and food systems.

4.0 Methodology and Methods

This chapter describes the methodology and methods employed to address the global research question: *How is food sovereignty expressed and practiced by Indigenous peoples in Canada?*

The methodology chosen for this project was a systematic review of qualitative evidence following the guidance provided by the Joanna Briggs Institute (Lockwood et al., 2020, p. 22). Specifically, this project employed a meta-aggregative approach to qualitative synthesis, which seeks to aggregate evidence to "enable generalizable statements in the form of recommendations to guide practitioners and policy makers" (Lockwood et al., 2020, p. 27). Given that a key objective of this project is to provide recommendations to policy makers on the subject of Indigenous food sovereignty, meta-aggregation is therefore an appropriate approach.

A further strength of a meta-aggregative approach in the context of this project is that, while other approaches to qualitative synthesis are intended to facilitate the re-interpretation of evidence and development of theories, meta-aggregation is intended to capture and present existing findings as identified by the original researchers (Lockwood et al., 2020, p. 26). A key concern in research that involves Indigenous peoples is the fragmentation and decontextualization of Indigenous knowledges that often occurs when Western methods of analysis are used (Kovach, 2009, p. 131). Although meta-aggregation is a Western approach and subject to limitations as a result (as discussed below), it is nevertheless more appropriate for the context of this project than other methods of qualitative evidence synthesis.

3.2 Methods

The systematic review was conducted in accordance with the guidance provided by the Joanna Briggs Institute, which outlines four key stages: (1) define inclusion criteria; (2) conduct the search strategy; (3) gather data; and (4) synthesize data (Lockwood et al., 2020, pp. 33-40). This section describes the first three stages of this process, while the process of data synthesis is outlined in the following section on data analysis. The author did not use any software designed specifically for systematic literature reviews. Microsoft Excel was used throughout this process, first to manage the searching and screening process and later for data entry. A tactile approach to data analysis was also employed. These methods are described in greater detail below.

Inclusion Criteria

First, inclusion criteria were defined using the PICo mnemonic (Population, Phenomena of Interest, and Context) in order to determine the basic parameters for consideration of sources in the systematic review (Lockwood et al., 2020, p. 31). With respect to population, it was determined that the review would consider studies that included Indigenous people as participants. The phenomenon of interest for the review was Indigenous food sovereignty. The context was any setting within an Indigenous community in Canada. The review included a range of qualitative studies, including both interpretive and critical designs.

Search Strategy and Screening Process

Next, the search strategy was conducted. Five databases were searched using various permutations and combinations of the Boolean phrase [“food sovereignty” and (indigenous or aboriginal or “first nations” or metis or inuit) and Canada]. The databases searched were Google Scholar, Indigenous Studies Portal, Web of Science, Academic Search Premier, and ProQuest. These database searches returned a total of 1,696 results, 1,493 of which were determined to be unique results once duplicates were removed. As the literature review process in the previous chapter revealed the body of literature on Indigenous food sovereignty to be relatively new and limited in size, search parameters were not limited by date. A further 24 studies were identified for screening using other search methods, such as scanning reference lists of relevant studies (Lockwood et al., 2020, p. 39), direct searches of relevant journals (i.e., Canadian Food Studies), and scanning chapters of edited books.

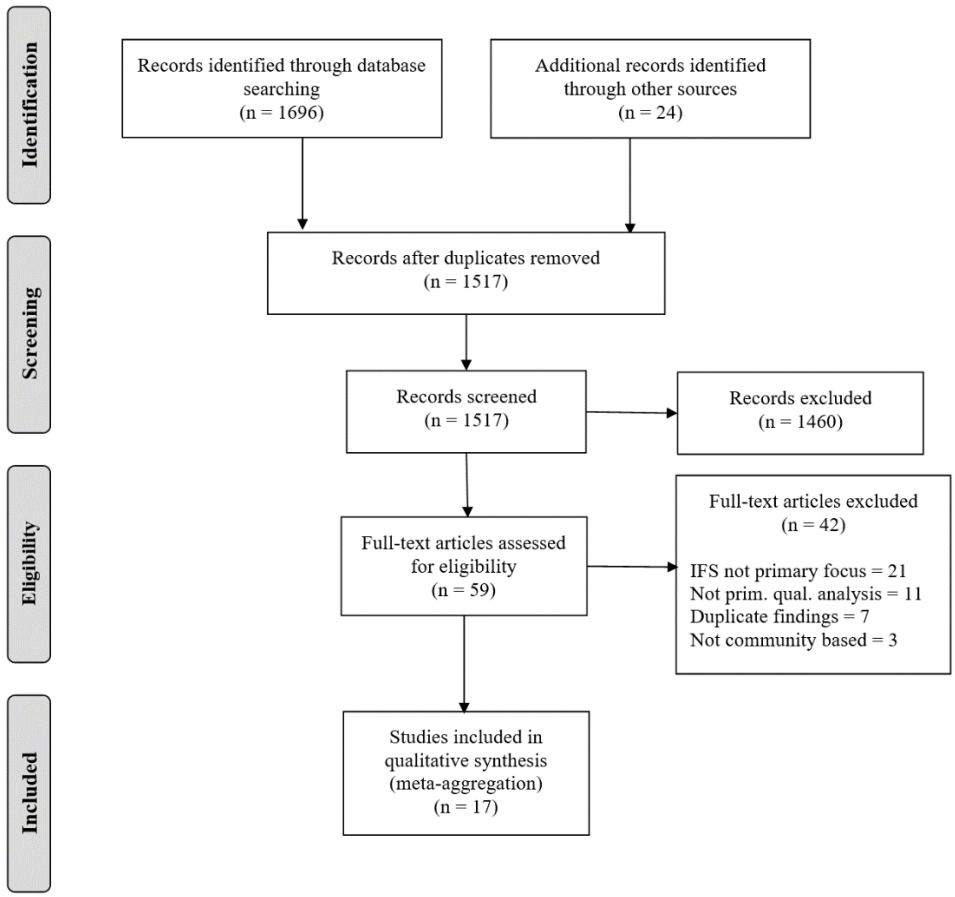

Figure 2: Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement Flowchart (Moher et al., 2009).

Screening of potentially relevant sources occurred in two stages (see Figure 2). First, titles and abstracts of all 1,517 unique sources were assessed against four inclusion criteria based on the PICo mnemonic: (1) primary qualitative analysis; (2) a focus on Indigenous communities in Canada; (3) participants were Indigenous; and (4) Indigenous food sovereignty was identified in

the title, abstract, or keywords for the source. In accordance with Joanna Briggs Institute recommendations, both academic and grey literature (i.e., unpublished theses and dissertations) were considered for inclusion (Lockwood et al., 2020, p. 39). Appendix A provides an example of a full search strategy and screening process for one selected database (Web of Science).

A total of 59 sources satisfied all four criteria, and were screened in for full-text assessment. At this stage, articles were carefully evaluated to determine whether they fully satisfied the PICo mnemonic. Specifically, they were assessed to determine whether Indigenous food sovereignty was the primary phenomenon of interest, meaning that Indigenous food sovereignty was either explicitly identified as a phenomenon of interest in the project objectives or research questions or that it provided the primary framework through which the original findings were interpreted. A few sources were also excluded at this stage because, although they involved primary qualitative research, the findings of the research were not presented in a structured way to facilitate data collection and meta-aggregation. Figure 2 (above) outlines the rationale for the exclusion of a further 42 sources during this stage.

Finally, 17 studies were screened in for inclusion in the meta-aggregation (see Appendix B). Of these, seven were journal articles, six were unpublished theses or dissertations, and four were chapters of edited books.

One aspect of screening process recommended by the Joanna Briggs Institute that was not employed for this systematic review is the assessment of methodological quality of all eligible sources (Lockwood et al., 2020, p. 41). This stage of assessment, which is intended to determine whether the results of individual studies meet certain standards of validity and transferability, has been a subject of debate in the literature on qualitative systematic reviews, with some authors arguing that it overlooks the potential value of interpretation and creativity (Lockwood et al., 2015, p. 183). Furthermore, in the context of Indigenous research, scholars have argued that employing Western paradigms of reliability and validity can result in the discrediting and assimilation of Indigenous knowledge (Saini, 2012, p. 4). For this reason, a full assessment of methodological quality was not conducted for this review. However, as described below, information on the methodologies, methods, and analytical tools employed by each study was collected during the data gathering phase.

Data Gathering

Data was collected from the 17 sources selected for inclusion in the review using a modified version of the Joanna Briggs Institute qualitative data extraction tool (see Appendix C) (Lockwood et al., 2020, p. 70). This tool gathers (1) general details on the study related to methodology, methods, setting, participants, data analysis, and conclusions, and (2) the original findings from the study (Lockwood et al., 2020, p. 55). Data was gathered through repeated reading of the selected studies. Each source was scanned at least three times during this stage to ensure all relevant data was captured. Microsoft Excel was used for data entry and management.

In meta-aggregation, findings are defined as "verbatim extract[s] of the author's analytic interpretation," and include categories, themes, or metaphors identified in a study (Lockwood et al., 2020, p. 55). For the purposes of this review, the findings identified and collected from each study were the categorized headings and/or subheadings within the "results" sections. These categories are often broad and contain several meaningful ideas. However, to adhere as closely as possible to the principle of aggregation, to ensure the equal treatment of all sources, and to avoid straying into reinterpretation and decontextualization of previous research, these additional themes have not been included as distinct findings in the review. They will, however, be discussed in chapter five within the context of broader themes and findings.

Pursuant to the Joanna Briggs Institute guidance, each finding collected from the studies was accompanied by an illustration, defined as "either a direct quotation of participant voice, field-work observations, or other supporting data" (Lockwood et al., 2020, p. 55). In most cases, illustrations were direct quotations from individual participants or author paraphrasing of themes discussed by several participants.

The Joanna Briggs Institute manual recommends assigning a level of credibility to each finding and excluding findings that do not appear to be supported by the data (Lockwood et al., 2020, p. 55). Given the challenges of applying Western concepts of credibility to Indigenous research discussed above, creating such a hierarchy of evidence would be inappropriate in the context of this project. However, the embedded process of identifying an illustration for each finding served to ensure that each finding was substantiated by evidence.

The data collection template used for this review is shown in Appendix C, complete with data gathered from one study included in the review. The first part of the template provides general information on the study design, while the second contains findings and illustrations as gathered from the study. The original Johanna Briggs Institute data extraction template was modified for the purposes of this project to include additional information on: (1) the purpose or objective of each study or article; (2) whether and how the concept of gender was discussed (i.e., with respect to participants, findings, or discussion); and (3) whether the study was focused on exploring food systems generally, discussing an existing food-related initiative, or implementing a new food-related initiative.

3.3 Data Analysis

Pursuant to the Joanna Briggs Institute guidance on reporting the results of qualitative evidence synthesis, data analysis for this review involved (1) synthesis of information related to the research design of the included studies, and (2) meta-aggregation of the original findings (Lockwood et al., 2020, pp. 60-61). A third stage of analysis was also developed to specifically address the secondary research questions pertaining to gender and lessons for policy makers. This stage focused on analyzing the role of gender in each included source and identifying patterns in the researchers' conclusions and recommendations emerging from the studies.

The first stage of analysis synthesized information on the research design of included studies. This stage is recommended by the Joanna Briggs Institute in order to provide greater context for the meta-aggregation and to demonstrate that the studies are sufficiently similar as to be synthesized (Lockwood et al., 2020, p. 60). Furthermore, given the significance of research design choices in Indigenous contexts, this analysis may provide a valuable avenue of inquiry from which to draw lessons. This stage of analysis synthesized research design data pertaining to each study's methodological approach (including theoretical framework where specified), methods, phenomena of interest, setting, participant characteristics (number, Indigenous identity, and role), and data analysis methods. Appendix D displays this data in table format. The results of this analysis are discussed in chapter five.

The second stage of analysis was a meta-aggregation of the included studies' research findings. The process of qualitative evidence synthesis recommended by the Joanna Briggs Institute involves developing categories and synthesized findings based on the original findings collected during the data gathering phase (Lockwood et al., 2020, p. 28). Through this process, original findings are first aggregated into categories of two or more findings. Then, these categories are aggregated to develop synthesized findings or two or more categories.

Through the data gathering process described above, 86 distinct findings were identified and collected from the 17 sources included in this review. Following the entry of this data into Microsoft Excel, the author employed an iterative and tactile approach to synthesis. Findings were copied out onto post-it notes and arranged into categories by hand. Both the titles of the findings and their underlying context (i.e., supporting illustrations) were considered in the process of grouping findings together and developing categories. The categories were then aggregated into synthesized findings. Through this process, the original findings were aggregated into 16 distinct categories and four synthesized findings (see Appendix E), which are discussed in detail in chapter five.

In addition to this two-stage analysis, a supplementary content analysis was conducted to analyze other information relevant to this project that was not specifically captured in the prescribed evidence synthesis process (see Appendix F). Specifically, the analysis sought to collect and synthesize information pertaining to (1) the role of gender in the existing research on Indigenous food sovereignty, and (2) conclusions and recommendations emerging from the literature. This analysis was designed to address the secondary research questions pertaining to gender and lessons for policy makers.

With respect to gender, the two places where gender was most often discussed in the context of these studies were the participant characteristics and findings sections, as noted in Appendix F. The depth of gender-based considerations in each study was also assessed and assigned a score of Low, Medium, or High. With respect to conclusions and recommendations, the discussion and conclusion sections of each source were collected and read repeatedly to identify common themes and patterns, which are listed in Appendix F.

3.4 Limitations and Delimitations

This systematic review was undertaken by one, non-Indigenous graduate student drawing exclusively from secondary data sources in an emerging field. As such, the process and results of this project are subject to certain limitations.

With respect to methodological limitations, true systematic reviews are most often undertaken by a team of at least two researchers to establish inter-rater reliability and minimize the potential for bias and errors in the study selection and data collection process (Uman, 2011, p. 58). This review was conducted by one researcher, which increases the likelihood of bias in the review process (Grant & Booth, 2009, p. 103).

Further methodological limitations stem from the nature of the research paradigm and the positionality of the researcher. Although many of the studies included in the review employed Indigenous research methods, and the researcher has attempted to represent the findings of these studies without distortion, this project has nonetheless been undertaken by a non-Indigenous researcher using a Western methodology (systematic evidence synthesis/meta-aggregation). Engagement with Indigenous peoples has been identified as an important aspect of decolonizing literature review processes (Chambers et al., 2018, p. 175). However, due to time, resource constraints, and timing of the research, wise practices such as stakeholder engagement and reflective dialogue (Chambers et al., 2018, p. 175) were not possible within the scope of this project. Finally, the ongoing COVID-19 pandemic has precluded the formation of research relationships that would have been valuable in guiding and validating the work of this project.

There are also limitations associated with the existing body of literature on Indigenous food sovereignty in Canada. The vast majority of studies screened in for inclusion in the review were conducted in Manitoba or British Columbia. Given the contextual and place-based nature of Indigenous food sovereignty (as discussed in detail in chapter three), the reality of Indigenous food sovereignty in Canada is likely not fully represented by the existing literature. For example, there are currently no studies of Indigenous food sovereignty in Inuit contexts. This geographical bias may limit the generalizability of the findings of this review.

Finally, the complex nature of Indigenous food sovereignty and its interconnection with various related concepts (e.g., land sovereignty, Indigenous food systems, food security) means that the body of literature relevant to this project is far larger than the collection of studies that deal with Indigenous food sovereignty specifically. Many relevant studies were excluded during the screening process because Indigenous food sovereignty was not the primary focus of analysis, or was not named as such by the authors (e.g., Neufeld & Richmond, 2017; Gendron, Hancherow, & Norton, 2017; Skinner, Hanning, Desjardins, & Tsuji, 2013). This literature review therefore does not encompass the full body of existing research that is tangentially relevant to understanding Indigenous food sovereignty. Instead, the scope has been purposely limited to include only those sources that explicitly identify Indigenous food sovereignty in the study objectives or as a framework for interpreting the research findings.

5.0 Findings

This chapter presents the findings of the systematic literature review conducted for this project. First, characteristics of the included studies are outlined. The subsequent section presents a meta-aggregation of the original research findings from these studies. Finally, the results of additional analyses conducted to address specific research sub-questions are summarized.

5.1 Characteristics of Included Studies

Seventeen sources were screened in for inclusion in the systematic literature review, representing sixteen unique studies. Of these sources, seven are journal articles, six are unpublished graduate student theses, and four are chapters from edited books. The earliest included source was published in 2011, while the newest was published in 2020. Eleven (i.e., 65%) of the included sources were published between 2018 and 2020. The journal articles were published in Canadian and international journals in a range of social science fields, including food studies, health, environment, community and economic development, and Indigenous studies. This section provides an overview of research design elements across these studies (see Appendix D). Parenthetical numbers indicate the number of studies that used an element of research design.

Methodology and Methods

Detailed information on research paradigms and methodologies is provided for 14 of the 16 unique studies included in this review. These studies encompass a range of critical and interpretive paradigms. Three of the included studies identify specific theoretical frameworks underlying their research: social constructivism, critical theory, and critical Indigenous theory.

The most popular methodology employed across the included studies was community-based participatory research (CBPR), which was used by eight studies. Seven studies used or were informed by Indigenous methodologies. Three studies identified grounded theory as a methodology underpinning their research design. Other methodologies identified in the selected studies are decolonizing methodologies (4) and ethnography (2). One study used a mixed methods approach. Finally, five studies employed a case study approach, three of which identified the case study as a methodology and two which identified it as a method.

The most ubiquitous method across the included studies was individual interviews, which were employed in 15 of the included studies. Common interview styles were semi-directed (6) and open-ended (2). Methods based on group discussion were also common, including focus groups (7), sharing circles (2), and conversation groups (1). Other common methods included oral traditions and storytelling (4), participant observation (4), workshops (3), participatory video (3), community mapping (1), and on-the-land or food-gathering activities (2).

Of the 16 unique studies selected for inclusion, 14 reported on data analysis methods. Two studies mapped their findings to existing analytical frameworks: a knowledge-practice-belief

framework (Beaudin-Reimer, 2020) and an Indigenous resurgence framework (Kamal & IMPC, 2020). The most common method of data analysis was thematic or concept analysis (11). Within these studies, six reported using emergent themes, one reported hand coding the data, and one reported employing a tactile approach to analysis. Five studies reported sharing their initial results with participants and using their feedback to inform further analysis.

Setting and Participants

In terms of geographical setting, nine studies (or 56%) are located in Manitoba. Six are located in British Columbia. Alberta, Saskatchewan, Ontario, and Yukon are each represented in one study.

The number of participants in each study ranges from three (Poirier, 2019) to 32 (Robin, 2019). Across all studies, the average number of participants is 15. With respect to the representation of Indigenous identities, First Nations communities are represented in 11 studies. Métis participants are represented in five studies. One study indicates that some participants are of mixed ancestry. Four studies do not specify the Indigenous identity of participants. Three studies also include non-Indigenous participants. None of the studies identify any Inuit participants.

Across all included studies, the most frequently represented participant group is elders (5). Also commonly represented are youth (4), food activists and organizers (4), and community members (4). Other groups represented among participants are Indigenous and Western health experts (3), experts and knowledge keepers (3), elected and community leaders (3) and harvesters (3). One study also included participants representing government and non-government organizations.

Phenomena of Interest

By design, the primary phenomenon of interest for all 16 included studies is Indigenous food sovereignty. Secondary phenomena of interest were drawn from the author keywords for each source or, where unavailable, the title and abstract. Seven studies identify aspects of Indigenous food systems as phenomena of interest, including traditional and country foods (3), and practices associated with traditional foods (3). Six studies indicate an interest in food security (3) or related subjects such as food aid, food access, and food-related economic development.

Other phenomena of interest identified across the 16 unique studies included in this review are resurgence (3), colonialism or decolonization (3), and self-determination. Four studies identify justice-related phenomena of interest, including environmental justice (2), food justice, and criminal justice. Researchers have also identified interests with respect to the environment (4) and health (4) as they relate to Indigenous food sovereignty.

While many of the included studies explore Indigenous food systems and food sovereignty broadly, seven of the included studies analyze specific programs or initiatives. In four studies, the researchers implement a food-related initiative or program as part of their research, while three studies explore and assess existing community-based food sovereignty initiatives. One study analyzes an existing initiative external to the participating Indigenous community.

5.2 Meta-Aggregation of Original Findings

A total of 86 themes were identified in the original research findings presented in the 17 sources included in this review. Through the process of meta-aggregation described in chapter four (and shown in Appendix D), these themes were grouped into 16 categories and four synthesized findings, which are summarized in detail in the following sections. The synthesized findings of this meta-aggregation are: (1) Practicing and sustaining Indigenous food systems through relationships; (2) Navigating barriers and challenges to Indigenous food sovereignty; (3) Defining and enacting Indigenous food sovereignty; and (4) Transforming relationships and imagining food sovereign futures.

Practicing and Sustaining Indigenous Food Systems through Relationships

Six categories representing 33 original findings from 13 sources explore the nature and foundational elements of Indigenous food systems. These findings reveal that Indigenous food systems encompass knowledge, values, and practices rooted in Indigenous epistemologies centered on interconnectedness and interdependence among humans and the natural world. This section finds that a cornerstone underpinning Indigenous food systems and Indigenous being is the understanding and fulfillment of relationships among Indigenous people, and between people and the natural world. Aspects of this relational worldview and its associated practices are outlined through discussion of six categories, which explore the following components of Indigenous food systems: (1) relationships; (2) history and tradition; (3) responsibility and reciprocity; (4) community connections; (5) connections to the land; and (6) culture and identity.

Relationships

Five themes from five included sources highlight the role of relationships with respect to Indigenous food systems and food sovereignty. Relationships are described as "an act of the process of food sovereignty" encompassing both relationships between people and relationships with the land (Robin, 2019, p. 192). These relationships contain tangible and intangible dimensions, as food-related practices both support tangible connections between people through sharing (Cidro, Martens & Guilbault, 2016, p. 51; Robin & Cidro, 2020, p. 144) and foster broader conceptualizations of community and relationality (Timler & Brown, 2019, p. 108).

Food is characterized as a relationship builder, facilitating shared cultural experiences that create connections among Indigenous people (Cidro, Martens & Guilbault, 2016, p. 51; Robin & Cidro, 2020, p. 144). Exchanging food is also discussed as a potential means of building relationships between Indigenous and non-Indigenous communities (Timler & Brown, 2019, p. 107). However, the act of exchanging food alone is not sufficient to nurture Indigenous food systems; deeper relational connections must also be realized (Timler, Varcoe & Brown, 2019, pp. 102-103). The findings in this category therefore indicate that food provides opportunities for relationships to flourish when it fosters connections between people. The following categories explore how these relationships are nurtured and sustained.

History and Tradition

Five themes from five included sources discuss the role and maintenance of history and tradition in relation to Indigenous food sovereignty. Connections to the past are identified by participants in several studies as important to sustaining Indigenous food systems, including valuing the ways in which ancestors lived (Poirier, 2020, p. 77), seeking a return to the past (Robin, 2019, p. 91), and learning from traditional Indigenous forms of governance (Chiblow, 2019, pp. 31-32).

Tradition encompasses tangible and intangible dimensions. It includes practices such as growing food (Robin, 2019, p. 91; Poirier, 2020, p. 77), harvesting (Cidro, Martens & Guilbault, 2016, p. 50), and engaging in spiritual activities (Poirier, 2020, p. 77). However, it is also characterized as encompassing the broader worldview, values, and attitudes that underpin how Indigenous people interact with the world (Freeden, 2018, p. 34; Poirier, 2020, p. 77). These connections to history and tradition are maintained and revitalized through intergenerational sharing of traditional knowledge (Poirier, 2020, p. 77; Freeden, 2018, p. 34; Robin, 2019, p. 91).

Indigenous histories and traditions have been continually de-valued (Cidro, Martens & Guilbault, 2016, p. 50) and lost as colonialism has eroded Indigenous land and culture (Robin, 2019, p. 91) and governance structures (Chiblow, 2019, pp. 31-32). The maintenance and revitalization of tradition is identified in multiple sources as a priority for Indigenous food sovereignty (Poirier, 2020, p. 77; Robin, 2019, p. 91). Connections to history and tradition are therefore critical to Indigenous food systems. These connections are maintained through relationships among Indigenous people and between Indigenous people and the natural world.

Responsibility and Reciprocity

Four themes from four included studies highlight the core values of responsibility, reciprocity, and interdependence underpinning Indigenous food systems. Within healthy Indigenous food systems, reciprocity characterizes relationships among people (Cidro, Martens & Guilbault, 2016, pp. 47-48; Manson, 2015, p. 88), and with the natural world (Russell & Parkes, 2018, p. 169). Strengthening reciprocity can also improve relationships between people, both Indigenous and non-Indigenous (Timler, Varcoe & Brown, 2019, pp. 103-104).

Several sources characterize food as a gift (Manson, 2015, p. 90; Cidro, Martens & Guilbault, 2016, p. 48; Timler, Varcoe & Brown, 2019, p. 103), exchanged among people and the natural world. These practices of reciprocal exchange demonstrate respect (Manson, 2015, p. 90), cultivate responsibility (Cidro, Martens & Guilbault, 2016, p. 48), and foster interdependence with the natural world that contributes to sustainability, health, and well-being (Russell & Parkes, 2018, p. 169). Values of responsibility and reciprocity are therefore essential components of a place-based Indigenous worldview that encompasses interdependent relationships among people and the natural world, which are the foundation of Indigenous food systems.

Community Connections

This category contains six themes from five studies that discuss the place of family, social, and community connections within Indigenous food systems. Food provides opportunities for communities to come together and for people to connect with one another (Russell & Parkes, 2018, p. 167; Freeden, 2018, p. 29). In turn, Indigenous food systems are sustained by ongoing community support and connections (Poirier, 2020, p. 85).

These relationships are underpinned by Indigenous values and understandings of how people should interact with one another (Manson, 2015, pp. 86, 99). Characteristics of healthy community connections identified in the studies include: the community being there for one another (Poirier, 2020, p. 83); understanding community as family (Manson, 2015, p. 86); feeling a sense of obligation to one's relations (Manson, 2015, p. 100); and the importance of values of care, generosity, and respect among people (Russell & Parkes, 2018, p. 167).

The themes in this category also discuss the importance of intergenerational relationships in sustaining Indigenous communities and food systems. Community connections are important in providing opportunities for intergenerational learning (Freeden, 2018, p. 29), which involves the sharing of traditional knowledge, values and practices (McMullen, 2012, p. 58). In turn, these intergenerational roles and relationships are critical to ensuring the continuity of traditional knowledge and practices (McMullen, 2012, p. 58). Ultimately, fulfilling and sustaining these community connections supports wellness (McMullen, 2012, pp. 84-85), and contributes to empowerment (Russell & Parkes, 2018, p. 168), and self-determination (Manson, 2015, p. 100).

Connection to the Land

Six themes from six studies locate connections to land as a foundational element of Indigenous food systems. Connections to the land identified in the literature include tangible activities such as living off the land (Russel & Parkes, 2018, p. 168), growing traditional foods (Poirier, 2020, p. 81), and participating in land-based workshops and activities (Robin & Cidro, 2020, p. 141; Kamal & IMPC, 2020, p. 127). However, these connections and their significance extend beyond physical practices to encompass other activities that foster connections to the land and place-based Indigenous worldviews, such as learning Indigenous languages (Robin, 2019, p. 91). A critical component of these connections is the values underpinning them, such as fulfilling responsibilities to nature (Robin, 2019, p. 92; Kamal & IMPC, 2020, p. 127) and being respectful (Poirier, 2020, p. 81). Practicing these connections to the land fosters health and well-being for Indigenous people (Russell & Parkes, 2018, p. 168; Kamal & IMPC, 2020, p. 127; Robin, 2019, p. 91), including physical, mental, and spiritual dimensions of wellness (Poirier, 2020, p. 81).

Culture and Identity

This category, comprising seven themes from six studies, highlights the relationship between food systems and Indigenous culture and identity. This relationship has tangible and intangible dimensions, encompassing practices, knowledge, spirituality, and underlying worldviews.

With respect to tangible practices, food and food skills are identified as a conduit to Indigenous culture (Cidro, Martens & Guilbault, 2016, p. 50; Russell & Parkes, 2018, p. 170). Active participation in Indigenous food systems can facilitate an exploration of Indigenous culture and identity (Robin & Cidro, 2020, p. 142). In terms of knowledge, connections to culture are sustained through the intergenerational transmission of knowledge (Kamal & IMPC, 2020, p. 128) and revitalized through the sharing of cultural knowledge (Cidro, Martens & Guilbault, 2016, p. 50). Ultimately, these cultural connections, maintained through participation in food systems and knowledge sharing, strengthen connections to identity (Cidro, Martens & Guilbault, 2016, p. 47), fostering a sense of belonging and a stronger understanding of what it means to be Indigenous (Robin, 2019, p. 43; Robin & Cidro, 2020, p. 143).

Another theme emerging from this category is the principle that Indigenous food sovereignty is fundamentally grounded in Indigenous paradigms and epistemologies (Robin, 2019, p. 93). Components of these epistemologies include an understanding of the interconnectedness between people and the environment (Cidro, Martens & Guilbault, 2016, p. 47) and conceptualizations of home and community that are rooted in ancestry and place (Manson, 2015, p. 82). Participating in Indigenous food systems nurtures Indigenous ways of knowing and being.

Navigating Barriers and Challenges to Indigenous Food Sovereignty

This synthesized finding includes three categories aggregating 18 themes from seven included studies that discuss barriers and challenges to Indigenous food sovereignty. Centuries of colonialism have worked to systematically damage and undermine Indigenous food systems by causing harm to the natural world and attempting to erode Indigenous peoples' ability to preserve Indigenous ways of knowing and being. This section explores barriers and challenges at three levels: (1) changes to environmental health and access to the land; (2) changes to social and community structures; and (3) changes to individual lives and identities.

Changes to Environmental Health and Access to the Land

Eight themes from five studies discuss barriers to food sovereignty resulting from food system changes that have impacted the relationships between Indigenous people and the natural world. As discussed below, common barriers identified the original research include industrial activity and development, climate change, and government policies and regulations. These barriers impact the health of natural ecosystems and constrain Indigenous peoples' ability to access the land and engage in traditional practices.

Environmental decline is discussed by participants across several studies. Participants note a decline in the availability of traditional food sources, such as plants and animals (Thompson et al., 2011, p. 24; Beaudin-Reimer, 2020, p. 243; Poirier, 2020, p. 79; Chiblow, 2019, p. 35). Industrial development is identified as a source of environmental damage across several studies, encompassing activities such as water level regulation, logging and mining (Thompson et al., 2011, p. 23), hydro damming (Thompson et al., 2011, p. 23; Rudolph & McLachlan, 2013,

p. 1084), forestry, and residential development (Poirier, 2020, p. 80). Climate change is also identified as a factor negatively impacting the health of the environment, the availability of traditional food sources, and the ability of Indigenous people to engage in traditional land-based practices (Poirier, 2020, p. 79; Chiblow, 2019, pp. 33-35).

Another barrier to Indigenous food systems identified across several studies in this category is the impact of government policies and regulations, which constrain access to and use of traditional food sources. Barriers identified in this category include administrative licensing and permitting processes (Beaudin-Reimer, 2020, p. 244), constraints on the ability to sell foods to offset the costs associated with traditional practices (Thompson et al., 2011, p. 24), and bans on the harvesting of endangered species (Beaudin-Reimer, 2020, p. 244).

These barriers directly impact the ability of Indigenous people to engage in traditional practices and transmit food-related knowledge (Beaudin-Reimer, 2020, p. 244; Rudolph & McLachlan, 2013, p. 1085; Poirier, 2020, p. 79). For this reason, Rudolph & McLachlan (2013) characterize barriers of declining environmental health and restrictive government policies and regulations as interlinked and compounding impacts of colonialism that highlight connections between food and environmental injustice in Indigenous communities (p. 1085). The importance of this connection is reinforced by the assertion in Chiblow (2019) that environmental and community health are directly linked (p. 34).

Changes to Community and Social Structures

Five themes from four sources explore barriers to Indigenous food sovereignty linked to changes in social and community structures and the ongoing loss and devaluation of Indigenous skills and knowledge. The historical process of treaty-making changed the structure of Indigenous communities, economies, and food systems and generated lasting dependency on the government (Rudolph & McLachlan, 2013, p. 1086). This is reflected in continued dependence on the conventional food system, despite the low availability of high-quality affordable foods in many communities, which has resulted in a high prevalence of diet-related disease (Rudolph & McLachlan, 2013, p. 1087). This dependence is therefore characterized as an ongoing barrier to Indigenous food sovereignty and is linked to poor health outcomes.

Another systemic challenge emerging from these themes is the loss of cultural skills and knowledge related to food systems within Indigenous communities, and their devaluation by settler society. Specific and interrelated barriers to preserving and revitalizing cultural skills and knowledge are identified in the literature, including: (i) the loss of skills respecting the harvesting, preservation, and preparation of cultural foods as a result of colonization and the legacy of the residential school system (Rudolph, 2012, p. 93), the impacts of which were discussed briefly in chapter two; (ii) dwindling numbers of elders with the ability to transmit cultural knowledge and skills; (iii) a lack of interest among youth (Beaudin-Reimer, 2020, pp. 240-241); and (iv) the exclusion of Indigenous knowledge from the Western education system (Chiblow, 2020, p. 32). The persistent exclusion and devaluation of Indigenous cultural

skills and knowledge by settler society and colonial governments, including the education system (Chiblow, 2019, p. 32) and governance and conservation efforts (Beaudin-Reimer, 2020, p. 240), are also identified as barriers to maintaining healthy Indigenous food systems.

Changes to Individual Lives and Identities

Five themes from two included studies explore how colonial barriers to Indigenous food sovereignty extend to the lives and identities of individual Indigenous people. Key concepts emerging from the findings in this category are: (1) changes in life circumstances; (2) changes in internal perceptions and values; and (3) adapting to transcend barriers.

First, these studies discuss how changes in the life circumstances of individuals impact traditional food practices. Factors discussed include the popularity of the conventional market food system, the constraints of full-time employment, and the migration of families to urban areas (Beaudin-Reimer, 2020, p. 242), as well as changes to Indigenous food systems imposed by the role of money and requirements for financial resources (Manson, 2015, p. 121). These factors have altered and limited the ways in which individuals can engage in traditional practices.

A further, related factor affecting food sovereignty at an individual level is an internal sense of loss among Indigenous people resulting from the impacts of colonialism. This encompasses a general sense of loss of connection with relations (Manson, 2015, p. 102), the loss of Indigenous women's roles and status in their cultures and communities (Manson, 2015, p. 124), and a perception that values have shifted among younger generations of Indigenous people (Beaudin-Reimer, 2020, p. 245). These findings suggest a general sense that individual perceptions and identities may be shifting away from traditional Indigenous ways of knowing and being.

However, these themes also explore the ways in which Indigenous people have resisted and adapted to these challenges to maintain their Indigenous values and identities. They reveal the determination of Indigenous people to maintain and revitalize cultural knowledge, values and practices to transcend barriers to Indigenous food systems (Beaudin-Reimer, 2020, p. 245; Manson, 2015, p. 102). They also discuss how Indigenous people adapt their food-related practices to reflect Indigenous place-based epistemologies and relational values in the context of participation in settler economies and social structures (Manson, 2015, p. 121). Manson (2015) refers to this work as "embodied self-determination" (p. 129).

Defining and Enacting Indigenous Food Sovereignty

This synthesized finding aggregates five categories representing 19 themes from 11 included sources, which explore how Indigenous food sovereignty is defined and understood by participants, as well as how it relates to activities and initiatives undertaken by individuals and communities. The findings from these categories demonstrate that advancing Indigenous food sovereignty is not dependent on any particular set of tools, practices, or initiatives. Rather, Indigenous food sovereignty is advanced when food-related practices and initiatives are guided by local priorities, knowledge, traditions, and culture and thereby support community control

over food systems. The categories in this section explore the following components of Indigenous food sovereignty: (1) defining food sovereignty; (2) country foods; (3) everyday practices and activities; (4) community-level initiatives; and (5) food security.

Defining Food Sovereignty

This category consists of two themes from two included studies that directly explore participants' perceptions and understandings of the concept of Indigenous food sovereignty. Both studies report that food sovereignty encompasses a range of meanings and activities among Indigenous people (McMullen, 2012, pp. 86-87; Poirier, 2020, p. 75). McMullen (2012) reports that participants demonstrated different understandings of the meaning of food sovereignty; for example, one participant suggested that food sovereignty meant consuming a diet of exclusively traditional foods (p. 87), while others indicated it could also include conventional market foods (p. 89). Two key themes emerge from both sources with respect to defining food sovereignty: tradition and self-determination.

Both studies identify tradition as a characteristic of Indigenous food sovereignty. Participants explicitly linked Indigenous food sovereignty with connecting to traditions, "practicing the 'old ways'" (McMullen, 2012, pp. 86, 88), and supporting traditional food systems (Poirier, 2020, p. 77). The importance of tradition to Indigenous food sovereignty extends beyond the consumption of traditional foods (McMullen, 2012, p. 92) to encompass the sharing of traditional knowledge and values (Poirier, 2020, p. 77) and the broad application of these traditions to food systems (McMullen, 2012, p. 90). According to these studies, connecting with traditional knowledge and practices supports the advancement of Indigenous community values (Poirier, 2020, p. 77) and holistic, relational understandings of food systems that foster ethics of sustainability and care (McMullen, 2012, pp. 90, 92). In this way, Indigenous food sovereignty is linked to the understanding and practice of Indigenous worldviews and paradigms more broadly.

Food sovereignty is also connected with autonomy and self-determination. Poirier (2020) characterizes the restoration of traditional food systems as empowering participants by allowing them to reclaim their cultural identity (p. 77). McMullen (2012) states that participants connected engaging in traditional food sovereignty with health benefits for both Indigenous people and ecosystems (pp. 90, 92), and that they identified food sovereignty as an expression of choice and self-determination in the context of colonialism and assimilation (McMullen, 2012, pp. 86, 89). Therefore, although food sovereignty is understood and defined in different ways by participants in these studies, the concept of self-determination appears as a theme in both.

Country Foods

Three themes from three included studies explore the role of country foods with respect to Indigenous food sovereignty. These foods are described as having dietary and cultural significance in both historical and contemporary food systems. Country foods are understood to be traditional food sources such as fish, game, and plants, obtained through practices including

fishing, hunting, gathering and gardening (Thompson et al., 2011, p. 21; Cidro, Martens, Zahayko & Lawrence, 2018, p. 35). With respect to diet, the procurement and consumption of country foods is identified as an important component of the contemporary diets of Indigenous communities in some studies (Rudolph & McLachlan, 2013, p. 1088; Thompson et al., 2011, p. 22). Participants also reported that country foods provide important health benefits (Rudolph & McLachlan, 2013, p. 1088; Thompson et al., 2011, p. 21; Cidro et al., 2018, pp. 35-36).

Beyond their dietary significance to Indigenous people, the knowledge and practices associated with country foods are linked more broadly to cultural connections to family and community (Thompson et al., 2011, p. 21), upholding spiritual relationships with the land (Rudolph & McLachlan, 2013, p. 1088), and intergenerational knowledge transmission and cultural continuity (Cidro et al., 2018, p. 36). The role of country foods in food sovereignty therefore extends beyond procurement and consumption for dietary reasons to encompass the broader cultural, spiritual, and community connections fostered by engaging in traditional food systems.

Everyday Practices and Activities

This category aggregates five themes from five studies that discuss various contemporary practices that are characterized as contributing to Indigenous food sovereignty. These themes encompass a range of activities, such as harvesting (Beaudin-Reimer, 2020, p. 246), land-based activities (Kamal & IMPC, 2020, p. 128), breastfeeding (Cidro et al., 2018, p. 34), and participating in food skills workshops (Cidro, Martens & Guilbault, 2016, p. 51).

Participants in these studies identified access to land-based foods and the environments that sustain Indigenous food systems as important for engaging in these activities (Kamal & IMPC, 2020, p. 128; Beaudin-Reimer, 2020, p. 236). These activities and practices contribute to Indigenous food sovereignty by supporting connections to culture (Kamal & IMPC, 2020, p. 128; Cidro, Martens & Guilbault, 2016, p. 51), facilitating community support and intergenerational learning (Cidro et al., 2018, pp. 34-35; Beaudin-Reimer, 2020, p. 236), and fostering traditional values such as respect and responsibility toward the environment and community (Kamal & IMPC, 2020, p. 129; Cidro, Martens & Guilbault, 2016, p. 51).

The cultural and spiritual connections developed through these practices and activities provides the foundation to nurture an Indigenous identity (Kamal & IMPC, 2020, p. 129; Cidro, Martens & Guilbault, 2016, p. 51) that guides how Indigenous people interact with the world in everyday life (Kamal & IMPC, 2020, p. 129). Therefore, provided that these connections are supported, Indigenous food sovereignty is not limited to narrowly defined activities such as living off the land (Kamal & IMPC, 2020, p. 129), and can be practiced in a range of ways and environments, including in urban settings (Cidro, Martens & Guilbault, 2016, p. 51).

Community-Level Initiatives

The five themes in this category draw from three studies that discuss the implementation of specific programs and initiatives designed to advance food-related goals, including Indigenous

food sovereignty, within Indigenous communities. The most common type of initiative discussed is community agriculture and gardening projects (Rudolph & McLachlan, 2013, p. 1089; Freeden, 2018, pp. 32, 27; Thompson et al., 2011, p. 26). These initiatives are described as a popular option among participants with the potential to complement other country foods (Rudolph & McLachlan, 2013, p. 1089) and improve access to traditional foods and plants (Freeden, 2018, p. 37), while being relatively simple to implement (Thompson et al., 2011).

The food production associated with these initiatives can be limited by seasonal and geographical factors, such as short growing seasons in northern communities (Rudolph & McLachlan, 2013, p. 1089). However, the goals of these initiatives extend beyond food security to encompass broader cultural and community goals. Priorities emerging from these themes with respect to fostering Indigenous food sovereignty through such community-level programs include community control over food systems (Rudolph & McLachlan, 2013, p. 1089), compatibility with Indigenous worldviews (Rudolph & McLachlan, 2013, p. 1089), and the need for programming to explicitly provide opportunities to engage in cultural learning and connections (Freeden, 2018, pp. 33-34). These underlying factors emerge as critical to successfully supporting Indigenous food sovereignty through community-level initiatives.

Community gardens have the potential to foster deeper spiritual connections with land and heritage through the associated physical practices and accompanying processes of communal learning and traditional knowledge sharing (Freeden, 2018, pp. 37-38). However, two studies find that agricultural initiatives face internal and external limitations to achieving these goals. With respect to internal barriers, Freeden (2018) explores how a community garden project fell short of fostering cultural values due to a lack of community engagement and limited opportunities for fostering intergenerational relationships (pp. 32-33). Externally, Rudolph & McLachlan (2013) discuss the shortcomings of existing government financial support for community-level food projects resulting from stringent requirements surrounding remuneration, job creations, and adult-centered initiatives (p. 1090). These factors can limit the ability of local initiatives to achieve cultural and community goals related to food sovereignty.

Food Security

This category aggregates four themes from four studies discussing approaches designed to improve food security for Indigenous communities, and how these relate to Indigenous food sovereignty. The initiatives explored in these studies include several projects designed to improve the quantity or quality of food imported from outside the community in response to barriers to accessing high-quality nutritious foods in the recipient communities (Rudolph & McLachlan, 2013, p. 1091; Timler, Varcoe & Brown, 2019, p. 102). However, participants in these studies indicated a clear preference for local rather than imported food (Rudolph & McLachlan, 2013, p. 1091; Rudolph, 2012, p. 91).

This preference stems from several limitations associated with initiatives designed to import food from other communities. First, participants noted that these initiatives face limitations to

improving food security, including barriers related to regulations and infrastructure, the superior quality of local food (Rudolph & McLachlan, 2013, p. 1091), and the need for additional support and education with respect to storing and preparing the imported food (Timler, Varcoe & Brown, 2019, p. 101). Furthermore, participants indicated that projects focusing on importing food from other communities could "undermine local, sovereignty-based initiatives" (Rudolph, 2012, p. 91). To ensure that programs targeting food security are compatible with food sovereignty goals, participants identified the need for ongoing community engagement by external researchers, NGOs, and government organizations implementing food-related initiatives to ensure that local priorities are addressed (Timler, Varcoe & Brown, 2019, p. 102). More broadly, these initiatives should promote community control over food systems and facilitate a broader reclamation of cultural connections to food systems (Cidro, Martens & Guilbault, 2016, p. 48).

Transforming Relationships and Imagining Food Sovereign Futures

The fourth synthesized finding of this meta-aggregation contains two categories aggregating 16 themes from five included studies that explore the relationship between Indigenous food sovereignty and broader transformations in colonial paradigms and relationships. These categories also discuss how food-related initiatives can provide opportunities to imagine and realize possibilities. The categories described in this section are (1) transforming colonial relationships, and (2) establishing a foundation for the future.

Transforming Colonial Relationships

Eight themes from three studies link Indigenous food sovereignty to the broader transformation of colonial relationships with governments and settler communities. Some participants in one study suggested that food sovereignty for Indigenous people would be impossible without first achieving political sovereignty and transforming relationships with the government (Rudolph & McLachlan, 2013, p. 1091). Two of the studies represented in this category discuss food programs in which an Indigenous community received food (Timler & Brown, 2019) or food-related training (Rudolph, 2012) from a non-Indigenous community. While participants criticized the implementation of these programs (Timler, Varcoe & Brown, 2019, p. 101; Rudolph, 2012, p. 91), such cross-cultural initiatives provide opportunities to reimagine and rebuild relationships with settlers, using food exchanges as a way to build community and foster reciprocity and collective citizenship (Timler & Brown, 2019, pp. 109, 111).

Cross-cultural connections through food are identified as having benefits for both Indigenous and non-Indigenous people. These benefits include the potential to foster healing and cultivate relationships based on values of responsibility (Timler & Brown, 2019, pp. 106-107), provide access to foods that would otherwise be unobtainable (Rudolph, 2012, p. 96), and offer alternatives to the conventional global industrial food systems by centering reciprocity and mutual support (Rudolph, 2012, pp. 87-88). However, concerns are also voiced by Indigenous participants who expressed that relying on settler communities could risk reinforcing and replicating one-sided dependent relationships (Rudolph, 2012, p. 95). Self-sufficiency is

identified as an important component of nationhood, which creates tension with respect to the value of potential new relationships with settlers (Rudolph, 2012, pp. 98-99). The studies therefore link food sovereignty with the potential to transform relationships with settler communities; however, these relationships must be in the service of local sovereignty.

Establishing a Foundation for the Future

This category aggregates eight themes from two included studies that explore how food-related initiatives provide spaces for Indigenous communities to advance local priorities and explore possibilities for the future. Both of the studies represented in this category are centered on discussing and supporting the roles of Indigenous youth in food systems (Chiblow, 2019, p. 2; Rudolph, 2012, p. 4). These initiatives were identified by participants as opportunities to provide youth with hands-on exposure to learning experiences related to traditional practices (Rudolph, 2012, p. 88; Chiblow, 2019, p. 32). Furthermore, participants also identified the importance of youth to Indigenous communities (Chiblow, 2019, p. 31), and indicated that these learning experiences provided youth with feelings of pride in their accomplishments and inspiration for the future (Rudolph, 2012, p. 89).

These food-related initiatives also provided opportunities for youth and other community members to articulate goals for future projects. These included further learning opportunities and on-the-land workshops to build food-related skills (Chiblow, 2019, p. 35; Rudolph, 2012, p. 90). Participants also imagined potential alternative solutions beyond the scope of the initiatives implemented in the studies (Rudolph, 2012, p. 100). Finally, these projects allowed participants to articulate and envision broad goals such as bringing community members together to foster mutual support and learning and better the community as a whole (Chiblow, 2019, pp. 31, 35). Food-related initiatives therefore provide opportunities for communities to identify and advance priorities and envision possible food sovereign futures.

5.3 Supplementary Content Analysis

This section presents the findings of supplementary analyses of the included studies. During the systematic review process, it was determined that the meta-aggregation alone would be insufficient to address all of the research questions for this project in detail. To address this gap, and through repeated reading of the included studies, additional findings across the literature were identified and analyzed with respect to (1) the role of gender in the existing work on Indigenous food sovereignty, and (2) conclusions and recommendations.

Gender in the Literature

An analysis of gender-based considerations in the included sources was conducted to address the following research sub-question: *In what ways, and to what extent, is community-based work on Indigenous food sovereignty linked to gender, and climate change?*

To assess whether the included studies addressed gender, each source was scanned for references to women or gender in the study design, findings, and analysis sections. Eleven of the included studies were deemed to address gender in some way. Each study was subsequently assigned a "depth of analysis" rating of low, medium, or high. Low depth (7 studies) indicates a passing mention of gender, medium depth (2 studies) entails a greater level of detail or critical gender analysis, and high depth (2 studies) denotes a significant focus on gender in the research and analysis. Based on this analysis, the overall depth of consideration and analysis of the gender dimensions of Indigenous food sovereignty in the existing literature is low.

Among these studies, gender is most often addressed in participant descriptions and research findings. The gender dimensions of participant identity and recruitment are detailed in six included studies. In two studies, all participants were women (Poirier, 2020, p. 73; Cidro et al., 2018, p. 32). A further two studies had more community participants who were women than men (Timler & Brown, 2019, p. 105; Russell & Parkes, 2018, p. 166). Finally, in two studies, the authors identified that they had wished to recruit an equal ratio of women and men participants, but that they were unable or encountered difficulties in recruiting and retaining enough women (Beaudin-Reimer, 2020, p. 236; Manson, 2015, p. 21). In one case, the author acknowledges that the findings of the study may reflect a gender bias as a result (Beaudin-Reimer, 2020, p. 236).

Eight of the included studies present gender-related findings. A phenomenon emerging from two studies is a general reluctance among participants to discuss gender in the context of Indigenous food systems. For example, a participant in one study stated, "I don't know if the story of the women of Grand Rapids will ever be told because it's still too painful" (Rudolph & McLachlan, 2013, p. 1086). Manson (2015) notes that a majority of participants in his study either "evaded, refused to answer, or gave overly generalized answers" to specific questions related to women's roles in local communities and food systems (p. 123). He suggests that this reluctance may stem from an awareness of potentially negative consequences that could result from discussing gender issues, such as decreased community cohesion (Manson, 2015, p. 123). Whatever the underlying cause, gender is clearly a sensitive and often painful subject, and a hesitation among participants to engage them may help to explain the limited consideration of gender in the existing literature.

Nevertheless, several studies discuss gender-related research findings in varying levels of depth. These findings primarily relate to (1) Indigenous women's roles in food systems and their relationship to food sovereignty, and (2) the distinct challenges experienced by women due to colonial impacts on Indigenous food systems and communities. Participants in several studies noted that women have distinct and important roles in Indigenous food systems (Chiblow, 2019, p. 33; Manson, 2015, pp. 124, 128; McMullen, 2012, p. 77; Robin, 2019, p. 93). Women's roles are characterized in a range of ways among the studies, which reflect diverse cultural contexts and food systems. For example, women's roles are discussed in terms of connections with the spiritual elements of Indigenous food systems (Chiblow, 2019, p. 33), responsibility for maintaining connections to home and to the relationships that maintain Indigenous food systems (Manson, 2015, pp. 125, 128), and upholding and embodying values of caretaking and

responsibility through sharing food (Russell & Parkes, 2018, p. 168). One study focuses entirely on exploring women's roles with respect to breastfeeding practices and introducing country foods to infants as supporting Indigenous food sovereignty, as well as the distinct community and social structures among women that support these roles (Cidro et al., 2018, p. 33).

Three studies discuss findings related to the loss and devaluation of Indigenous women's roles over time due to the multilayered impacts of ongoing colonialism. Manson (2015) notes that some participants acknowledged that women have lost their traditional roles in their food systems and communities (p. 124). Rudolph & McLachlan (2013) note that hydro development in northern Manitoba had particular consequences for women, with one participant remarking that "if you're a woman, you can't walk by yourself at nighttime" (p. 1086). Cidro et al. (2018) discuss challenges to women's roles in infant feeding, noting a general decline in consumption of country foods and cultural tensions between traditional childrearing and Western medical advice (p. 33). These findings indicate that the impacts on women's roles are multifaceted and ongoing.

Finally, the reclamation of women's roles in contemporary food systems is identified in the research findings as important for empowering Indigenous women (Russell & Parkes, 2013, p. 172), and rebuilding Indigenous culture and identity more broadly (Robin, 2019, p. 93). Manson (2015) discusses how Indigenous identity and self-determination are practiced differently among women depending on their unique context, with rural women maintaining direct connections to the land (p. 128), and urban women finding empowerment through feminist organizations in the city (p. 129). These findings therefore identify women's roles as important to Indigenous food sovereignty and discuss strategies with the potential to empower women.

Overall, gender-based considerations in the literature on Indigenous food sovereignty are limited. Across several included studies, both researchers and participants exhibit hesitation to engage deeply with issues of gender. However, drawing together gender-based findings from across the studies reveals that women's roles and stories represent an important component of Indigenous food systems and food sovereignty, which merits further exploration.

Analysis of Conclusions and Recommendations from the Literature

Conclusions and recommendations are not captured within the meta-aggregation process. Given that an objective of this project is to provide lessons for policy makers, it was deemed appropriate to undertake a separate analysis to identify themes among the recommendations and conclusions emerging from previous research. This section provides a brief overview of common themes emerging from the existing literature on Indigenous food sovereignty with respect to conclusions and recommendations, identified through repeated reading of the included sources.

The conclusions and recommendations presented in the literature are directed at a range of identified audiences, including Indigenous communities, researchers, practitioners, and policy makers. The researchers identify various priorities and recommendations for how to develop and support Indigenous food sovereignty targeted at different segments of these audiences. The most

common priority emerging from the literature is the need for Indigenous food sovereignty to be advanced through solutions that are community-based, which is discussed in eight included sources (Chiblow, 2019, pp. 38-39; Freeden, 2018, p. 39; Kamal & IMPC, 2020, p. 130; Poirier, 2020, p. 94; Robin, 2019, p. 94; Rudolph, 2012, p. 106; Rudolph & McLachlan, 2013, p. 1094; Timler, Varcoe & Brown, 2019, pp. 106-107).

Environmental and educational priorities are also identified across the literature. Six sources identify environmental priorities, including access to the land (Beaudin-Reimer, 2020, p. 246), healthy environments (Beaudin-Reimer, 2020, p. 246; Chiblow, 2019, p. 38), and the need to undertake conservation efforts (Poirier, 2020, p. 94). A further six sources identify goals and priorities related to ongoing learning of food-related skills and knowledge (Cidro, Martens & Guilbault, 2016, p. 53; Rudolph, 2012, p. 106), as well as culture and traditions more broadly (Chiblow, 2019, p. 38). Some sources suggest formalized education strategies, such as the development of new community programming (McMullen, 2012, p. 123; Poirier, 2020, pp. 93-94) and the active inclusion and integration of Indigenous knowledge within Western education systems (Robin & Cidro, 2020, p. 146).

Finally, several sources identify issues and priorities respecting relationships between Indigenous communities and the government. The literature highlights that government policy has not only been inadequate to address food issues for Indigenous peoples (Kamal & IMPC, 2020, p. 130), but has been actively harmful (Thompson et al., 2011, p. 35). Priorities include the need for greater government support through enhanced, ongoing funding (Chiblow, 2019, p. 39; Poirier, 2020, p. 93; Rudolph, 2012, p. 107; Thompson et al., 2011, p. 36), and broader recognition of Indigenous inherent and treaty rights (Beaudin-Reimer, 2020, p. 246; Rudolph & McLachlan, 2013, p. 1095; Thompson et al., 2011). Thompson et al. (2011) also discuss the need to challenge harmful policies and regulations that continue to impede Indigenous food systems (p. 36).

5.4 Summary of Findings

This chapter has presented the findings of three sets of analysis conducted on the seventeen sources included in this systematic literature review: (1) characteristics of the included studies; (2) meta-aggregation of the original research findings; and (3) supplementary analysis of content related to gender and recommendations and conclusions from across the literature.

The research on Indigenous food sovereignty encompasses a range of related subject areas, including health and environmental and social justice. With respect to characteristics of the included studies, the analysis revealed that existing research on Indigenous food sovereignty is based predominantly in community-based research methodologies. Ongoing collaborative relationships with communities and participants are important at multiple stages of the research process, including data analysis. This analysis also reveals that the existing research is limited in cultural and geographic scope, with most of the included studies based in British Columbia and Manitoba and most participants being First Nations.

The meta-aggregation of original findings reveals the complex and interconnected web of features, challenges, and possibilities that characterize Indigenous food systems and food sovereignty. Indigenous food systems are found to be grounded in ongoing physical and spiritual relationships among people and the natural world, which are rooted in Indigenous histories and traditions, guided by values of responsibility and reciprocity, and underpinned by Indigenous worldviews passed down through generations. These Indigenous ways of being and knowing continue to be threatened and devalued by colonial forces that have damaged natural ecosystems and Indigenous peoples' relationships to them, altered and impacted Indigenous community structures and well-being, and influenced the lives and identities of individual people. In the face of these challenges, Indigenous people have articulated an understanding and practice of food sovereignty that takes many forms, but which is fundamentally rooted in the maintenance and restoration of relational food systems, and which is driven by community strengths, needs, and priorities. Implementing food-related initiatives has allowed communities to articulate their priorities and begin to imagine and realize decolonized and food sovereign futures.

An analysis of the role of gender in the context of Indigenous food sovereignty found that gender considerations are not fully addressed by the literature. The analysis of conclusions from the existing research reveals the overarching recommendation that activities and initiatives must be community driven in order to advance food sovereignty.

The findings of this systematic literature review explore key concepts and issues that contribute to a complex and nuanced understanding of Indigenous food sovereignty and highlight the characteristics and limitations of the existing research. The following chapters draw on these findings to respond directly to the research questions and provide recommendations for research and policy development.

6.0 Discussion and Analysis

The goal of this project has been to provide advice to policy makers by developing a response to the primary research question: *How is food sovereignty expressed and practiced by Indigenous peoples in Canada?*

To facilitate a fulsome response to this question, five secondary research questions were posed:

1) *How is the meaning of Indigenous food sovereignty articulated and what are the features of its practice, including both commonalities and differences?*
2) *What conditions are identified as barriers or enablers to Indigenous food sovereignty?*
3) *What are the benefits associated with local practices of Indigenous food sovereignty and how do they support and improve the well-being of Indigenous peoples?*
4) *In what ways, and to what extent, is community-based work on Indigenous food sovereignty linked to gender, and climate change?*
5) *What lessons can governments learn from this work with respect to: (i) the role of policy in supporting or undermining Indigenous food sovereignty, and (ii) how to understand and engage with the concept of Indigenous food sovereignty in policy work?*

This chapter addresses each research question in light of the findings presented in chapter five, as well as the general literature review and conceptual framework discussed in chapter three.

6.1 Question #1: Meanings and Features of Indigenous Food Sovereignty

The findings of this report serve to confirm and synthesize the insights from across the existing literature with respect to the definitions and characteristics of Indigenous food sovereignty. The findings of previous studies demonstrate that Indigenous food sovereignty is characterized by a diversity of definitions and manifestations, all of which are linked by their common grounding in relational Indigenous worldviews and calls for local self-determination within food systems.

Despite the cultural and geographic limitations of the existing studies, which were discussed in chapter four, synthesizing the findings of previous research serves to highlight the diversity of Indigenous food sovereignty. With respect to definitions, this research shows that Indigenous food sovereignty is not perceived the same way by all people. Participants in previous studies demonstrate various understandings of the term that encompass a range of food-related practices, and which sometimes contradict one another (McMullen, 2012, pp. 86-87; Poirier, 2020, p. 75). The practices and initiatives characterized by participants as representing food sovereignty are similarly diverse, encompassing a range of tools and activities in various settings and contexts. These practices may include preparing and/or consuming country foods (Thompson et al., 2011; Cidro et al., 2018; Rudolph & McLachlan, 2013), engaging in on-the-land activities (Beaudin-Reimer, 2020; Kamal & IMPC, 2020), participating in community agriculture and gardening (Thompson et al., 2011; Rudolph & McLachlan, 2013; Freeden, 2018), and attending workshops to develop food-related skills and knowledge (Cidro, Martens & Guilbault, 2016; Robin & Cidro,

2020). Such practices are undertaken in diverse settings, including both rural and urban environments. The diversity of definitions and practices described in the literature indicates that food sovereignty is not confined to a single set of definitions and features but is adaptable to various cultural contexts, community needs and priorities, and environmental circumstances.

Despite its diverse manifestations, this research also demonstrates that the examples of Indigenous food sovereignty presented in the literature are widely linked by common underlying principles. Two key themes emerge from the findings of this report with respect to common features: (1) the meanings and practices of Indigenous food sovereignty are rooted in Indigenous worldviews, which center on relationships and responsibilities; and (2) food sovereignty is contingent upon local control over food systems and driven by community priorities.

First, the existing research devotes considerable attention to exploring the relational and interdependent nature of Indigenous food systems (Robin, 2019, p. 192; Cidro, Martens & Guilbault, 2016, pp. 47-48; Manson, 2015, p. 88). The maintenance and revitalization of these food systems is central to food sovereignty (Morrison, 2011, pp. 97-98). These relational values are a unifying feature among the diverse practices and initiatives discussed in the literature. Second, the existing research conveys the importance of local initiatives and community control to advancing food sovereignty (Rudolph, 2012, p. 91; Cidro, Martens & Guilbault, 2016, p. 48). Projects developed by external researchers and organizations without significant input and direction from Indigenous communities are found to have limited success in supporting food sovereignty (Rudolph, 2012, p. 91; Timler, Varcoe & Brown, 2019, p. 102). Local food systems self-determination is therefore another unifying characteristic of Indigenous food sovereignty.

Indigenous food sovereignty manifests in various ways that reflect the diversity of Indigenous cultures and communities across Canada, but which are linked by common underlying principles and guiding worldviews. These findings align with the framework articulated by Morrison (2011), who rejects a universal definition of food sovereignty in favour of one that captures a range of strategies that sustain Indigenous food systems, all of which are linked by "underlying principles…based on our responsibilities to uphold our distinct cultures and relationships to the land and food systems" (p. 97).

6.2 Question #2: Barriers and Enablers to Indigenous Food Sovereignty

This literature review finds that barriers to Indigenous food sovereignty exist at multiple levels and are both tangible and intangible in nature. At the most external level, the healthy functioning of Indigenous food systems has been obstructed by environmental damage caused by mainstream industrial development (Thompson et al., 2011, p. 23; Rudolph & McLachlan, 2013, p. 1084; Poirier, 2020, p. 80) and restrictive government policies and regulations (Thompson et al., 2011, p. 24; Beaudin-Reimer, 2020, p. 244). At the community level, due to continued displacement from their lands and government policy designed to destroy Indigenous cultures and create dependency, Indigenous communities have become more dependent on market foods (Rudolph

& McLachlan, 2013, p. 1087) and experienced a loss of food-related skills and knowledge (Rudolph, 2012, p. 93; Beaudin-Reimer, 2020, p. 240). These impacts are also reflected in the individual lives and identities of Indigenous people, many of whom encounter barriers to engaging in cultural practices due to factors including changed life circumstances and priorities (Beaudin-Reimer, 2020, pp. 242, 245; Manson, 2015, p. 121) and an internal sense of loss (Manson, 2015, p. 102). These interconnected barriers represent ongoing impacts of colonialism, which reverberate throughout Indigenous food systems, cultures, communities, and identities.

Despite these barriers, by demonstrating how Indigenous communities have persevered and adapted to maintain and revitalize their food systems, the existing research also suggests conditions that may act as enablers to food sovereignty. As discussed, Indigenous food sovereignty is characterized by diverse meanings and practices, which are linked by their shared prioritization of Indigenous values and local self-determination. The research indicates that food sovereignty can be nurtured by activities that advance these priorities. For example, cultural and community connections, such as relationships between Elders and youth, can strengthen and reinforce cultural identity and worldviews and support the continuity of traditional knowledge and practices (McMullen, 2012, p. 58; Poirier, 2020, p. 85). Activities that nurture these cultural connections may therefore contribute to the preservation and revitalization of Indigenous food systems and support the ability of Indigenous communities to advance food sovereignty. The recommendations emerging from previous research also identify a number of concrete priorities to support Indigenous food sovereignty, including: improved access to the land (Beaudin-Reimer, 2020, p. 246); increased food-related skills and knowledge within communities (Cidro, Martens & Guilbault, 2016, p. 53; Rudolph, 2012, p. 106; Chiblow, 2019, p. 38); and sustained financial support for local programs and initiatives (Chiblow, 2019, p. 39; Poirier, 2020, p. 93; Rudolph, 2012, p. 107; Thompson et al., 2011, p. 36).

The exploration of enabling conditions in the existing research also serves to highlight and offer potential solutions to the contending paradigms of recognition and resurgence, as discussed in chapter three, in the context of Indigenous food sovereignty. The research clearly indicates that the work of food sovereignty is accomplished primarily at the local level, through daily activities and initiatives undertaken by individuals and communities. This framing aligns with the resurgence paradigm, which is premised upon turning away from state-centric forms of recognition and toward decolonization through "everyday practices of renewal" of Indigenous identities and ways of life (Corntassel, 2012, p. 86). Some existing studies explicitly identify Indigenous food sovereignty as a form of resurgence (Kamal & IMPC, 2020, pp. 122-123; Timler & Brown, 2019, p. 100). However, several other sources in the literature call on governments to recognize and affirm Indigenous rights in order to support food sovereignty (Beaudin-Reimer, 2020, p. 246; Rudolph & McLachlan, 2013, p. 1095; Thompson et al., 2011).

The absence of a clear preference for either recognition or resurgence in the research suggests that, although these paradigms may appear to be mutually exclusive in theory, both likely have a role to play in supporting Indigenous food sovereignty in practice. This aligns with the

interpretation advanced by Elliott (2018), who suggests that, rather than rejecting engagement with the state outright, resurgence instead seeks renewed Indigenous-state relations that resolve longstanding power imbalances and uphold values of respect and reciprocity (p. 70). Indigenous food sovereignty cannot exist without the everyday work of Indigenous communities to maintain and revitalize their food systems. However, the research also suggests that the paradigm of recognition, if engaged in ways that meaningfully transform relationships and uphold the rights of Indigenous people, also has a role to play in supporting Indigenous food sovereignty.

6.3 Question #3: Benefits of Indigenous Food Sovereignty

The existing research does not address the outcomes of Indigenous food sovereignty in great detail. However, in synthesizing limited insights from across the literature, this research provides some indication of the potential benefits of Indigenous food sovereignty with respect to individual and community well-being, political transformation, and environmental sustainability.

For individuals, participating in practices that support food sovereignty can provide a sense of pride, accomplishment (Rudolph, 2012, p. 89), and empowerment (Russell & Parkes, 2018, p. 168). Furthermore, engaging in food-related activities that nurture connections to culture, community, and the land is identified as an important contributor to health and well-being for Indigenous people and communities (Russell & Parkes, 2018, pp. 168-169; McMullen, 2012, pp. 84-85; Kamal & IMPC, 2020, p. 127; Robin, 2019, p. 91; Poirier, 2020, p. 81). This is consistent with other research that locates culture and language as key social determinants of health for Indigenous people (National Collaborating Centre for Aboriginal Health, 2016, p. 3).

A broader, less tangible benefit of Indigenous food sovereignty is its potential to transform relationships with government and settler society in ways that shift away from colonial models of dependency and toward relationships based on mutual respect and reciprocity (Timler & Brown, 2019, pp. 109, 111). This transformation also has benefits for non-Indigenous people, offering opportunities for healing (Timler & Brown, 2019, pp. 106-107) and presenting sustainable alternatives to the global industrial food system (Rudolph, 2012, pp. 87-88).

The existing research does not contemplate to a great extent the environmental benefits of Indigenous food systems, which have been theorized elsewhere in the literature (see: Morrison, 2011, p. 98; Woodman & Menzies, 2016, p. 36). The relationship between food sovereignty and the environment is discussed in greater in the following section.

6.4 Question #4: Linkages to Gender and Climate Change

The general literature review in chapter three found that the gender dimensions of Indigenous food systems are identified as an important avenue to understand and address the gender-based harms of colonialism and to empower Indigenous women. However, the analysis of gender-based considerations presented in chapter five found that gender has been addressed only to a limited extent by previous research on Indigenous food sovereignty.

Several studies acknowledge that Indigenous women have occupied distinct roles within Indigenous food systems (Chiblow, 2019; Manson, 2015; McMullen, 2012; Robin, 2019), and that these roles have been undermined by colonialism (Manson, 2015; Rudolph & McLachlan, 2013). The rebuilding and reclamation of these roles is identified as an important avenue to empower Indigenous women (Russell & Parkes, 2013, p. 172), and to strengthen Indigenous culture and identity more broadly (Robin, 2019, p. 93). However, these discussions are limited in depth. In their study, Manson (2015) remarks that many participants were unwilling to engage with the gender dimensions of food systems (p. 122). This phenomenon may be linked to the historical and contemporary trauma experienced by Indigenous women. For example, a participant in one study stated, "I don't know if the story of the women of Grand Rapids will ever be told because it's still too painful" (Rudolph & McLachlan, 2013, p. 1085). The hesitation among participants across these studies to discuss gender issues in the context of Indigenous food systems mirrors a broader silence in scholarship and activism on Indigenous food sovereignty. Grey and Patel (2015) have attributed this hesitation to broach the subject of gender to a general reluctance to divide anti-colonial political struggles along gender lines (p. 439).

Greater consideration of the gender dimensions of Indigenous food sovereignty provides a promising avenue of inquiry for future research. The existing literature provides some valuable indications of Indigenous women's unique roles and experiences in the context of food sovereignty. For example, in investigating breastfeeding and childrearing practices in a First Nations community in Manitoba, Cidro et al. (2018) explore how Indigenous women enact food sovereignty through these practices and must contend with the contradictory advice of Western medical professionals in doing so (pp. 36-37). This example clearly demonstrates that Indigenous women have unique roles and experiences and encounter distinct challenges in practicing food sovereignty. Further research to explore and understand the experiences of Indigenous women and LGBTQ2+ people in the context of food systems and food sovereignty may yield findings and recommendations that are both gender-sensitive and gender-responsive.

This project is also interested in the intersection of food sovereignty and climate change. Climate change has most commonly been characterized as a barrier to Indigenous food sovereignty by both participants and researchers in previous studies. It has been identified as a source of declining environmental health, reduced availability of traditional food sources, and more limited opportunities to engage in land-based activities (Poirier, 2020, p. 79; Chiblow, 2019, pp. 33-35). In the context of climate change, Indigenous food systems are also characterized as a more sustainable way of living, grounded in principles of respect and consideration for future generations (Poirier, 2020, p. 82). This characterization aligns with other research, discussed in chapter three, which positions the knowledge and voices of Indigenous people, including the knowledge and experiences of Indigenous women, as valuable and overlooked contributors to addressing the climate crisis (Settee, 2020, pp. 222-223; Woodman and Menzies, 2016, p. 36; Parlee & Wray, 2016, p. 186). However, these potential opportunities to respond to the climate crisis are not addressed in detail by the existing research on Indigenous food sovereignty.

As a small and emerging body of research, the existing literature focuses primarily on understanding the features, barriers and strategies that characterize Indigenous food sovereignty. Previous studies have not contemplated in great detail intersecting issues such as gender, climate change, and the nexus between them. Further research in these areas would provide insights that could assist in the development of recommendations and approaches that are more sensitive and responsive to the intersectional dimensions of Indigenous food sovereignty.

6.5 Question #5: The Role of Policy

The existing research provides substantial insight into the interactions between government policy and Indigenous food sovereignty. Government policies and programs, both historical and contemporary, are widely characterized as a threat and barrier to Indigenous food sovereignty. Historical policies, such as the signing of treaties that relegated Indigenous people to reserves and the perpetration of the residential school system, have had lasting impacts on the Indigenous peoples' social structures, economies, and connections to culture and language, which have affected their ability to maintain healthy Indigenous food systems (Rudolph & McLachlan, 2013, p. 1086; Rudolph, 2012, p. 93). The legacy of these policies has also impacted Indigenous individuals, many of whom experience life circumstances and financial constraints that limit their ability to engage in traditional food practices, and who have also described a broader sense of loss of their Indigenous relations, values, and identity (Beaudin-Reimer, 2020, p. 242, 245; Manson, 2015, pp. 102, 121).

The findings of this report also lend insight into the ways in which contemporary government policy continues to impact Indigenous food systems and limit Indigenous food sovereignty. Current policies that directly impact Indigenous food sovereignty include policies that enable industrial development that causes damage to natural ecosystems (Thompson et al., 2011, p. 23; Rudolph & McLachlan, 2013, p. 1084; Poirier, 2020, p. 80), and regulations that restrict land access and otherwise limit hunting, fishing and harvesting practices (Beaudin-Reimer, 2020, p. 244; Thompson et al., 2020, p. 24). Furthermore, the omission and marginalization of Indigenous knowledge within mainstream education systems (Chiblow, 2019, p. 32) and decision-making processes affecting Indigenous food systems (Beaudin-Reimer, 2020, p. 240) is also identified as an ongoing barrier to food sovereignty that falls within the purview of government policy.

Finally, the literature also discusses the shortcomings of existing programs available to support food-related initiatives in Indigenous communities, including government programs. These programs offer limited potential to support Indigenous food sovereignty due to a narrow focus on importing food from outside Indigenous communities (Timler, Varcoe & Brown, 2019, p. 101; Rudolph, 2012, p. 91) and, in the case of federal funding available through the Department of Agriculture and Agri-Foods, eligibility criteria that require food-related initiatives to meet requirements such as job creation and other economic objectives (Rudolph & McLachlan, 2013, p. 1090). Such programmatic approaches are not aligned with the principles of local control and cultural values that underpin Indigenous food sovereignty. These issues echo broader criticism of

government programs targeting Indigenous food security, such as the infamous Nutrition North Canada program (Chin-Yee & Chin-Yee, 2015, p. 13; Crown-Indigenous Relations and Northern Affairs Canada, 2020, pp. 11-12), which are criticized for chronic misalignment with community needs and priorities and failure to provide support that is culturally appropriate and responsive.

The literature therefore reveals how current policy approaches present barriers and limitations to efforts to advance Indigenous food sovereignty at multiple levels, and in a range of policy areas. These harms and shortcomings represent historical and contemporary attempts by colonial actors to overwrite relational Indigenous food systems with Western paradigms of ownership, extraction, and economic development. These findings can further be used to highlight the shortcomings of recent attempts by governments to engage with Indigenous food sovereignty in policy development. Chapter seven explores these shortcomings and offers principles and recommendations to policy makers regarding how to better integrate considerations for Indigenous food sovereignty into policy development and implementation moving forward.

6.6 Conclusion: Expressions and Practices of Indigenous Food Sovereignty

The findings of this research provide valuable insight into the context, features, and interactions that influence Indigenous food sovereignty. Linking these insights back to the conceptual framework developed in chapter three, this research can be used to further explore and illuminate aspects of the relational network that shapes and contextualizes Indigenous food systems and movements for food sovereignty.

First, this research provides insight into the features of Indigenous food systems, exploring the values and worldviews that guide relationships within Indigenous communities and between Indigenous people and the natural world. It also provides an exploration of barriers and challenges to Indigenous food sovereignty, which shows how these relationships have been impacted, undermined, and altered by interactions with government and industry, environmental destruction, and the ongoing influence of colonial forces on the natural world, communities, and individuals. Third, the findings of this report highlight how Indigenous people have adapted and endured to maintain and revitalize relational food systems in diverse ways that reflect a range of cultures and circumstances, but which remain linked by common guiding values and principles. Finally, this research explores the transformative potential of Indigenous food sovereignty to restore and redefine relationships between Indigenous people and food systems, government, and settler society in order to advance self-determination and realize better ways of living.

Some aspects of these relationships remain underexplored, such as the linkages among food sovereignty, gender, and climate change. These intersections present promising avenues for further research. However, this research lends substantial insight into other areas, such as the role of government and policy with respect to Indigenous food sovereignty. In light of these findings, the following chapter addresses the objective of this research project by outlining key principles and proposing recommendations for an audience of policy makers.

7.0 Guiding Principles and Recommendations for Policy

The findings of this report provide insight into the nature of Indigenous food sovereignty and its interactions with government policy, the impacts of which have been restrictive at best and actively destructive at worst. This chapter addresses governments and policy makers directly. First, it highlights specific shortcomings of current policy approaches based on the research findings. Next, it outlines three key principles to guide policy work that is sensitive and responsive to Indigenous food sovereignty. Finally, it proposes three short-term recommendations for integrating food sovereignty considerations into policy development and implementation and highlights the need for deeper long-term work to transform relationships with Indigenous peoples.

7.1 Policy Shortcomings

As discussed in chapter two, governments in Canada have made recent attempts to engage with the concept of Indigenous food sovereignty in the development of food-related policies. The insights provided by this report show that these approaches are narrow in scope, demonstrating a limited understanding of the nature of Indigenous food systems, the meaning of Indigenous food sovereignty, and the role of government policy. For example, the *Food Policy for Canada*, introduced by the federal government in 2019, articulates a commitment to "acknowledging how historic government policies have disrupted [Indigenous] food systems" (Agriculture and Agri-Food Canada, 2019, p. 10). This statement ignores and implicitly denies the harmful impacts of contemporary policies on Indigenous food systems, which are discussed at length in this report. Without understanding and addressing these impacts, the federal government will be unable to achieve the policy's intended outcome of "strong Indigenous food systems" (p. 7).

Attempts to integrate consideration for Indigenous food sovereignty into policy development have thus far been limited to agricultural and food security policies. However, to more fully account for interconnected impacts within relational food systems, policy development in a broader range of areas should be informed by Indigenous knowledge, values, and paradigms. As stated by the Indigenous Circle of the People's Food Policy Project (2010): "There is a wealth of knowledge, values and wisdom to share, and we hope to engage in activities and policy creation that is not 'about' Indigenous peoples' food systems but learns from and is informed by the experiences and expertise gained through a multi-millennia of practice" (p. 2). Policy work should therefore expand in scope beyond current attempts to develop policies that are "about" Indigenous food systems and instead work to understand food sovereignty, as Morrison (2011) suggests, as a framework for better policy development and analysis overall (p. 101).

Improving policy sensitivity and responsiveness to Indigenous food sovereignty requires both foundational principles and actionable guidance for policy makers. The following sections propose principles and recommendations to inform a framework for policy analysis and implementation that actively considers Indigenous food sovereignty.

7.2 Guiding Principles

Based on the research findings, I outline three principles to articulate a vision and provide guidance for policy analysis, development, and implementation that is sensitive and responsive to Indigenous food sovereignty.

1) Policy and programming are informed by Indigenous paradigms and responsive to work being done at the local level to advance food sovereignty.

Indigenous food sovereignty is not an intangible theoretical concept, but is embodied in the daily activities undertaken by Indigenous people that uphold their connections to land, community, and culture (Morrison, 2011, p. 100). It is led at the local level by Indigenous communities, organizations, and collectives working on the ground to advance their priorities. Indigenous food sovereignty is also diverse, practiced by Indigenous nations and communities across Canada in distinct ways that reflect their unique cultures, languages, geographies, needs, and priorities.

Since Indigenous food sovereignty is led at the local level, it follows that sound policy cannot be advanced without being actively informed and co-developed by Indigenous people and communities from the earliest stages of policy development. Furthermore, given its active and participatory nature, if Canadian governments are to support Indigenous food sovereignty, the high-level policy work undertaken to date needs to be accompanied by operational impacts that tangibly support the on-the-ground work of Indigenous communities to maintain and revitalize their food systems. Finally, policies and program approaches designed to support Indigenous food sovereignty should incorporate sufficient flexibility to accommodate its diversity.

This principle aligns with the framework proposed by Morrison (2011), which characterizes the on-the-ground work of food sovereignty as ideally influencing "policy driven by practice" (p. 111). This lesson is also aligned with Morrison's recommendation to the Government of British Columbia that any further work on policy development related to Indigenous food sovereignty must be grounded in Indigenous paradigms (Seed, Kurrein & Morrison, 2019, p. 3).

2) Policy articulates a commitment to understand and address barriers to Indigenous food sovereignty and to support local food systems resurgence and decolonization.

Government policies have consistently worked to obstruct and dismantle Indigenous food sovereignty. These impacts are not confined to the colonial past, but are perpetuated by contemporary policy agendas and decisions. Existing programmatic approaches designed to support food security and community development often fail to align with local food sovereignty goals and priorities. Furthermore, Indigenous food sovereignty encompasses a broad range of policy areas, including food and agriculture, health, environment, education, and culture and language. Indigenous food sovereignty is inseparable from the historical and contemporary impacts of colonialism and from the broader context of relationships between Indigenous peoples and colonial governments. As discussed in this report, food systems are inextricably linked to

Indigenous culture, identity, and worldviews, and their maintenance and revitalization is understood as an act of resurgence and decolonization.

Moving forward, policy work should seek to understand and acknowledge the harms of contemporary policy and the shortcomings of programmatic approaches. Its objectives should be to alleviate direct barriers and re-examine existing programs to better support local work by Indigenous communities to advance food sovereignty. Policy articulations designed to support Indigenous food sovereignty are also unlikely to have a meaningful impact until they broaden in scope beyond food security and agricultural policy to acknowledge and address overlapping impacts in a range of policy areas. Furthermore, a full understanding of Indigenous food sovereignty impacts and considerations requires that all policies impacting food systems be informed by local knowledge and values. Finally, governments should broaden their perspectives and recognize that to engage meaningfully with Indigenous food sovereignty is to engage with the broader context of Indigenous rights and sovereignty. Likewise, engaging with questions of Indigenous rights and self-determination necessitates consideration of food sovereignty.

This principle aligns with Morrison's (2011) framework for Indigenous food sovereignty, which articulates the need for policy reform across interconnected areas of "forestry, fisheries, rangeland, environmental conservation, health, agriculture as well as rural and community development" (p. 101). It is also informed by the call for deeper engagement in policy creation advanced by the Indigenous Circle of the People's Food Policy Project (2010, p. 2).

3) Policy reflects an openness to explore and embrace the transformative potential, opportunities, and wide-ranging benefits offered by Indigenous food sovereignty.

Indigenous food sovereignty has the potential to deliver positive impacts beyond Indigenous people in Canada. Although these impacts have not yet been deeply studied, the existing research points to the potential of Indigenous food sovereignty to provide wide-ranging benefits by offering an alternative to the global industrial food system and encouraging more respectful, responsible, and sustainable interactions amongst people and the natural world. To understand and realize these benefits, policy development and decision-making should be informed by Indigenous voices, knowledge, and values while remaining sensitive to issues surrounding the extraction and exploitation of Indigenous knowledge (Muller, 2018, p. 14). This work will require renewed relationships built upon values of mutual trust, respect, and reciprocity.

7.3 Recommendations

This section outlines three short-term recommendations to tangibly improve the sensitivity and responsiveness of policies, programs, and decision-making to Indigenous food sovereignty. These recommendations address existing food-related policies and programs as well as broader policy development. The objective of these recommendations is to (i) help policy makers understand and address the impacts of existing approaches in policy design and implementation, and (ii) improve consideration of Indigenous food sovereignty in decision-making.

To begin work toward achieving these objectives, it is recommended that policy makers:

1) Revisit and redesign existing policy frameworks

To address the limitations of recent policy approaches intended to support Indigenous food sovereignty, such as the *Food Policy for Canada*, it is recommended that governments revisit these policy frameworks in collaboration with Indigenous partners. Policy makers should seek to engage a wide range of Indigenous Elders, experts, organizers, scholars, and community members in order to build common understanding of Indigenous food systems principles and priorities. These policy frameworks should be co-developed with Indigenous partners to ensure that they reflect Indigenous values, paradigms, and priorities.

2) Re-evaluate current programmatic approaches

To address the shortcomings of programs that are constrained by a narrow focus on food security and economic objectives, it is recommended that governments re-examine the terms, conditions, and eligibility requirements for funding available to support food-related initiatives in Indigenous communities. Policy makers should seek to remove requirements that narrowly address food security or impose economic development objectives and make revisions to reflect the needs of locally designed initiatives that advance community priorities.

3) Develop an analytical tool to assess food sovereignty impacts in policy work

To improve consideration for Indigenous food sovereignty in policy development and meet commitments to incorporate Indigenous perspectives in decision-making, it is recommended that governments develop and implement an analytical tool to better understand the impacts of contemporary policy, programming, and legislation on Indigenous food systems. This tool should be applied to assess the food sovereignty impacts of both *existing* policies and programs, as well as policy and program *proposals*. The findings of these analyses should be presented as part of sound and informed policy analysis and advice for consideration by decision makers.

This recommendation aligns with existing government commitments to assess a range of potential impacts in policy development. For example, since 1995 the Government of Canada has included Gender-Based Analysis Plus (GBA+) in policy, program, and legislative development processes (Women and Gender Equality Canada, 2021, para. 9). However, feminist scholars have criticized the adoption of gender mainstreaming by governments in Canada. Paterson (2010) remarks that the technocratic, instrumentalist approach to gender mainstreaming employed by governments reinforces rather than resists bureaucratic discourses that drive decision making and thereby fails to transform social relations (p. 411). Furthermore, Hankivsky and Mussell (2018) find that the current approach to GBA+ and surrounding institutional environment are incompatible with an intersectional approach to mainstreaming (p. 312).

In response to these shortcomings, feminist scholars, activists, and organizations have recommended new approaches to mainstreaming, particularly in the context of experiences of

Indigenous women and communities. The Native Women's Association of Canada (2020) has developed a framework for culturally relevant gender-based analysis based on four pillars: (1) distinctions-based; (2) gender diversity; (3) intersectionality; and (4) Indigenous knowledge (pp. 11-12). Furthermore, Hankivsky and Mussell (2018) argue that intersectional approaches to mainstreaming should be supported by institutional changes and increased capacity for building cross-sectoral relationships (p. 312). Additionally, in advocating for new approaches to address violence against Indigenous girls, Clark (2016) calls for intersectional "policy processes grounded in Indigenous epistemologies" that "center the knowledge of Indigenous girls and affected communities" and "[foreground] Indigenous girls' resistance, Indigenous sovereignty/nationhood, and anti-colonialism" (p. 50). By contrast to technocratic approaches to GBA+ that warp intersectionality through the lens of bureaucratic language and practice, these approaches demand a paradigm shift in policy analysis that supports and integrates Indigenous knowledge, locates expertise within affected communities, and centers relationships.

Some governments in Canada have taken steps toward developing intersectional approaches to gender mainstreaming. In British Columbia, the Minister's Advisory Council on Indigenous Women has worked with Indigenous women, organizations, and collectives to co-create a forthcoming toolkit for Indigenous Gender-Based Analysis (IGBA+) in the context of resource development. The toolkit is intended for use by "government, industry, and communities to incorporate Indigenous women's worldview, lived experience, wisdom, and solutions into the provincial environmental assessment process" (Davis, 2019, p. 8). The development of a new tool to consider Indigenous food sovereignty in policy development presents an opportunity to align with these efforts to advance IGBA+ and address the shortcomings of current approaches to mainstreaming by advancing a transformative and relational approach to policy analysis. In developing and implementing this tool, governments and policy makers should learn from previous recommendations and ongoing parallel work on IGBA+ by centering Indigenous knowledge and paradigms and creating space to build relationships as part of the policy process.

7.4 Moving Forward: Advancing Long-Term Policy Transformation

Beyond the immediate recommendations outlined in this chapter, governments should also explore ways to transform policy approaches and relationships with Indigenous people more broadly. Such approaches are needed to ensure that the fundamental right of Indigenous peoples to self-determination, as articulated by UNDRIP (United Nations, 2007, p. 8) and enshrined in statements of state recognition such as the federal *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples* (Department of Justice Canada, 2018, p. 5), is affirmed and upheld in Canada. For example, governments across Canada should explore the development and implementation of new approaches that directly and meaningfully empower Indigenous peoples in the management of their traditional territories and resources. This right is articulated in Article 32 of UNDRIP (United Nations, 2007, p. 23). As discussed in chapter three, existing co-management arrangements in Canada have been criticized for their ethnocentric and androcentric approach. New, co-developed regimes of shared or delegated decision-making

should therefore be founded in principles of inclusivity, mutual respect, shared responsibility, and a deeper commitment to reconcile Western and Indigenous knowledge systems.

The principles and recommendations outlined in this chapter have suggested ways that governments can work to better support and uphold the rights of Indigenous people with respect to food systems by supporting local self-determination, addressing barriers, and creating space for Indigenous participation in decision-making. In doing so, this work outlines preliminary steps to build renewed relationships with Indigenous peoples that would respect their established right to self-determination, including their rights with respect to food systems as affirmed by UNDRIP (United Nations, 2007, pp. 8, 19). By undertaking these actions, governments would also demonstrate responsiveness to UNDRIP's calls to states to involve Indigenous peoples in decision-making and obtain their free, prior, and informed consent in all matters affecting their rights (United Nations, 2007, pp. 15-16).

In order to effectively fulfil these commitments and support Indigenous food systems, policy approaches must be embraced and coordinated across all jurisdictions and orders of government. Due to the federated nature of Canada's system of government, policy coverage is often siloed and fragmented along imagined land borders and jurisdictional boundaries. However, Indigenous food systems are not confined to these boundaries, and are impacted by policies and activities occurring in numerous, overlapping areas of jurisdiction. Indigenous food sovereignty is a shared responsibility (Morrison, 2011, p. 107), and will require collaborative work among federal, provincial, local, and Indigenous governments to address barriers and provide support for work that is already underway to nurture and revitalize Indigenous food systems.

As a final note, however, responsibility for Indigenous food sovereignty does not belong to governments alone: it is also shared by individuals. Beyond the broad findings and recommendations discussed in this report, this project constitutes the researcher's own efforts to understand and practice responsibility for Indigenous food sovereignty from her position as a white settler, student researcher, and federal government policy analyst. This chapter has encouraged policy makers to develop a multilayered and transversal perspective on Indigenous food sovereignty and connect with the lived experiences and local expertise of Indigenous communities. In doing so, it has attempted to evoke and promote the uptake of a sensing policy lens to policy and program development and implementation as advanced by Wiebe (2020, pp. 185-190). It is important to note that a sensing policy approach cannot simply be adopted and implemented at the organizational level, but requires individual openness and commitment to exploring and confronting injustice (Wiebe, 2020, p. 191). In the context of policy and program design, individual government officials should be willing to critically examine their own roles with respect to Indigenous food sovereignty, open to learning from the knowledge and voices of Indigenous communities, and committed to reflecting these perspectives in their reporting and recommendations to inform policy development (Wiebe, 2020, p. 190).

8.0 Conclusion

Governments in Canada have increasingly committed to implement UNDRIP and renew relationships with Indigenous peoples. In this context, the objective of this research project was to explore the concept and practice of Indigenous food sovereignty to inform future policy work. Synthesizing the findings of a small but growing body of research, this project provides insight into the ways in which food systems are understood and nurtured by Indigenous peoples in Canada, the barriers and challenges confronting local efforts to maintain and revitalize food systems relationships, and the transformative potential of food sovereignty. It also highlights gaps in the existing literature and promising avenues for further research. Finally, this project offers guiding principles and practical recommendations to encourage policy makers to reconsider how they understand and engage with Indigenous food sovereignty.

This project was originally motivated by a desire to better understand the nature, context, and possibilities of Indigenous food sovereignty in the face of severe and escalating climate change impacts. Social and political developments that unfolded during the development of this project have further highlighted the urgent need for deeper policy consideration. Much of the unrest that characterized the Canadian landscape coast-to-coast in 2020 is inextricably linked to Indigenous food sovereignty. In February 2020, amidst nationwide protests following the dismantling of pipeline blockades on Wet'suwet'en lands by the RCMP, the BC Working Group on Indigenous Food Sovereignty thanked Wet'suwet'en hereditary leaders for "upholding the sacred responsibilities encoded within their original instructions, to ensure the health and integrity of their land, water, cultures/languages and present and future generations" (Morrison, 2020b, p. 1).

Then, in October, commercial fishermen in Nova Scotia carried out acts of theft, vandalism, and arson in response to a lobster fishery established by the Sipekne'katik First Nation. This violence has been widely attributed to ongoing uncertainty surrounding Mi'kmaq fishing rights (Grant, 2020a) and linked to environmental conservation (Grant, 2020b). This dispute clearly shows that settler communities also occupy a significant role with respect to Indigenous food sovereignty, which is not explored by this research. The challenges presented by the COVID-19 pandemic have further illuminated the urgency of food sovereignty. In response to a heightened risk of supply chain disruptions and food insecurity resulting from the pandemic, the First Nations Health Authority (FNHA) published a toolkit for communities suggesting ways to address these challenges and "take more control over the community-level food system" (FNHA, 2020, p. 1).

The conversation about Indigenous food sovereignty is alive and its impacts are far-reaching across Canada. Article 25 of UNDRIP clearly articulates the right of Indigenous peoples to maintain and revitalize healthy food systems. If governments wish to fulfil their commitments respecting Indigenous rights and realize the promise of truth and reconciliation, it is essential that they take immediate action to address ongoing barriers, provide tangible support, and undertake deeper work to transform the foundations of their relationships with Indigenous peoples.

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Rudolph, K. R., & McLachlan, S. M. (2013). Seeking Indigenous food sovereignty: origins of and responses to the food crisis in northern Manitoba, Canada. *Local Environment, 18*(9), 1079-1098. DOI: 10.1080/13549839.2012.754741

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Settee, P. & Shukla, S. (2020a). Introduction. In P. Settee & S. Shukla (Eds.), *Indigenous Food Systems: Concepts, Cases, and Conversations,* pp. 1-13. Toronto: Canadian Scholars.

Shukla, S. & Settee, P. (2020b). Synthesis: Revitalizing the Past, Nourishing the present, and Feeding the Future. In P. Settee & S. Shukla (Eds.), *Indigenous Food Systems: Concepts, Cases, and Conversations*, pp. 269-284. Toronto: Canadian Scholars.

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Skinner, K., Hanning, R. M., Desjardins, E., & Tsuji, L. J. (2013). Giving voice to food insecurity in a remote Indigenous community in subarctic Ontario, Canada: Traditional ways, ways to cope, ways forward. *BMC Public Health, 13*(1).

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Timler, K., & Brown, H. (2019). The Prison Garden as Artistic Boundary Object: Fostering Food Sovereignty and Social Citizenship for Indigenous People in British Columbia. *BC Studies, 202*, 99-206.

Timler, K., Varcoe, C., & Brown, H. (2019). Growing Beyond Nutrition: How a Prison Garden Program Highlights the Potential of Shifting from Food Security to Food Sovereignty for Indigenous Peoples. *International Journal of Indigenous Health, 14*(2), 95-114. DOI: 10.32799/ijih.v14i2.31938

Timler, K. & Sandy, D. W. (2020). Gardening in the Ashes: The Possibilities and Limitations of Gardening to Support Indigenous Health and Well-Being in the Context of Wildfires and Colonialism. *International Journal of Environmental Research and Public Health, 17*(9), 1-24.

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Appendices

Appendix A: Example Database Search and Screening Process

Database: Web of Science (Core Collection)
Date: July 15, 2020
Search Term: "food sovereignty" and (indigenous or aboriginal or "first nations" or metis or inuit) and canada
Results: 32

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS1	Robin, T., Dennis, M. K., & Hart, M. A. (2020). Feeding Indigenous people in Canada. *International Social Work.* (Early Access Unpublished)	A	N	Y	N	N	-	-	-	N
WS2	Timler, K. & Sandy, D. W. (2020). Gardening in the Ashes: The Possibilities and Limitations of Gardening to Support Indigenous Health and Well-Being in the Context of Wildfires and Colonialism. *International Journal of Envrionmental Research and Public Health, 17*(9).	A	Y	Y	Y	Y	N	N	N	N
WS3	Blanchet, R., Willows, N., Johnson, S., & Batal, M. (2020). Traditional Food, Health, and Diet Quality in Sylix Okanagan Adults in British Columbia, Canada. *Nutrients, 12*(4).	A	Duplicate result captured by previous database search.				-	-	-	N
WS4	Hanemaayer, R., Anderson, K., Haines, J., Lickers, K. R., Xavier, A. L., Gordon, K., & Neufeld, H. T. (2020). Exploring the Perceptions of and Experiences with Traditional Foods among First Nations Female Youth: A Participatory Photovoice Study. *International Journal of Environmental Research and Public Health, 17*(7). DOI: 10.3390/ijerph17072214	A	Y	Y	Y	Y	N	Y	Y	N

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS5	Spiegel, S. J., Thomas, S., O'Neill, K., Brondgeest, C., Thomas, J., Beltran, J., Hunt, T., & Yassi, A. (2020). Visual Storytelling, Intergenerational Environmental Justice and Indigenous Sovereignty: Exploring Images and Stories amid a Contested Oil Pipeline Project. *International Journal of Environmental Research and Public Health, 17*(7). DOI: 10.3390/ijerph17072362	A	Y	Y	Y	Y	N	Y	Y	N
WS6	Dale, B. (2019). Alliances for agroecology: from climate change to food system change. *Agroecology and Sustainable Food Systems, 44*(5), 629-652. DOI: 10.1080/21683565.2019.1697787	A	N	N	N	N	-	-	-	N
WS7	Jonasson, M. E., Spiegel, S. J., Thomas, S., Yassi, A., Wittman, H., Takaro, T., Afshari, R., Markwick, M., & Spiegel, J. M. (2019). Oil pipelines and food sovereignty: threat to health equity for Indigenous communities. *Journal of Public Health Policy, 40*(4), 504-517. DOI: 10.1057/s41271-019-00186-1	A	N	Y	Y	N	-	-	-	N
WS8	Timler, K., Varcoe, C., & Brown, H. (2019). Growing Beyond Nutrition: How a Prison Garden Program Highlights the Potential of Shifting from Food Security to Food Sovereignty for Indigenous Peoples. *International Journal of Indigenous Health, 14*(2), 95-114. DOI: 10.32799/ijih.v14i2.31938	A	Y	Y	Y	Y	Y	Y	Y	**Y**
WS9	Robin, T. (2019). Our hands at work: Indigenous food sovereignty in Western Canada. *Journal of Agriculture Food Systems and Community Development, 9*, 85-99. DOI: 10.5304/jafscd.2019.09B.007	A	Y	Y	Y	Y	Y	Y	Y	**Y**
WS10	Levkoe, C. Z., Ray, L., & Mclaughlin, J. (2019). The Indigenous Food Circle: Reconciliation and resurgence through food in Northwestern Ontario. *Journal of Agriculture Food Systems and Community Development, 9*, 101-114. DOI: 10.5304/jafscd.2019.09B.008	A	Y	Y	Y	Y	Y	N	N	N

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS11	Thompson, S., Thapa, K., & Whiteway, N. (2019). Sacred Harvest, Sacred Place: Mapping Harvesting Sites in Wasagamack First Nartion. *Journal of Agriculture, Food Systems, and Community Development, 9*, 251-279.	A	Y	Y	Y	Y	N	Y	N	N
WS12	Kepkiewicz, L. & Dale, B. (2019). Keeping 'our' land: property, agriculture and tensions between Indigenous and settler visions of food sovereignty in Canada. *Journal of Peasant Studies, 46*(5), 983-1002. DOI: 10.1080/03066150.2018.1439929	A	Duplicate result captured by previous database search.				-	-	-	N
WS13	Ray, L., Burnett, K., Cameron, A., Joseph, S., LeBlanc, J., Parker, B., Recollet, A., & Sergerie, C. (2019). Examining Indigenous food sovereignty as a conceptual framework for health in two urban communities in Northern Ontario, Canada. *Global Health Promotion, 26*(3), 54-63. DOI: 0.1177/1757975919831639	A	Duplicate result captured by previous database search.				-	-	-	N
WS14	Marushka, L., Kenny, T. A., Batal, M., Cheung, W. W. L., Fediuk, K., Golden, C. D., Salomon, A. K., Sadik, T., Weatherdon, L. V., & Chan, H. M. (2019). Potential impacts of climate-related decline of seafood harvest on nutritional status of coastal First Nations in British Columbia, Canada. *PLoS One, 14*(2). DOI: 10.1371/journal.pone.0211473	A	Duplicate result captured by previous database search.				-	-	-	N
WS15	Daigle, M. (2019). Tracing the terrain of Indigenous food sovereignties. *Journal of Peasant Studies, 46*(2), 297-315. DOI: 10.1080/03066150.2017.1324423	A	Y	Y	Y	Y	Y	Y	N	N
WS16	Levkoe, C. Z. & Sheedy, A. (2019). A people-centred approach to food policy making: Lessons from Canada's People's Food Policy project. *Journal of Hunger & Environmental Nutrition, 14*(3), 318-338. DOI: 10.1080/19320248.2017.1407724	A	N	N	Y	N	-	-	-	N

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS17	Noreen, W., Johnson-Down, L., Jean-Claude, M., Lucas, M., Robinson, E., & Batal, M. (2018). Factors associated with the intake of traditional foods in the Eeyou Istchee (Cree) of northern Quebec include age, speaking the Cree language and food sovereignty indicators. *International Journal of Circumpolar Health, 77*(1). DOI: 10.1080/22423982.2018.1536251	A	Duplicate result captured by previous database search.				-	-	-	N
WS18	Gheller, F. (2018). Governing large-scale farmland acquisitions in Quebec: the conventional family farm model questioned. *Agriculture and Human Values, 35*(3), 623-636. DOI: 10.1007/s10460-018-9855-7	A	N	N	N	N	-	-	-	N
WS19	Grey, S. & Newman, L. (2018). Beyond culinary colonialism: indigenous food sovereignty, liberal multiculturalism, and the control of gastronomic capital. *Agriculture and Human Values, 35*(3), 717-730. DOI: 10.1007/s10460-018-9868-2.	A	N	Y	Y	N	-	-	-	N
WS20	Mcgregor, L., Toulouse, P., Maar, M., & Young, N. L. (2018). Caregivers' Perspectives on the Determinants of Dietary Decisions in Six First Nation Communities. *International Journal of Indigenous Health, 13*(1), 122-139. DOI: 10.18357/ijih.v13i1.30306	A	Duplicate result captured by previous database search.				-	-	-	N
WS21	Lowitt, K., Johnston-Weiser, D., Lauzon, R., & Hickey, G. M. (2018). On food security and access to fish in the Saugeen Ojibway Nation, Lake Huron, Canada. *Journal of Great Lakes Research, 44*(1), 174-183. DOI: 10.1016/j.jglr.2017.10.009	A	Y	Y	Y	Y	N	Y	Y	N
WS22	Muller, M. K. (2018). Promoting or Protecting Traditional Knowledges? Tensions in the Resurgence of Indigenous Food Practices on Vancouver Island. *International Indigenous Policy Journal, 9*(4). DOI: 10.18584/iipj.2018.9.4.4	A	Duplicate result captured by previous database search.				-	-	-	N

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS23	Kuhnlein, H. V. (2017). Gender roles, food system biodiversity, and food security in Indigenous Peoples' communities. *Maternal and Child Nutrition, 13*. DOI: 10.1111/mcn.12529	A	N	Y	Y	N	-	-	-	N
WS24	Rotz, S. (2017). 'They took our beads, it was a fair trade, get over it': Settler colonial logics, racial hierarchies and material dominance in Canadian agriculture. *Geoforum, 82*, 158-169. DOI: 10.1016/j.geoforum.2017.04.010	A	Duplicate result captured by previous database search.				-	-	-	N
WS25	Neufeld, H. T. & Richmond, C. A. M. (2017). Impacts of Place and Social Spaces on Traditional Food Systems in Southwestern Ontario. *International Journal of Indigenous Health, 12*(1), 93-115. DOI: 10.18357/ijih112201716903	A	Duplicate result captured by previous database search.				-	-	-	N
WS26	Islam, D. & Berkes, F. (2016). Indigenous peoples' fisheries and food security: a case from northern Canada. *Food Security, 8*(4), 815-826. DOI: 10.1007/s12571-016-0594-6	A	Duplicate result captured by previous database search.				-	-	-	N
WS27	Hart, A. K., McMichael, P., Milder, J. C., & Scherr, S. J. (2016). Multi-functional landscapes from the grassroots? The role of rural producer movements. *Agriculture and Human Values, 33*(2), 305-322. DOI: 10.1007/s10460-015-9611-1	A	Y	N	N	N	-	-	-	N
WS28	Rezaei, M. & Dowlatabadi, H. (2016). Off-grid: community energy and the pursuit of self-sufficiency in British Columbia's remote and First Nations communities. *Local Environment, 21*(7), 789-807. DOI: 10.1080/13549839.2015.1031730	A	Y	N	N	N	-	-	-	N
WS29	Loring, P. A. & Gerlach, S. C. (2015). Searching for Progress on Food Security in the North American North: A Research Synthesis and Meta-analysis of the Peer-Reviewed Literature. *Arctic, 68*(3), 380-392. DOI: 10.14430/arctic4509	A	Duplicate result captured by previous database search.				-	-	-	N

Code	Citation	Type	Preliminary Screening (Title, Abstract, Keywords)				Full-Text Screening			Screened in?
			Primary qual. research	Indigenous Canada	IFS in T/A/K	Indigenous participants	PoI = IFS	CB work	Thematic results	
WS30	Kamal, A. G., Linklater, R., Thompson, S., & Dipple, J. (2015). A Recipe for Change: Reclamation of Indigenous Food Sovereignty in O-Pipon-Na-Piwin Cree Nation for Decolonization, Resource Sharing, and Cultural Restoration. *Globalizations*, *12*(4), 559-575. DOI: 10.1080/14747731.2015.1039761.	A	Duplicate result captured by previous database search.				-	-	-	N
WS31	Desmarais, A. A. & Wittman, H. (2014). Farmers, foodies and First Nations: getting to food sovereignty in Canada. *Journal of Peasant Studies*, *41*(6), 1153-1173. DOI: 10.1080/03066150.2013.876623	A	Duplicate result captured by previous database search.				-	-	-	N
WS32	Desmarais, A. A. & Wittman, H. (2014). Farmers, foodies and First Nations: getting to food sovereignty in Canada. *Journal of Peasant Studies*, *41*(6), 1153-1173. DOI: 10.1080/03066150.2013.876623	A	Duplicate result captured by previous database search.				-	-	-	N

Appendix B: List of Included Studies

AUTHOR(S)	TITLE	YEAR	TYPE	PUBLICATION
Beaudin-Reimer	Perspectives from Métis Harvesters in Manitoba on Concerns and Challenges to Sustaining Traditional Harvesting Practices and Knowledge: A Distinctions-Based Approach to Indigenous Food Sovereignty	2020	Chapter	Canadian Scholars
Chiblow	Anishinaabe & Climate Justice: An Indigenous Food Sovereignty Approach	2019	Thesis	N/A (Unpublished)
Cidro, Martens, & Guilbault	Traditional Indigenous Food Upskilling as a Pathway to Urban Indigenous Food Sovereignty	2016	Chapter	Education for Sustainable Well-Being Press
Cidro, Martens, Zahayko, & Lawrence	First foods as Indigenous food sovereignty: Country foods and breastfeeding practices in a Manitoban First Nations community	2018	Article	Canadian Food Studies
Freeden	Looking Forward to a Food Sovereign Future: The Role of Tradition-Informed Values and Indigeneity in the Carcross/Tagish First Nation Community Garden	2018	Thesis	N/A (Unpublished)
Kamal & Ithinto Mechisowin Program Committee	Cultivating Resurgence from the Indigenous Food Sovereignty Lens: A Case Study from Northern Manitoba	2020	Chapter	Canadian Scholars
Manson	Relational Nations: Trading and Sharing Ethos for Indigenous Food Sovereignty on Vancouver Island.	2015	Thesis	N/A (Unpublished)
McMullen	Regenerating Indigenous Health and Food Systems: Assessing Conflict Transformation models and Sustainable Approaches to Indigenous Food Sovereignty	2012	Thesis	N/A (Unpublished)
Poirier	From The Ocean Floor To The Mountain Top: Using The Renewable Energy Of Mother Earth To Grow Food	2020	Thesis	N/A (Unpublished)
Robin	Our hands at work: Indigenous food sovereignty in Western Canada	2019	Article	Agriculture, Food Systems, and Community Development
Robin & Cidro	Rebuilding Cultural Identity and Indigenous Food Sovereignty with Indigenous Youth through Traditional Food Access and Skills in the City	2020	Chapter	Canadian Scholars
Rudolph	Close to the Land: Connecting Northern Indigenous Communities and Southern Farming Communities Through Food Sovereignty	2012	Thesis	N/A (Unpublished)
Rudolph & McLachlan	Seeking Indigenous food sovereignty: origins of and responses to the food crisis in northern Manitoba, Canada	2013	Article	Local Environment
Russell & Parkes	Exploring homelessness and Indigenous food systems in northern British Columbia	2018	Article	Canadian Food Studies
Thompson, Gulrukh, Ballard, Beardy, Islam, Lozeznik, & Wong	Is community Economic Development putting healthy food on the table? Food sovereignty in northern Manitoba's Aboriginal communities	2011	Article	Journal of Aboriginal Economic Development
Timler & Brown	The Prison Garden as Artistic Boundary Object: Fostering Food Sovereignty and Social Citizenship for Indigenous People in British Columbia	2019	Article	BC Studies
Timler, Varcoe, & Brown	Growing Beyond Nutrition: How a Prison Garden Program Highlights the Potential of Shifting from Food Security to Food Sovereignty for Indigenous Peoples	2019	Article	International Journal of Indigenous Health

Appendix C: JBI QARI Data Extraction Tool for Qualitative Research

BASIC INFORMATION
Citation: Cidro, J., Martens, T., & Guilbault, L. (2016). Traditional Indigenous Food Upskilling as a Pathway to Urban Indigenous Food Sovereignty. In F. Deer & T. Falkenberg (Eds.), Indigenous Perspectives on Education for Well-Being in Canada, pp. 41-58. Winnipeg: Education for Sustainable Well-Being Press.
Author: Cidro, Jaime; Martens, Tabitha; Guilbault, Lance
Year: 2016
Publication: Education for Sustainable Well-Being Press
STUDY DESCRIPTION
Article Purpose*   Provide insight into how urban organizations, specifically Indigenous organizations that focus on food security, can better develop programs and policies which support traditional and culturally based food production and food preparation; Explore the ways in which IFS can be understood as operational in an urban context; Explore how, when Indigenous people have the skills to practice IFS, a whole range of positive benefits to their social and economic well-being will unfold (p. 42)
Methodology   Grounded theory; collaborative research
Method   individual interviews; focus group interviews; traditional food skills workshops
Phenomena of interest   access to cultural foods in the city; connection between cultural food and well-being; experiences learning traditional food skills; operationalizing IFS
Setting   Urban
Geographical   Winnipeg, Manitoba
Cultural   Indigenous
Participants   Phase 1: mostly individuals participating in urban land-based Indigenous food movements (from Winnipeg, nearby communities, and rural and remote communities).   Phase 2: Indigenous people from Winnipeg's North End.
Data analysis   Coding, development of concepts/themes, presentation of preliminary findings to facilitate fuller distillation of themes
Author conclusions   • Operationalizing IFS must be done at a very tangible and practical level. In urban settings, IFS is often encumbered by lack of access to traditional territories outside of the city, but…The principles of IFS are such that they can be practiced and honoured elsewhere (p. 52)   • Urban IFS must be approached with the viewpoint that food skills are at the heart of regaining control over food systems. Our findings indicate that participants felt an important cultural connection, using cultural food skills development as the conduit. (p. 52)   • In order for urban IFS to be fully operational, a re-building of urban Indigenous food must take place…There is an important opportunity to operationalize IFS principles as a means to not only address food insecurity, and chronic disease, but as a pathway for cultural reclamation (p. 52).
Gender*   N/A
Study Type*   Implementing a new initiative
Comments   Research phase 3 detailed in Robin & Cidro (2020)

***** Asterisk indicates modification from original Joanna Briggs Institute template.

FINDINGS AND EVIDENCE		
No.	**Findings**	**Illustration**
1	Growing, Harvesting, Preparing, Eating, and Sharing Cultural Food as Ceremony	"The elders where I come from were very strict about the ritual; how the food came out, how things happened, how you came in, how you left, how you sat, where you sat, how you held a sacred item or what you did with it, or how you said something. When everyone was together and the elders started talking, everyone stopped, and was quiet and listened. The young people had to get up and serve the elders, and there were tiny offerings of food that we would make to the spirits. It's symbolic, and it shows gratitude. It says thank you for looking out for us, we appreciate and we give this thanks." (pp. 46-7)
2	Cultural Food as a Part of Connection to Land through Reciprocity	"There is an assumption about people in the community, that if you are no longer hunters or gatherers or fishers, you are totally disconnected from your traditional food. I say that's not true because I get it through my relatives, and I am still connected through them. I don't go personally shoot a moose, but I will eat moose when my relatives hunt and they send me some." (p. 48)
3	Re-learning IFS to Address Food Insecurity	"Every child should plant things, and they should be aware of the whole process leading up to eating it. If you have a relationship with your food, like peas, beans or squash, you have a new way of being grateful and showing that gratitude when you eat. People need to really understand the circle of life, and that we are a part of it. We are not more important than plants, fish, birds or animals; we are part of it all, and every part is important. Until that respect is there, traditional foods will continue to die. Part of tradition is who we are inside, and those plants can only nourish us totally if we are part of that circle of life. To bring back traditional ways, we need to show our kids how to plant gardens, whether it's what was planted 200 years ago, or a new kind of food that the Europeans brought…We need our children to understand the habitats of animals, and to learn to live in harmony with them." (p. 49)
4	Food as Reclaiming Identity	"You know, the Aboriginal people had been…had their choices taken away and it's [food] just one more way to make a choice." (p. 50)
5	Food Memory	"You know this is for me… just reconnecting…like my great grandpa, my Auntie Jean's grandpa. He takes me out in the bush and we go pick medicines. I remember this stuff, the fishing. I have that memory of this, but reconnecting again. . . because when you come to the city, all those skills are not acknowledged as skills. They are put aside and now it's time for books and school and city life and getting street smart. You put those traditional skills away and you just lose them. So to learn this stuff again . . . actually I still do make wicked bannock!" (p. 50)
6	Practicing Culture in the City	The participant describes the practice of offering tobacco in her garden in the city as akin to how her father offered tobacco when hunting: "I like the traditional aspect…like when you get a fur, or that sort of thing. My dad hunts and when he hunts, if he kills a moose he puts down tobacco. It's the same thing you know, when you're taking plants, you have to be thankful to the earth and to give back so it's nice to incorporate that." (p. 51)
7	Food as Relationship Building	The communal nature of food skill building was discussed by one respondent: "I feel like cooking together and "doing it up" before we do anything else is a really good way to get to know each other. That's something people don't really do in groups anymore, but historically that is how people ate. They ate in groups and cooked in groups. Everybody participated, which is something that was kind of cool for me to watch us all do. Everyone had a little task, a little job, a little something to do and it was sort of a good way for strangers to get to know each other." (p. 51)

Appendix D: Characteristics of Included Studies

Source	Methodological Approach	Methods	Phenomena of Interest	Setting	Participants			Analysis
					n	Identity	Role	
Beaudin-Reimer	Social constructivism Indigenous Case study	Archival research Participatory field research In-depth interviews Oral food traditions	Harvesting Foodscape	MB	15	M	Harvesters	Mapping to existing framework
Chiblow	Indigenous Participatory research Decolonizing	Storytelling Observation/oral tradition Conversation groups Semi-directed interviews On-the-land activities	Climate change Health impacts Justice	ON	16	FN	Youth Elders Knowledge keepers Medicine people Elected leaders	Content analysis Emergent themes
Cidro, Martens & Guilbault	Collaborative research Grounded theory	Individual interviews Focus groups Traditional food workshops	[Food access]† [Food skills] Initiative (new)	MB	N/S	N/S	Food activists Urban Indigenous people	Concept/thematic Participant feedback
Cidro, Martens, Zahayko & Lawrence	Participatory research Grounded theory	Interviews Focus groups	Breastfeeding Country food Infant oral health	MB	[~20]	FN	Grandmothers Health care providers Medicine people	Qualitative coding Participant feedback
Freeden	Community-based research Decolonized methodologies Grounded theory	Semi-structured interviews Participant observation Case study	Decolonization Comm. gardening Initiative (CB)	Yukon	[~15]	FN	Elders [Community experts] Non-Indigenous	Thematic Hand coding
Kamal & IMPC	Collaborative CBPR Case study Critical Indigenous theory	Open-ended interviews Storytelling Focus groups Participatory video	Resurgence Initiative (CB) Initiative (new)	MB	N/S	FN	N/S	Mapping to existing framework
Manson	Indigenous Critical theory	Open-ended interview Thematic questioning	[Trading/sharing]	BC	14	FN	Food traders/sharers	Emergent coding
McMullen	Indigenous Community-based research	Semi-structured interviews Narrative inquiry	[Conflict transfor-mation]	BC	9	N/S	Youth	Thematic/concept
Poirier	CBPR Indigenous	Sharing circle	[IFS perspectives]	BC	3	FN	[Practitioners/organizers]	Thematic Community feedback
Robin	Indigenous Decolonizing	Interviews Food gathering event	Traditional food Self-determination Resurgence Initiative (CB)	BC AB SK MB	32	FN M	[Practitioners/organizers]	Thematic Tactile analysis

† Square brackets indicate where information was inferred rather than extracted verbatim.

Source	Methodological Approach	Methods	Phenomena of Interest	Setting	Participants			Analysis
					n	Identity	Role	
Robin & Cidro	Indigenous research	Workshops Individual interviews Participant observation Sharing circles Focus groups Conversational method	Blood memory Food desert Knowledge transl. Soc. det. of health Urbanization Initiative (new)	MB	12	N/S	Youth	N/S
Rudolph	Participatory action research	Case study Participatory video Semi-directed interviews Focus groups	Environ. justice Initiative (new)	MB	N/S	FN [M]	Youth Elders Community leaders Food activists Non-Indigenous	Emergent themes Participant feedback
Rudolph & McLachlan	N/S	Semi-directed interviews	Colonialism Environ. justice Food justice Food security	MB	N/S	FN M	Food experts	Emergent themes
Russell & Parkes	Ethnographic Case study Exploratory design	Community mapping Focus group Semi-structured interviews	Food systems Homelessness Emerg. food aid	BC	12	FN M Mixed	Individuals with experiences of homelessness	Emergent themes
Thompson et al.	Mixed methods	Focus group In-depth interviews Participant observation Participatory video Quantitative methods	Economic dev. Country foods Sust. livelihoods Food security	MB	N/S	N/S	Community members NGOs Government reps	N/S
Timler & Brown*	Ethnographic Decolonizing CBPR	Interviews Participant observation Cooking workshops	Initiative (other)	BC	20	FN	Incarcerated men Community members Elders Community leaders Non-Indigenous	Emergent themes Iterative analysis Participant feedback
Timler, Varcoe & Brown*	Ethnographic CBPR	Interviews Participant observation	Food security Indigenous health Criminal justice Gardening Reciprocity Colonialism Strengths-based	BC	20	FN	Community members Incarcerated men Program stakeholders Non-Indigenous	Thematic Iterative analysis

*Articles are based on the same underlying study.

Appendix E: Meta-Aggregation of Findings

Reference	Finding/Theme	Category	Synthesized Finding
Robin	Relationships	Relationships (5, 5)*	1. Practicing and sustaining Indigenous food systems through relationships (33, 13)
Robin & Cidro	Cultivating relationships		
Cidro, Martens, & Guilbault	Food as Relationship Building		
Timler & Brown	Sharing food as supporting relationships		
Timler, Varcoe, & Brown	Food as Relationship		
Poirier	Traditional Knowledge	History and tradition (5, 5)	
Freeden	Spirituality and Tradition		
Robin	History		
Cidro, Martens, & Guilbault	Food Memory		
Chiblow	A brief history of GRFN		
Manson	Food and responsibilities	Responsibility and reciprocity (4, 4)	
Timler, Varcoe, & Brown	Food as responsibility		
Russell & Parkes	Natural environment as interdependence		
Cidro, Martens, & Guilbault	Cultural Food as a Part of Connection to Land through Reciprocity		
Russell & Parkes	Social connections	Community and social roles (6, 5)	
Poirier	Community Support		
Freeden	Community-togetherness and Intergenerational Communication		
McMullen	Roles and Learner-Teacher Cycles		
Manson	Who is your family?		
Manson	Food and recognizing your family		
Russell & Parkes	Connections to the land	Connection to the land (6, 6)	
Poirier	Relationship with the Land		
Robin	Connection to the Land		
Robin & Cidro	Connection to the Land		
Kamal & IMPC	Resurgence: Land		
Russell & Parkes	Natural environment as healing		
Kamal & IMPC	Resurgence: Culture	Culture and identity (7, 6)	
Russell & Parkes	Reconnecting with culture		
Cidro, Martens, & Guilbault	Growing, Harvesting, Preparing, Eating, and Sharing Cultural Food as Ceremony		
Cidro, Martens, & Guilbault	Food as Reclaiming Identity		
Manson	Where are you from?		
Robin & Cidro	Strengthening Indigenous culture and identity		
Robin	Cultural identity		

Reference	Finding/Theme	Category	Synthesized Finding
Thompson et al.	Factors Undermining food sovereignty	Changes to environmental health and access to the land (8, 5)	2. Navigating barriers and challenges to Indigenous food sovereignty (18, 7)
Beaudin-Reimer	Challenges to IFS: Threats to Indigenous Foods/Wildlife		
Beaudin-Reimer	Challenges to IFS: Changing Policies and Regulations		
Rudolph & McLachlan	Changes to the northern food system		
Poirier	Environmental concerns		
Chiblow	Climate Change: Water		
Chiblow	Climate Change: Land		
Chiblow	Climate Change: Animals/Plants/Medicines		
Rudolph & McLachlan	Food and the construction of dependency	Changes to community and social structures (5, 4)	
Rudolph & McLachlan	Current food system and community health		
Chiblow	A colonized education system		
Beaudin-Reimer	Intergenerational Transmission of Metis Food-Related Knowledge		
Rudolph	The Northern Food Crisis and the Need for Skills and Knowledge		
Beaudin-Reimer	Changes in Life Circumstances	Changes to individual lives and identities (5, 2)	
Manson	Money and technology		
Manson	Place and Perceptions of Relational Loss		
Beaudin-Reimer	Challenges to IFS: Perceptions and Values		
Manson	Gender and Food Sovereignty		
McMullen	Food Sovereignty	Defining food sovereignty (2, 2)	3. Defining and enacting Indigenous food sovereignty (19, 11)
Poirier	Indigenous Food Sovereignty		
Thompson et al.	The importance of country foods to food sovereignty	Country foods (3, 3)	
Rudolph & McLachlan	Revival of country foods traditions		
Cidro et al.	Introduction of country food		
Kamal & IMPC	Resurgence: Everyday Activities	Everyday practices and activities (5, 5)	
Cidro et al.	Breastfeeding practices		
Beaudin-Reimer	Metis harvesting: practices, knowledge, and values		
Poirier	Sustainable Practices		
Cidro, Martens, & Guilbault	Practicing Culture in the City		
Rudolph & McLachlan	Agriculture in the North	Community-level initiatives (5, 3)	
Rudolph & McLachlan	Community and individual gardens		
Freeden	Spirituality and Tradition: the Garden		
Freeden	Community-togetherness and Intergenerational Communication: the Garden		
Thompson et al.	Food-related Community Economic Development Programs		
Rudolph & McLachlan	Better imported food	Food security (4, 4)	
Timler, Varcoe, & Brown	Food as nutritionally required		
Rudolph	Northern Food Security: Is Southern Land Necessary?		
Cidro, Martens, & Guilbault	Re-learning IFS to Address Food Insecurity		

Reference	Finding/Theme	Category	Synthesized Finding
Timler & Brown	Prison Gardens: intersecting and contested social spaces	Transforming colonial relationships (8, 3)	4. Transforming relationships and imagining food sovereign futures (16, 5)
Timler & Brown	The artistry and resistance of food sovereignty		
Rudolph & McLachlan	Politicized approaches		
Rudolph	Intercultural Alliances and Land-Based Resources		
Timler & Brown	Gardening as healing for men in prison		
Rudolph	Southern Benefits and Reasons for Participating		
Rudolph	Avoiding a Charity Model and Escaping Cycles of Dependency		
Rudolph	Developing Reciprocity: A Recipe for Success?		
Rudolph	Just Getting Started	Establishing a foundation for the future (8, 2)	
Rudolph	Gaining Knowledge and Skills for the Future		
Rudolph	Unexplored options		
Rudolph	Inspiration and Demonstrating Possibilities		
Rudolph	A Success Story to be Proud of		
Chiblow	Moving forward		
Chiblow	Youth participation		
Chiblow	Youth are the future		

*The first parenthetical number indicates the number of findings in a category. The second indicates the number of sources represented in that category.

Appendix F: Supplementary Content Analysis

Source	Gender	Depth	Conclusion Concepts	Audience
Beaudin-Reimer	Participants	L	Access to land Healthy environment Recognition of rights Community strengths Cultural continuity Distinctions-based approach	Research Policy development Community relationship Practice
Chiblow	Findings	L	Healthy environment Youth Learning (traditions, culture) Community-based solutions	Community
Cidro, Martens, & Guilbault	N/A	N/A	Everyday practice as IFS Learning (skills) Access to land Cultural reclamation Community health	N/S
Cidro, Martens, Zahayko, & Lawrence	Participants Findings	H	Everyday practice as IFS Cultural continuity	N/S
Freeden	N/A	N/A	Community-based solutions Intergenerational communication	Community Research
Kamal & IMPC	N/A	N/A	Resurgence Relationships / place-making Community health Cultural reclamation Community-based solutions Inadequate government support	Policy development
Manson	Participants Findings	H	Relationships / place-making Challenging colonial power	N/S
McMullen	Findings	L	Youth (learning) Learning Community roles Networks Self-determination / decolonization Community health	N/S
Poirier	Participants	L	Community-based solutions Sustained funding Learning (educational programs) Conservation of food sources	N/S
Robin	Findings	L	Community-based solutions Diversity	N/S
Robin & Cidro	N/A	N/A	Learning (accommodating IWK) Cultural development Complexity	N/S
Rudolph	Findings	M	Community-based solutions Youth Learning (skills/knowledge) Networks Ongoing support Diversity / multiplicity	N/S

Source	Gender	Depth	Conclusion Concepts	Audience
Rudolph & McLachlan	Findings	M	Diversity / multiplicity Financial and political support Community-based solutions Relationships (intercultural)	N/S
Russell & Parkes	Participants Findings Other	M	Social/environmental sustainability Relationships (service delivery) Complexity Community health	Research Programming
Thompson et al.	N/A	N/A	Enhanced funding/programming Networks Promotion of country food Challenging regulatory regimes Treaty rights Social/environmental policy impacts	Policy Programming
Timler & Brown	Participants	L	Resistance / resurgence	
Timler, Varcoe, & Brown	N/A	N/A	Community-based solutions Community strengths	Research Programming