Exploring Food System Assessments as a Contribution to Sustainability and Equity: A Case

Study of the Thunder Bay + Area Food Strategy Community Food System Report Card

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ABSTRACT

The corporate food regime has contributed to a number of negative outcomes that include land, water, and ecosystem degradation; human health concerns; marginalization of smallholder farmers and urban agriculture producers; and negative social impacts on their livelihoods, particularly in the context of climate change. As a response, Civil Society Organizations (CSOs) have emerged, attempting to transform the food system. One of the primary alternative food system discourses questioning the limitations of dominant agri-food system practices has been focused on the concept of sustainability. Sustainability is a contested concept and has different interpretations depending on one's political and ideological perspective. As a result, sustainable food system assessments have been used to analyze the way that sustainability might be an alternative to the corporate food system and assess progress toward stated sustainability goals.

The outcomes of a sustainable food system assessment are notably influenced by the selection of a sustainability framework, which brings particular approaches and specified measurement metrics into play. Many food system assessments, however, neglect to identify their underlying assumptions and motivations for change. This research explores the use of sustainable food system assessments and their potential contributions and impacts. Three interconnected aspects influencing outcomes of assessments were identified in the literature, including food system governance, sustainability frameworks, and choice of indicators.

This research used qualitative methodologies with a focus on a single case study of The Thunder Bay + Food Strategy Food System Report Card (the Report Card) that was created to assess the food system in Thunder Bay, Ontario, Canada. Key findings showed that the employment of a food sovereignty framework enabled the development of a comprehensive assessment with an integrated set of local indicators that were identified through community-

based processes. The development of the Report Card involved active participation of various CSOs in the region, working together to identify the most relevant indicators for addressing regional food issues. This collaborative effort facilitated connections among different food sovereignty advocates and played a role in establishing local alliances. The formation of these networks emerged as a prominent outcome of the Report Card, fostering CSOs engagement in food governance and paving the way for broader changes.

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CHAPTER 1: OVERVIEW

1.1 Background

The dominant food system produces an abundance of food for global markets. However, the current industrialized food system has been described as a corporate food regime, in which only a few companies control most of the sector and prioritize their own financial success over the interests of the broader society and environment (Holt-Giménez, 2019). As a result, this has led to a number of negative outcomes (Blay-Palmer et al., 2020; Ericksen, 2008; Levkoe, 2011; Levkoe & Blay-Palmer, 2018) that include land, water, and ecosystem degradation; human health concerns; marginalization of smallholder farmers and urban agriculture producers and negative social impacts on their livelihoods, particularly in the context of climate change (Blay-Palmer et al., 2020; Levkoe & Blay-Palmer, 2018; Marsden & Sonnino, 2012; Weis, 2022).

In North America, capitalist social relations have dominated agriculture leading to the commodification of food, and have been the main driver of profit-oriented corporate food system (Albritton, 2022; Holt-Giménez, 2011). This economic-centred framework places a priority on profit through large-scale farming and swift financial turnover, leading to the exploitation of workers and disregarding the natural growth cycles and regeneration processes (Holt-Giménez, 2011). This approach ultimately overlooks the long-term social and environmental consequences. Farms have been transformed into large-scale corporate entities, employing methods centered around mechanization, chemical use, biological manipulation, and overall industrialization (Albritton, 2022; Neufeld, 2022). Furthermore, the influence of capitalism, combined with a lack of effective policies to restore a fair balance of power and profitability, has worsened the decline of traditional food systems built upon experiential knowledge (Alkon & Agyeman, 2011; Levkoe et al., 2019; Neufeld, 2022; Wiebe, 2022). Spring et al. (2020) state, "Food systems across the

North have been, and continue to be, impacted by issues of colonialism, including forced placement in settlements, and other government policies, infrastructure, and the wage-based economy" (p. 43).

As a response, Civil Society Organizations (CSOs) have emerged, attempting to transform the food system. In the context of the Global North, Levkoe (2014) analyzed the different approaches employed by food movements in their endeavor to challenge the corporate-led industrial food system, focusing on the development of viable alternatives. He describes these movements as self-governed initiatives established by individuals or groups originating from civil society, which may also involve actors from private sectors. One of the primary alternative food discourses questioning the limitations of current practices has been focused on the concept of sustainability (Anderson, 2008; Koç, 2010).

Sustainability is a contested concept (Moragues-Faus, 2020; Kloppenburg et al., 2000) and has different interpretations depending on the political and ideological perspective of user. Lack of conceptual clarity makes sustainability a nebulous concept that is not only unclear, but also open to interpretations that are frequently coopted, ultimately rendering them meaningless. Levkoe (2014) raised concerns regarding CSOs and their approaches to adopting sustainable alternatives to the corporate-led industrial food system in Canada. He argues that some initiatives, like those advocating for organic practices, may not adequately tackle the complexities of the food system. He further noted that these approaches often align with neoliberal ideas and overlook crucial issues, such as land ownership and labor exploitation. The 2015 United Nations' Sustainable Development Goals (SDGs) report suggests that what is being called "food sustainability" is just a stronger version of the commodity relationships that led to poverty and hunger in the first place (Sustainable Development Solutions Network, UN, 2015).

On the other hand, a more holistic view of sustainability envisions a food system that embraces accessible, affordable, culturally appropriate, healthful foods, while respecting human rights and dignities (Blay-Palmer & Koç, 2010; Koç, 2010). To ensure the sustainability of food systems, opportunities for public participation through democratic engagement must be created in order to ensure public accountability and a vision of the public good (Koç, 2010).

As a result, sustainable food system assessments have been developed to analyze the proposed ideals of sustainability as an alternative to the corporate food system and to assess the progress of the food system toward a specific set of goals. These assessments of food system sustainability have increased in significance as a means of understanding and measuring the challenges within the food system in relation to established sustainability objectives in a given place and at a given scale. These kinds of assessments can take different forms, but typically bring together statistics, examples, vignettes, and analysis to tell a story about the performance and impact of a food system in a particular place[1].

In general, food system assessments aim to evaluate the progress of various food initiatives toward sustainability goals, as well as attempts to reform food systems in a practical way through public participation (Andrée et al., 2019a; Blay-Palmer et al., 2020). In its ideal sense, food system governance would mean greater participation from civil society actors in the processes of decision-making (Andrée et al., 2019a). When done well, assessments can paint a comprehensive picture of how food systems work, highlight opportunities and limitations, and provide information for practitioners and policymakers to intervene and work toward greater engagement, ultimately contributing to enhanced sustainability and equity. Food system assessments also allow for comparisons between different places as opportunities for information

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[1] For example, see http://foodshedproject.ca/wp-content/uploads/2015/12/2007-FSN-Indicators-Baseline-2005-Report-Card.pdf. example

sharing and learning (Blay-Palmer et al., 2020). Blay-Palmer et al. (2020) contend that food system assessments can do more than just provide information. They assert that these kinds of assessments also help create capacity between food-related actors within a community, foster system thinking, connect people across scales, and lead to policy coherence.

Due to the unclear and often contentious nature of the sustainability concept, scholars argue that sustainable food system assessments must explicitly identify a conceptual framework to describe what they mean by sustainability and its related goals (Levkoe & Blay-Palmer, 2018; Blay-Palmer et al., 2020). Beyond transparency, identifying and articulating an underlying framework plays an essential role in justifying the selection of sustainability indicators (Prosperi et al., 2020). Bauler (2012) describes indicators as policy tools used to transfer between different arenas. In general, indicators can be useful tools for measuring sustainability goals and informing policymakers and CSOs about how to make interventions that are based on evidence (Bell & Morse, 2011; Levkoe & Blay-Palmer, 2018). Hence, establishing a sustainability framework to define goals and identify indicators for addressing those goals is a crucial initial step in conducting a sustainable food system assessment.

1.2 Research Goals and Objectives

The outcomes of a sustainable food system assessment are notably influenced by the selection of a sustainability framework, which brings particular approaches and specified measurement metrics into play. Many food system assessments, however, neglect to identify their underlying assumptions and motivations for change. Furthermore, when it comes to selecting indicators for measurement and assessment, it is essential to gather input from communities, practitioners, researchers, and policymakers. This ensures that the food system assessment and chosen indicators offer a precise portrayal of the food system, effectively

communicating the results, and guiding users towards next steps for fostering a sustainable food system in their community. This input and feedback can play a central role in identifying opportunities and gaps in a sustainable assessment of a food system.

This research explores the potential outcomes of a sustainable food system assessment in building a more sustainable and equitable food system by focusing on the case of the Thunder Bay + Area Food Systems Report Card (the Report Card) as a particular sustainable food system assessment. The Report Card was developed in 2015 by the Thunder Bay + Area Food Strategy (TBAFS) and updated in 2023 to provide an overview of the regional food system from a sustainability perspective. In addition to exploring reflections from the Report Card creators and users regarding its value and impact, my research also received feedback on the Report Card content itself.

1.3 Research Questions

Following an assessment of a food system's sustainability, I conclude that it is important to explore how employed sustainability frameworks and identified indicators impact that food system and contribute to aligning it with the defined sustainability goals. As previously stated, many sustainable food system assessments neglect to investigate the outcomes of their assessments. For example, in a national-scale assessment developed by Gustafson et al. (2016), metrics were chosen for their significance as measurements of the overall food system and their impact on human health, as well as their influence on social, economic, and environmental sustainability. Although the study indicated that some or all of the metrics would be useful at smaller geographic scales, it did not look into whether the selected indicators might communicate sustainability goals to users, such as practitioners, academics, and policymakers. Additionally, obtaining feedback from the people that use the assessment can enhance and refine

sustainable food system assessments for future. Therefore, with a focus on the Report Card as a case study, my research aimed to address the gap in exploring outcomes of a sustainable food system assessment in building more sustainability and equity and asked: How can food system assessments contribute to greater sustainability and equity? My three sub-questions asked: 1) How do goals and objectives guide food system assessments and shape indicators and measurements? 2) What values do food system assessments serve for civil society organizations? 3) How do food system assessments contribute to food system governance and bring about broader changes?

1.4 Thesis Overview

In the next Chapter, I examine the three theoretical underpinnings of a sustainable food system assessment that contribute to the development of sustainability and equity, including food system governance, sustainability frameworks and indicators, laying the groundwork for this research. Chapter three delves into the methodologies and methods that structured the research process. The methodologies describe the approach that I took based on my constructivist worldview to understanding and analyze knowledge. I also describe the methods I undertook to collect data and analyze it. Chapter four provides a summary of the main findings of this research, which are structured into two sections. The first section draws from responses gathered from a focus group with the creators of the Report Card and is organized around two themes: 1) motivations behind creating the Report Card; and 2) goals and objectives that steered its development. The second section is derived from responses obtained through interviews with the users of the Report Card and is organized around three themes:1) benefits of the Report Card; 2) limitations/challenges; and 3) reflections and next steps. In Chapter five, the discussion entails integrating the findings with existing literature to describe how a sustainable food system

assessment can contribute to greater sustainability and equity. Additionally, it involves describing the main characteristics of the assessments, including frameworks and measurement tools, that contribute to the overarching objectives of advancing sustainability and equity, both within and extending beyond the community. Chapter five also discusses the limitations of this research and offers recommendations for future studies. And finally, Chapter six describes my reflections on the Report Card's contribution to building a sustainable and equitable food system, as well as my suggestions for its enhancement.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Several sustainable food system assessments have been developed to provide practitioners and policymakers with a clear picture of a food system and direction to rethink, challenge, and change the current food system. However, transformative change necessitates empowering individuals to actively engage in the food system, creating room within institutions for creativity and innovation (Koç, 2010). Hence, achieving more substantial and impactful changes on food systems necessitates shifting decision-making mechanisms, ensuring the incorporation of a broader spectrum of perspectives, experiences, and interests in the development and implementation of policies and initiatives related to the food system. This underscores the significance of food system governance in the process. Different types of engagement exist in food system governance, depending on the ideological and strategic framework used to effect changes.

Three interconnected bodies of literature are explored in this chapter to understand the role of food system assessments in attempting to make institutional changes and build more sustainable and equitable food systems: 1) food system governance, which ensures the involvement of Civil Society Organizations (CSOs) and diverse perspectives in decision-making processes related to food system assessments, including the identification of sustainability goals and measurement tools based on a community's need; 2) conceptual frameworks, which provide a foundation for understanding complex issues within food systems by organizing and categorizing different elements, which then contribute to assessing the functions of these elements within the broader system and establishing goals for strengthening them; 3) indicators,

serving as measurement tools, identified in the assessment process to address sustainability goals that are influenced by conceptual frameworks.

2.2 Food System Governance

The concept of *governance* goes beyond the term *government*, acknowledging that there are always multiple actors and perspectives involved in public decision-making structures, necessitating critical reflection on what those structures and their implications look like (Andrée et al., 2019a). Descriptions of governance often place emphasis on two critical aspects: efficiency and democracy. Efficiency is frequently linked with the effectiveness of service provided by delivery institutions and the emphasis on democratic practices, particularly in terms of accountability and legitimacy; it has emerged in response to the recognition that governance involves the increasing influence of non-state entities in shaping policies (Hezri & Dovers, 2006). CSOs are claiming new roles in governance in pursuit of more sustainable and equitable food systems. Their engagement in governance structures to reclaim decision-making power within food systems depends on their ideological orientation and sustainability goals (Andrée et al., 2019b; Clément, 2019). While there is overlap in terms of strategies, those working to alleviate hunger and food insecurity are ideologically split between those who want to maintain the status quo of the corporate food system and those who want to bring about more radical change (Holt-Giménez & Shattuck, 2011).

Governance is also about the execution of power, including the levels of power (from local to global) and the various forms of power that exist within them (Andrée et al., 2019b). According to Clapp and Fuchs (2009), CSOs can possess and exercise three different types of power: 'instrumental', 'discursive', and 'structural' power. The ability of actors to frame food issues in a way that considers different values and priorities and then sets up the logical solutions

to those problems is referred to as 'discursive power'. The strategic use of various resources, such as technical, financial, and informational resources, by actors to achieve their goals is referred to as 'instrumental power'. Power to define the institutional structures in which decisions are made is referred to as 'structural power' and those who successfully use structural power may be able to create new spaces in food system governance rather than simply being invited to the decision-making table (Andrée et al., 2019b).

Andrée et al. (2019a; 2019b) developed a governance engagement continuum as a theoretical and practical framework that helps understand how CSOs mobilize resources to disrupt, influence, or participate in the execution of power through food systems governance arrangements. The governance engagement continuum categorizes food movements efforts from multi-stakeholderism to polycentric governance including self-governance (Figure 1).

Figure 1: Goverenance Engagement Continuum; The role of food movements
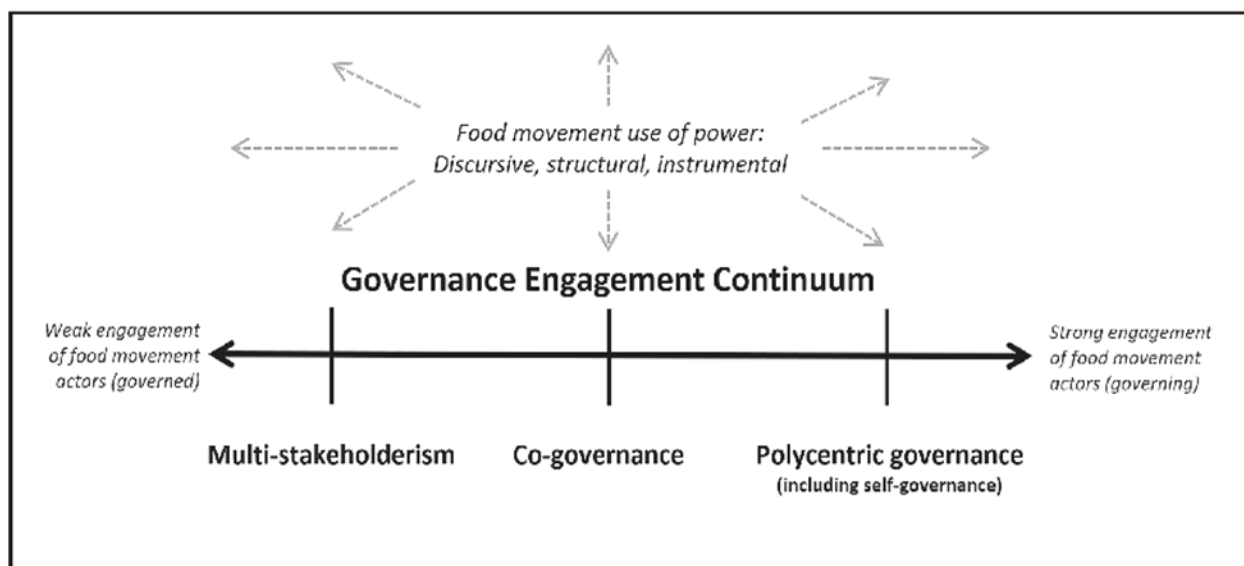
Source: Reprinted from 'Civil Society and Social Movements in Food System Governance', by Andrée, P., Clark, J. K., Levkoe, C. Z., & Lowitt, K. (Eds.). (2019). Civil Society and Social Movements in Food System Governance (1st ed.). *Routledge*.

On the far left of the continuum, multi-stakeholderism involves CSOs seeking to simply exert influence with the government while ultimately remaining governed by the state and

corporations, which have more structural power in determining the rules. On the far right of the continuum is polycentric governance, in which CSOs participate in the active governance of their own food systems by disrupting the existing food system. In this case, food actors control the food system from the ground up by framing issues and establishing institutions that reintegrate social and environmental concerns into the food system (Andrée et al., 2019b).

Between these two poles, there is co-governance, in which civil society participants co-produce governance outcomes and demand equal stewardship in the process of planning and how decisions are made (Clark, 2019). In co-governance, civil society participants can exercise both discursive and structural power by collectively identifying food issues and collaboratively establishing procedures, like decision-making rules. As CSOs gain more influence in governance, there is a greater potential for transformative change in favor of public interests within the food system (Andrée et al., 2019b). There are a variety of evolving arrangements, where actors from the food movement collaborate in governance roles alongside other entities, including state agencies. In the Global North, there is a notable increase in experiments occurring within this intermediate realm, referred to as Collaborative Governance, in which the initial phase is prioritizing the establishment of relationships, trust, and shared values rather than planning processes (Andrée et al., 2019b; Clark, 2019).

2.2.1 Place-based urban food governance

CSOs are increasingly adopting place-based strategies for participating in food governance, with a notable emphasis on forming trans-local networks (Moragues-Faus & Sonnino, 2019). In recent years, there has been a notable increase in interest in governance of urban food system through place-based approaches (Battersby, 2020). In urban food system planning, food serves as a tool to bridge gaps between separate policy areas, leading to various positive outcomes (Young

et al., 2022; Moragues-Faus, 2021; Moragues-Faus & Sonnino, 2019), and urban food governance involves bringing together diverse partnerships across sectors like health, economics, and the environment, to address food issues in urban regions and foster innovation in urban food policy (Moragues-Faus, 2021).

Among various approaches striving to institute food system governance at the regional level, the City-Region Food System (CRFS) stands out as one that intertwines food with complex challenges such as resource management, climate change, and poverty within a specific context. It provides an integrative method for analyzing and developing policies and programs across scales, including urban, peri-urban, and rural, as well as providing a collective voice for food actors across scales and having the potential to provide collaborative food networks across jurisdictions and policies from local to national (Blay-Plamer et al., 2018; Young et al., 2022; Santini et al., 2020). As a result of these efforts to establish urban food governance, cities across the globe have established Food Policy Councils (FPCs) as structures to create urban space, where various partners and stakeholders can collaborate to shape decision-making and policy development, specifically addressing food as a pivotal cross-cutting planning issue in context-specific ways (Young et.al, 2022).

In many cities of the Global North, FPCs have garnered attention as platforms for community members to partner with local government. Driving positive change in their food systems has led to the emergence of more collaborative forms of governance through FPCs (Andrée et al., 2019a; Beckie & Bacon, 2019; Holt-Giménez, 2011; Young et al., 2022). However, FPCs differ greatly in terms of civil society inclusion, as well as efficacy in food governance engagement (Anderson, 2019). Therefore, the position of FPCs on the Governance Engagement Continuum depends on the level of CSOs involvement in food policy decision-

making. For instance, if a food policy council has a limited representation of CSOs, and power remains primarily controlled by the state, with decisions favoring large corporations, it operates within the multi-stakeholder end of the spectrum. Conversely, when there is a power-sharing mechanism in effect to prevent one entity from dominating, and CSOs have equal stewardship with local government in planning processes, the food policy council operates in a co-governance capacity (Anderson 2019; Andrée et al., 2019a; 2019b).

2.2.1.1 Social movements and collaborative food networks

FPCs have the capacity to bring together a diverse range of actors including stakeholders, representatives from CSOs, government officials, local food businesses, and the private sector (Young et al., 2022), to increase the visibility of a diverse range of food system interests in government policy, planning, and decision-making (Schiff, 2008). This collaborative effort aims to reform food policy and programs, while also building connections between various levels of governance, from regional to national and international, in order to advance food governance networks (Young et al., 2022; Levkoe, 2022). This trans-local dimension of urban food governance aims to foster various networking and communication channels between cities, enabling the exchange of knowledge and collective learning as well as supporting the development of integrated urban food policies or programs (Young et al., 2022; Moragues-Faus, 2021; Moragues-Faus & Sonnino, 2019).

A prominent instance of global collaborative food networks is the Milan Urban Food Policy Pact (MUFPP), established in 2015. This protocol, endorsed by over 200 cities worldwide provides municipalities and city-regions with the opportunity to participate in collaborative food policy and program initiatives (Blay-Palmer et al., 2018; Moragues-Faus, 2021). The Sustainable Food Cities Network (SFCN) is another example of a place-specific social movement that took

place on a national scale in the UK. The SFCN brought together 47 local food partnerships operating throughout the UK, offering cities the chance to collaboratively generate knowledge, exchange resources, and formulate collective visions grounded in three pivotal catalysts for transformation: an all-encompassing perspective of the food system; an emphasis on participation from various stakeholders; and an acknowledgment of the place-based nature of food partnerships and strategies. By developing a trans-local vision and exercising multi-scalar agency, the SFCN aims to transfer knowledge among groups at the local and state levels, elevate local solutions to a national level, and ensure that the voices of communities are heard by government authorities (Moragues-Faus & Sonnino, 2019; Moragues-Faus, 2020). In Canada, the first large-scale food networks focused on comprehensively addressing the food system's challenges and possibilities arose in the late 1970s. The People's Food Commission (PFC) was a collective food network that united thousands of diverse actors from across the country to view food as part of a system. Going beyond isolated concerns, they identified the systemic challenges posed by neoliberalism on small-scale farmers and fishes, along with increasing poverty in cities (Levkoe, 2022).

The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) points out the connection between food system assessment and food system governance, reporting that assessments provided an important opportunity for CSOs engagement and raising awareness about corporate control and agribusiness interests, as well as highlighting the possibilities for more sustainable practices and collaborative networks. The final report also introduced the concept of reflexive institutions, which enables the discussion of diverse, culturally-rooted viewpoints and the creation of a unified vision while also facilitating the debate of contrasting perspectives and the recognition of different political and value stances.

However, the report pointed out the absence of such reflexive practices and emphasized the importance of integrating systematic reflexivity into the process. This integration involves engaging voices from CSOs and farmers, aiming to establish a more effective and inclusive reflexive governance framework (Scoones, 2009). Landert et al. (2017) also investigated the broad applicability of food system assessments in a study, and the findings show that some assessments have the potential to facilitate cooperation between cities and pave the way for food governance networks by enabling cities to compare the results and learn from each other. This potential of food system assessment relies on the frameworks employed to create food system metrics, which will be delved into in the following sections.

2.3 Frameworks

2.3.1   Systems thinking

Different frameworks have been developed to define sustainability objectives and establish metrics for evaluating sustainability of food systems. However, food system assessments often lack a comprehensive approach to sustainability. Many of these assessments have adopted narrow frameworks that concentrate on specific aspects of sustainability, such as economic aspects, rather than encompassing the multidimensional nature of a food system (Moragues-Faus, 2020; Valette et al., 2020). As a result of these food system assessments, policies and programs designed to address food-related concerns frequently lack coherence, failing to consider various sustainability elements and interconnection between them (Blay-Palmer et al., 2020; IAASTD, 2009). Therefore, there is a critical need for a comprehensive food system assessment to capture various elements that comprise a food system and understanding the interconnections between them, which can serve as a foundational guide for integrated policy and program creation (Ericksen, 2008; Landert et al., 2017; Meter, 2020; Valette et al., 2020).

One of the general frameworks for this is systems thinking, which is described as an "enterprise aimed at comprehending how objects are connected to each other within some notion of a whole entity…and recognizes that solutions will require engagement from more than one sector or organization" (Palmer & Santo, 2020, p. 169). However, there are some challenges in considering system thinking and connecting different elements in a food system due to its complexity (Palmer & Santo 2020; Freedgood et al., 2011). The complexity inherent in food systems is primarily a result of their dynamic and ever-changing nature. Factors such as climate change significantly contribute to this dynamism, introducing variability and unpredictability. Additionally, the interconnected components of the food system, spanning from production to consumption, create a web of relationships where changes in one part can trigger effects throughout the entire system (Meter, 2020). As a result, in some assessments, urban food systems are viewed as complex adaptive systems. With this approach, the focus is on identifying responsive system dynamics in a specific environment and time series, prioritizing this over providing a comprehensive overview that includes all elements of a system (Cohen, 2020; Gustafson et al., 2016; Meter, 2020; Valette et al., 2020).

In addition to systems thinking, food system assessments employ other main frameworks to define objectives and metrics in response to the challenges posed by the corporate food regime from a sustainability standpoint. Holt-Giménez & Shattuck (2011) presented a comparative analytical framework to examine different political and social trends within the corporate food regime and global food movements. These trends are categorized in the literature as Neoliberal, Reformist, Progressive, and Radical. To classify the different sustainability frameworks discovered in the literature for shaping food system assessments, I used Holt-Giménez and

Shattuck's (2011) comparative analytical framework within four Neoliberal, Reformist, Progressive, and Radical.

2.3.2 The Neoliberal Trend

Over the past three decades, neoliberalism has been the dominant political trend in the food system, with the ideology of expanding global markets, increasing output through corporate-led technological innovations, and forcing peasant producers out of agriculture due to corporate agrifood monopolies (Holt-Giménez & Shattuck, 2011). The neoliberal approach to global hunger is to either deny the existence of a crisis or to use it as an opportunity to increase investment in agricultural productivity through land grabs and industrial food production, leading to further deregulation of land and labour markets (Holt-Giménez & Shattuck, 2011; Holt-Giménez, 2019). These approaches are rooted in overproduction, fostering increased capital expansion, while also offering some emergency aid to those in crisis. Under this model, approaches to the corporate food regime are being advanced by northern governments and major institutions (e.g., World Bank, World Trade Organization, International Monetary Fund, US Department of Agriculture, and the US Agency for International Development), as well as the major agri-food monopolies (e.g., Cargill, Monsanto, Tyson, Carrefour, Tesco, Walmart). The sustainability goals outlined in this model endorse the continuation of neoliberal policies that originally shaped the current flawed food system, prioritizing significant profits for specific major corporations over other social and environmental objectives (Holt-Giménez, 2011; MacRae, 2022).

2.3.3   The Reformist Trend

The reformist trend proposes minor changes to the corporate food regime and neoliberalism, which is still focused on global trade and economic development and might reinforce problematic aspects of the dominant food system. The reformist trend uses a food security discourse by ignoring the system thinking approach and focusing on increasing food production as its primary sustainability goal. This is similar to the neoliberal trend and the corporate food regime (Andrée et al., 2019b; Holt-Giménez & Shattuck, 2011). The reformist trend supports sustainability goals such as the Millennium Development Goals and the United Nations' Sustainable Development Goals (SDGs), and common projects and institutions adopting this trend are the corporate mainstreaming faction of Fair Trade, industry-driven roundtables focused on sustainable soy, sustainable biofuels, and sustainable agricultural standards, as well as the corporate sectors of the organic agriculture industry. So-called sustainable goals offered by reformist approach do not have the power to challenge the dominant structures and institutional practices; instead, they seek to mainstream less socially and environmentally damaging alternatives into the existing market structures (Holt-Giménez, 2011).

The reformist approach to the food crisis advocates for further trade liberalization, emergency relief, and long-term investment in agricultural development, none of which differs greatly from neoliberal approach (Holt-Giménez, 2011; Holt-Giménez & Shattuck, 2011; Holt-Giménez, 2019). This approach ignores inequity and poverty as the primary cause of food insecurity along with other social and ecological causes (Tarasuk et al., 2014). Hence, both neoliberal and reformist trends, while having some ideological differences, are fundamentally connected to the corporate food regime.

One prominent example of the temporary solutions to the food crisis in the US and Canada are food banks. Although they highlight the issue of hunger, they do not advocate for structural change, instead relying on charitable donations and business surpluses to survive within the logic of neoliberalism (Holt-Giménez, 2011; Levkoe, 2011). Tarasuk (2022) writes, "in Canada, major food charity providers have formal partnerships with large food retail corporations" (p. 212). Within neoliberal and reformist approaches, substantial influence over defining sustainability goals and establishing the necessary institutional structures lie in the hands of major corporations and government institutions, with CSOs lacking significant structural power in this regard. Consequently, the involvement of neoliberal and reformist approaches in food system governance is positioned on the left side of the continuum (see Figure 1), aligning with multi-stakeholderism.

2.3.4   The Progressive Trend

Progressive approaches to addressing food issues go beyond immediate fixes and strive for longer-term solutions. These approaches tend to adopt a food justice perspective, emphasizing the empowerment of marginalized communities. In doing so, they aim to enable these communities to assert their rights in the realm of food systems. This perspective acknowledges that the structural inequalities and systemic issues in the food system often disproportionately affect vulnerable and marginalized groups, such as farmers (Andrée et al., 2019b; Holt-Giménez, 2011). Frameworks developed within the progressive trend support local food production, processing, and consumption, while also developing new business models that benefit economically disadvantaged communities, such as farmers' markets and community-supported agriculture (Holt-Giménez, 2011). They aim to incorporate diverse sustainability dimensions within a food system and acknowledge the interconnections between them, thereby embracing a

systems-thinking approach. Within this trend, the application of systems thinking involves perceiving the local self-reliance as a system dynamic, recognizing that strengthening it can have repercussions throughout the entire system. For instance, supporting local farmers may not only enhance economic opportunities, but also contribute to environmental sustainability, community well-being, and social equity.

Among the various frameworks developed in the progressive trend, Community Food Systems (CFS) gained popularity in North America. It was introduced by Alternative Food Initiatives (AFIs) in the United States as a comprehensive perspective that integrates ideas of ecological and social justice with concerns about local self-reliance and the quality and cultural appropriateness of food (Levkoe, 2022; Holt-Giménez & Shattuck, 2011). CFS, with its aim to establish a community-based food system rooted in regional ecological production and local decision-making, represents one of the collective action frames that have emerged to address food system issues and provide a space for community members to work together and develop collaborative food networks (Levkoe, 2011).

The collaborative food networks within the progressive trend have led to strengthened engagement between CSOs and governments, advocating for food to be given priority on the public agenda, and striving for the development of socially just and ecologically sustainable food systems (Mackay & Connelly, 2019; Clark, 2019). The rise of FPCs across the United States, Canada, and several industrialized northern regions, stands as a notable instance of civil society actively working to improve food systems within the current regime, employing progressive strategies. As an example, the Toronto Food Policy Council (TFPC), established in 1990 by the Toronto City Council, strives to address a comprehensive range of economic, social, cultural, and environmental issues related to food and involving community members in the development

of food policies. TFPC engagements in food governance include the development of Toronto's

Food Strategy to better influence policy, advocating for urban agriculture-supportive policies in

collaboration with community members, and encouraging and engaging citizen participation in

food policy discussions. Additionally, it works towards strengthening rural-urban connections

and promoting environmental sustainability, such as through initiatives focused on reducing food

waste and strategies for emissions reduction (Young et al., 2022).

In a global evaluation of food systems, the IAASTD frequently referred to progressive

methods for addressing negative impacts of the existing food system. Its strategies focused on

empowering farmers for rural development and involving civil society in political processes

(IAASTD, 2008). Therefore, the progressive approaches tend to involve CSOs in collectively

defining sustainability goals of their food system and involve them in the process of decision-

making. The engagement of the Progressive Trend with food system governance can range from

the left side of the spectrum (multi-stakeholderism) to the middle position, which is co-

governance. Alignment on the spectrums is depending on the degree to which civil society

members are engaged in political processes and decision-making, determining whether they

merely have a listening role or hold actual influence over policy.

2.3.5   The Radical Trend

In pursuit of system transformation, radical frameworks going beyond offering alternatives

to the existing food system call for a radical shift in power dynamics from major corporations to

CSOs. The radical tendency centers around the concept of food sovereignty, initially launched by

Via Campesina at the 1996 World Food Summit. This political concept, which advocates for "the

human right to food but not simply through access to food but through the right of democratic

control over food" (Holt-Giménez & Shattuck, 2011, p. 128), has gained support from various

farmers' groups, fisherfolk, pastoralists, NGOs, and CSOs globally (Levkoe & Blay-Palmer, 2018). Food sovereignty, as a central idea in global food movements, emphasizes "the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (Nyéléni, 2007, p. 9).

Food sovereignty is a comprehensive, right-based approach that unites individuals advocating for food justice, Indigenous food systems, and the right to food, aiming to foster collaboration across various sectors, scales, and locations and focus on food as a means for collective social change (Binimelis et al., 2014; Levkoe & Blay-Palmer, 2018; Levkoe & Wilson, 2019; Lowitt et al., 2019b). Furthermore, food sovereignty is an evolving place-based approach whose main principles could be adopted by different regions based on specific characteristics of each food system, paving the way for food sovereignty alliances to advocate for regional, national, and international collaborative actions (Levkoe & Blay-Palmer, 2018; Blay-Palmer et al., 2020). For example, in assessing the state of Canada's food system in the *Food Counts* report card, the sustainability perspective incorporated the six core pillars of food sovereignty established at the Nyéléni Forum in 2007, including focus on food for people, value food providers, localize food systems, put control locally, build knowledge and skills, and work with nature, as well as the seventh pillar, "food is sacred," drawing on work by the national organization Food Secure Canada and its People's Food Policy project (Levkoe & Blay-Palmer, 2018; Desmarais, 2022).

Food sovereignty is a theoretical and practical tool with the potential to design and manage sustainable food systems (Simón Reardon & Pérez, 2010). In the current challenges of climate change and biodiversity loss, a food sovereignty lens compels researchers and practitioners to

evaluate food systems in a way that considers the intersection of social and ecosystem elements (Spring et al., 2020). In an assessment of the Cuban food system, the food sovereignty framework is in widespread adoption due to Cuba's Campesino to Campesino Agroecology movement (Simón Reardon & Pérez, 2010). The initial assessment process was based on the core principles of food sovereignty prepared by *La Via Campesina*. Moreover, a participatory action framework has been proposed to engage smallholders in support of their movements, and the first identified food sovereignty indicators have been placed in trial settings to be adjusted to the national context.

Likewise, a food sovereignty lens was used to assess the complexity of Canadians' northern food systems by Spring et al. (2020). In more remote areas like the Northwest Territories (NT) of Canada, sustainability of food systems heavily relies on the health of the ecosystems. Spring et al. (2020) assessed the state of the food system in the community of Kakisa, NT, with a focus on evaluating the food system through a community-based and participatory process. Participation from the community adds traditional knowledge to the process of assessing the food system and helps build a food system that meets the needs of the whole community (Spring et al., 2020). Drawing from these case studies, the food sovereignty principles were tailored to meet the sustainability goals of the community members. Furthermore, in the development of place-specific food sovereignty indicators, one notable feature is the emphasis on fostering participation and collaboration among diverse groups, including academics and civil society.

On the Governance Engagement Continuum, the food sovereignty framework is situated at the self-governance, right side of the spectrum, where there is a strong and enduring engagement

between various social movement actors, including Indigenous people and CSOs, who take on central roles with substantial influence in governing their own food systems.

2.4 Indicators

Indicators are measurable, usually simple, and reliable factors that can be either quantitative or qualitative, that are to effectively capture changes in a system after an intervention. Indicators are also usually generated from multiple variables, and the data associated with them is collected through a combination of modeling and direct field observations (Gustafson et al., 2016).

In the assessment of food systems, indicators are become essential for capturing sustainability goals in a way that is easily comprehensible and facilitates the monitoring of changes over time. For instance, in a study of integrating nutritional and agro-biodiversity challenge to the sustainability debate, Prosperi et al. (2020) developed an integrated set of Sustainable Diets and Food System indicators to provide a perspective with three primary goals: to inform civil society and various stakeholders, to monitor impact or progress toward set goals, and to enhance decision-making processes. Among the diverse purposes for developing indicators, some scholars have highlighted the potential influence of indicators on policy systems for implementing sustainability goals (e.g., Hezri & Dovers, 2006; Tanguay et al., 2010; Bell & Morse, 2011), calling for the development of a comprehensive, integrated set of indicators that guide policymakers to identify gaps, establish priorities, and design targeted interventions to address specific challenges related to sustainability goals (Bell & Morse, 2011). Additionally, a comprehensive and integrated set of indicators contributes to enhanced accountability by providing a transparent and straightforward method to communicate progress to the public.

In the exploration of the usability of sustainability indicators as a policy instrument in governance, Hezri & Dovers (2006) expressed that practices such as reflexivity and promoting grounded thinking for the development of sustainability indicators within the context of social construction can establish more effective institutional arrangements and democracy. Therefore, "sustainability indicators represent an important new experiment in governance" (ibid., p. 88). Similarly, when it comes to steering the governing tools and instruments, and thus enhancing their influence on policy processes, Bauler (2012) emphasized the adoption of reflexive governance, which entails overseeing how indicators are institutionally integrated and calls for implementing a deliberate and collectively agreed-upon placement of the indicators within various societal actor arenas.

However, the usability and the effectiveness of sustainability indicators in bridging the knowledge gap between science and policy, and in providing practical information to better understand the current state of food systems, primarily depends on the sustainability framework and criteria upon which the indicators are established. Selecting the ideal indicators and deciding on their quantity necessitates the establishment of specific criteria. Establishing transparent and rigorous selection criteria is important to enhance the credibility and scientific validity of chosen indicators, while also ensuring their effectiveness in informing decision-making processes (Tanguay et al., 2010). One example of this is known as SMART (specific, measurable, achievable/ attainable, relevant, and time-bound). This approach has been used to develop a place-based indicators toolbox to measure progress of Sustainable Food Cities network in the UK by Moragues-Faus (2020).

The conceptual frameworks discussed in the preceding sections of different trends serve as the primary mechanism that empowers indicators to facilitate a shared understanding or act as

discursive elements in sustainability debates. For example, indicators adopted from a narrow lens rooted in Neoliberal and Reformist trends, which focuses only on economic aspects, can mislead policymakers into thinking that increasing production is the best way for people to have access to food, instead of considering other social and environmental costs (Levkoe & Blay-Palmer, 2018). Moreover, despite any indicator's functionality in providing information about conditions over time, individual indicator values examined in isolation have been criticized for their inability to provide an integrated view of the various aspects comprising a system (Bauler, 2012; Tanguay et al., 2010).

Implementing food sovereignty principles can result in the creation of indicators that encompass economic, social, and environmental aspects, providing a comprehensive and integrated set of measurements to monitor a food system. Apart from offering an integrated political direction, the process of developing food sovereignty indicators in the local context, from defining the objectives to selecting the indicators, also enhances the self-reflexivity of the different local food sovereignty movements to come up with shared future plans and to build a network (Binimelis et al., 2014; Levkoe & Blay-Palmer, 2018).

The current circumstances of communities in each place and their relationship to other places should determine the application and prioritization of sustainability goals at any scale (e.g., country, region, or community). Furthermore, even a single sustainability framework may characterize different objectives for stakeholders. Consequently, each combination of context and scale necessitates that one type of indicator toolbox is chosen over another to measure progress towards sustainability goals (Binimelis et al., 2014). As a result, indicators that aim to be more universal, such as SDG indicators, are not always adaptable to every place-based stakeholder perspective and thus cannot adequately address their needs at a smaller scale and in a

particular context. A complex aspect of formulating global indicators is to ensure that the voices of communities are taken into account, potentially exacerbating the marginalization of certain groups that are excluded from the decision-making processes (Binimelis et al., 2014; Levkoe & Blay-Palmer, 2018; Bauler, 2012). This exclusion from the decision-making processes can perpetuate existing power imbalances, as those who are already marginalized may find their needs, concerns, and perspectives neglected. On the other hand, the development of place-based indicators, such as urban indicators and community sustainability indicators, has gained significance as cities and communities are more aware of food system gaps and potential areas for improvement, while also attempting to foster collaboration and action among different community members (Hezri & Dovers, 2006). The table below tries to offer some examples of indicators, illustrating both place-based and global perspectives.

Table 2.1: Comparing universal and place-based indicators

Zero Hunger SDG indicators	The Report Card local level indicators
Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) Note: FIES survey is designed to assess individuals' experiences of food insecurity and is used globally to gather data on people's access to and availability of food.	Percentage of citizens over 12 years old living with moderate to severe food insecurity in the Thunder Bay District health region, Percentage of people living below the poverty line, using the Low Income Measure (after tax) in the Thunder Bay Census Metropolitan Area (CMA)
Prevalence of undernourishment	Percentage of citizens who consume 5 or more fruit and vegetable servings per day in the Thunder Bay District health region
Proportion of agricultural area under productive and sustainable agriculture	Number of local farms producing hay/fodder crops, Number of local sheep farms, Number of local poultry and egg farms

As evident from the examples presented in the table above, place-based indicators are more tailored to specific communities when contrasted with global indicators. Indicators developed at

broader national and international scales, such as the SDG indicators and the Food and Agriculture Organization's (FAO) Sustainability Assessment of Food and Agriculture Systems (SAFA) indicators, can be customized for local contexts (e.g., Landert et al., 2017). Modifying these indicators at the community level necessitates the use of community-based assessments and involvement of key stakeholders in the process. These tools are essential to incorporate the diverse needs of individuals and to address place-based indicators effectively (Freedgood et al., 2011; Prosperi et al., 2020). In order to address the maximum use of indicators, the conflicting interests of different food actors in defining sustainability goals, and the lack of data, some research has been conducted using the participatory methodology and reflexive practices in developing place-based sustainability measurements (e.g., Valette et al., 2020; Spring et al., 2020, Meter, 2020; Moragues-Faus, 2020).

2.5 Gaps in Literature

In my analysis of sustainable food system assessment projects described by the literature, I explored the development and impact of their work on actors involved in the food system. There are a few studies that delve into the outcomes of their projects. Among these few studies, some stopped at discussing anticipated impacts (medium-term or long-term changes) or/and outcomes (short-term changes) from their food system assessments without further investigations (e.g., Valette et al., 2020). On the flip side, some researchers (e.g., Palmer & Santo, 2020; Santini et al., 2020) conducted additional studies to delve into the outcomes of their food system assessments.

One of the outcomes of assessing urban-driven innovations on the sustainability of food systems is expecting collaboration between urban and rural partners (Valette et al., 2020). Results from a case study in which FPCs were given an indicator toolbox to assess their ability to

advocate for their food system issues show that using the indicators prompted food council members to adopt a food system framework and address the food issues in a holistic and integrative way rather than in silos (Palmer & Santo, 2020). In a CRFS pilot project, the goal was to assess and plan for more sustainable food systems in seven city regions around the world, with a focus on the Global South. Results from the study show that each city region has its own context and outcomes of the sustainable assessments would be different in seven contexts (Santini et al., 2020). In general, the outcomes of the CRFS assessment in seven city regions include: raising awareness about regional food opportunities and issues and contributing to identifying gaps and limitations to create more resilient and sustainable food systems in specific city regions; building bridges of communication between institutions to bring a more integrated and territorial perspective to planning for sustainable food systems; identifying significant institutional fragmentation in the realm of food; building connections between different stakeholders; contributing to design an appropriate food system governance structure to engage (Santini et al., 2020; Blay-Palmer et al., 2018).

Based on these few projects and their explored outcomes, I identified gaps in assessments of sustainable food systems in terms of a limited number of studies that delve deeper into the outcomes of their work in building a more sustainable food system and bringing about change within their community, as well as seeking input from users to address gaps in their assessments and make improvements. In this study, my research delved into the perspectives of creators of the Thunder Bay + Area Food Strategy Community Food System Report Card (the Report Card) regarding the frameworks that influenced the development of assessment metrics. Additionally, I gathered insights from food practitioners on their perceptions of the Report Card's value and

impact, and their feedback on its content and indicators, along with any suggestions they had for its improvement.

Hence, in an effort to address the gap in the literature, which lacks sufficient studies exploring the outcomes of food system assessments from sustainability perspectives, three interconnected influential factors affecting the outcomes of sustainable food system assessments were identified. The pivotal factor that significantly shapes assessment outcomes, fostering broader changes, involves granting food actors the opportunity to participate in food system governance. This entails inviting various food actors to contribute ideas and innovations regarding regional food system issues and including them in decision-making processes. This form of urban food governance engagement can pave the way for social movements and collaborative food actions, thus contributing to broader changes. Food actors can wield diverse forms of power throughout the assessment process, ranging from discursive to shaping food-related issues and setting sustainability objectives to exerting significant structural power in decision-making at various stages, including the selection of assessment metrics and generating new programs or policy. Incorporating CSOs into the food system assessment process and facilitating their engagement in food governance are influenced by the established sustainability frameworks and indicators within assessments.

As a result of employing a sustainability framework based on right-based principles and comprehensive approaches, such as food sovereignty framework, the outcomes of food system assessment would be a holistic picture of the food system with an integrated set of indicators established in alignment with the community's needs, serving as guidance for addressing gaps in the food system. Furthermore, employing participatory approaches and involving CSOs in the decision-making process during these assessments would provide them with the opportunity to

connect and build networks within the region, facilitating their active participation in urban food governance. By establishing social movements and cultivating food networks that extend beyond regions, CSOs can wield more power in the arena of food governance engagement. In conclusion, to examine the outcomes of a sustainable food system assessment in constructing a better food system for a community, attention should be directed towards three interconnected aspects of food system governance, sustainability frameworks, and sustainability indicators. The following chapter provides a background context for this case study research and describes the methodology and methods utilized in collecting and analyzing the data for the study.

CHAPTER 3: METHODOLOGIES AND METHODS

3.1 Positionality Statement

I come to this research as a woman who was born and raised in Iran, studying as a graduate student in Thunder Bay, Ontario. I was brought up in a country where the government makes decisions concerning individual liberties in an effort to exert control over its population. Women and the poor are particularly hard hit by unjust political policies. In Iran, agricultural lands hold the rich heritage of traditional farming practices, providing farmers the opportunity of growing food and earn a living while also maintaining this valuable knowledge and passing it on to the next generation of farmers. Unfortunately, a variety of issues have driven many farmers to seek secondary jobs to make a living, discouraging young people from pursuing farming as a career choice. A key factor contributing to this challenge is water scarcity, influenced by Iran's geographical location and the impact of climate change. Water Scarcity is further complicated by the current structure of the water governance system in the country, and the lack of a comprehensive understanding of the root causes of this issue leaves little room for optimism in developing sustainable solutions to Iran's unprecedented water challenges and the socio-economic hardships faced by its farmers (Madani et al., 2016).

My educational background in the field of agriculture and my work experience with farmers to implement sustainable irrigation practices and revive depleted farmlands are the origins of my connection to food systems and dedication to farmers and farmlands. Even though political power and business deals continue to shape revitalization efforts for land, I still see this as a positive step toward marginalized populations' voices being heard. As someone who does not come from a democratic country, I see change as something that is not simple but is also not impossible. Through my lived experiences, I've come to realize that food has the power to turn

complicated problems into innovative ideas, policies, and actions that can lead to broader change. I also believe that those roots of ideas are important since they lead to the use of different strategies that steer actions to make changes towards justice and sustainability that work and last. I came to this research with a constructivist (interpretative) perspective, believing that reality can differ for each of us based on our experiences in different places and our unique understandings of the world. In embracing my constructive epistemology, I interpret my experiences subjectively, recognizing that these interpretations may differ widely for others. This leads me to look for the diverse range of perspectives, avoiding the tendency to oversimplify meanings by restricting them to just a few categories or concepts. Consequently, I recognize that participants' views of the world are shaped by their unique historical and cultural contexts in which they live and work, and my interpretations are both co-constructed with their perspectives and informed by my own personal, cultural, and historical experiences.

As a master's student, I was involved in supporting development of the 2023 Thunder Bay + Area Food Strategy Community Food System Report Card (the Report Card) [2], with the Thunder Bay + Area Food Strategy (TBAFS). I was hoping to contribute to addressing challenges within the food system that impact marginalized people, particularly women and farmers. I participated in various meetings with TBAFS members and community stakeholders, where different opinions were shared to review and revise the identified indicators for the 2015 edition of the Report Card in order to select indicators that not only provide an accurate picture of the regional food system but are also replicable and supported by available data sources. The next step involved gathering data for revised indicators, with some sourced from Statistics Canada, updated on a five-year basis, and others requiring reaching out to different organizations

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[2] The full Report Card is available at https://foodsystemreportcard.ca/

and community partners for collecting local data. In addition to the quantitative data gathering, I collaborated with TBAFS members to highlight the stories of some local food initiatives, illustrating how their efforts contributed to enhancing Thunder Bay's food system. This endeavor was a result of a collaborative community effort to illustrate the challenges and possibilities for improving the regional food system, and I was interested in learning more about this project's outcome in the community and how it contributes to the sustainability and equity of the Thunder Bay food system. I then started looking into how the Report Card was created and how different food practitioners used it to enhance the food system. I was also interested in contributing to the improvement of the Report Card for its upcoming rounds in addition to learning about its outcomes, so I sought to do this as part of my study by getting feedback from the Report Card users on its content and suggestions for potential improvements.

My research was supported through a partnership with the TBAFS and my supervisor, Dr. Charles Levkoe and funding from a SSHRC Partnership Engage Grant.

3.2 Background Context

Thunder Bay, the largest city in northwestern Ontario, is situated on the northern shore of Lake Superior, the world's largest freshwater lake and surrounded by natural landscapes, including dense forests and rugged terrain. It is located on the traditional territories of Fort William First Nation, signatory to the Robinson Superior Treaty of 1850 (Figure 2). Thunder Bay has a population of about 110,000 people and serves as a regional hub for social services, food, and other basic necessities for residents in the region's more rural and remote areas (Lowitt et al., 2019a). The city's geographical setting also contributes to a sense of isolation, which is primarily due to its distance from major urban centers. The nearest major city, Winnipeg, Manitoba, is about 700-800 kilometers away and Toronto, Ontario's capital and the largest city,

lies roughly 1,400 kilometers distant. This geographical remoteness gives rise to challenges in transportation, supply chains, and access to a range of services.

As per Canada's Plant Hardiness Zones Map, initially designed in the 1960s for trees and shrubs, Thunder Bay falls within the Zone 4b category (Natural Resources Canada, n.d.). This

Figure 2: Fort William First Nation Traditional Territory

designation signifies the capacity of plants to endure the specific climatic conditions of a given region, especially during the winter season. Tomatoes, onions, lettuce, kale, spinach, rutabaga, radish, cucumber, beans, peas, corn, beets, squash, cantaloupe, and melons are some of the fruit, vegetable and field crops that are grown in Thunder Bay. Aside from cultivated foods, the region also relies on wild foods obtained through gathering, including blueberries, mushrooms, tea, wild rice, fiddleheads, and medicinal plants, as well as

Source: Fort William Fist Nation, https://fwfn.com/wp-content/uploads/2019/08/Duty-to-Consult-Accommodate.pdf

caught through hunting, including deer, moose and black bear, and fishing, all of which contribute to the local food sources. According to the 2023 Report Card, Thunder Bay Area has 37% fewer farms operating in 2021 than in 2011 and 32% less farmland in production. Farmland in production totaled 61850 acres in 2006, 59072 acres in 2011, 49219 acres in 2016, and 39908 acres in 2021. Moreover, the average annual catch statistics for Whitefish over the previous five years in Lake Superior were 122,450 for 2011–2015 and 119,218 for 2016–2020. The estimated number of moose harvested in the Thunder Bay Wildlife Management Unit (WMU 13) was 66 in 2015 and 28 in 2020 (TBAFS, 2023).

Thunder Bay's historical and political factors are also pivotal in influencing the regional food system. Thunder Bay is home to Canada's largest urban Indigenous population (per capita), accounting for nearly 13 percent of the city's residents (Statistics Canada, 2017). Nonetheless, a recent study called 'Our Health Counts', carried out by Anishnawbe Mushkiki Community Health and Wellness, an Aboriginal health access centre in Thunder Bay, reveals that the First Nation population may range from 23,080 to 42,641, which is two to four times higher than the estimates provided by Statistics Canada (Anishnawbe Mushkiki, n.d.).

The traditional Indigenous food system for Anishnawbe Mushkiki people encompasses hunting, fishing, cultivation, and foraging, underscoring the vital importance of Anishnawbe peoples having access to forests, fields, and waterways (Levkoe et al., 2019). The extensive and systematic impact of settler colonialism has fundamentally changed the connection Indigenous peoples have with their land, driven by the goal of acquiring and maintaining control over their land and resources. In a study of exploring Thunder Bay's fishing industry, examining its sustainability, accessibility, and cultural significance, Lowitt and her colleagues (2019a) underscore the difficulties that Anishnawbe communities encounter when trying to access their

traditional fishing areas. They also emphasize the cultural and dietary significance of these resources for those communities. Furthermore, they bring attention to broader concerns encompassing food security, environmental conservation, and the enduring effects of settler colonialism on Indigenous interactions with Thunder Bay's natural resources. This enduring influence of settler colonialism has deeply affected communities, resulting in experiences of racism, elevated poverty rates, compromised health, limited educational opportunities, and restricted access to public services (Levkoe et al., 2019). However, despite the difficult context they are living in, Indigenous people have continued to assert their food sovereignty and develop solutions rooted in their cultural heritage and traditional knowledge.

3.2.1   Thunder Bay + Area Food Strategy

Food Policy Councils (FPCs) serve as collaborative platforms, bringing together diverse stakeholders from various sectors to address food-related issues within a community or region, and they play a crucial role in advocating for promoting for sustainable food systems (Schiff, 2008). The TBAFS was launched in 2008, and is a regional food policy council made up of over 40 organizational representatives including academics, farmers, local businesses, and nonprofit organizations, ten executive council members, and seven regional municipalities (City of Thunder Bay, Oliver Paipoonge, Conmee, O'Connor, Shuniah, Gilles, and Neebing) (Thunder Bay + Area Food Strategy, n.d.-a). Together, their goal is to build a healthy, sustainable and equitable food system through putting food on the agenda and addressing interconnected food-related issues within the region, as well as developing and implementing solutions through research, planning, policy, and program development. After consultations with groups across the region, a food charter was developed in 2008, outlining a shared vision encompassing the values, principles, and priorities of regional food systems which has been endorsed by the city of

Thunder Bay and local governments, businesses, and organizations (Levkoe et al., 2019). In 2014, the Strategic Action Plan was endorsed by seven municipalities in the Thunder Bay area to carry forward the principles ingrained in the Thunder Bay Food Charter in order to achieve long-term community food security to promote regional food self-reliance, healthy environments, and thriving economies (Thunder Bay + Area Food Strategy, n.d.-a).

The TBAFS is organized around seven strategic pillars identified and selected at a Community Food Summit held in March 2013 (Thunder Bay + Area Food Strategy, n.d.-b):

(1) *food access* is founded on the principles that food is more than just a commodity but a human right, ensuring that all community members have access to healthy, sufficient and culturally appropriate food in a way that maintains dignity;

(2) *forest and freshwater foods* with the goal of increasing regional knowledge of available forest and freshwater foods and sustainable use of them in order to protect ecosystems and support local economy around these food resources in the region;

(3) *food infrastructure* based on supporting the creation of a local food supply chain from production to waste management in order to promote local economy, reduce the environmental footprint associated with transported foods and improve community's access to healthy food;

(4) *food procurement* with the aim of supporting local food procurements through encouraging public institutions to buy local foods in a way that benefits the economy, environment, and community of Thunder Bay and Area;

(5) *food production* based on supporting and encouraging local food production for sale in nearby markets which lead to job creation, increased tax revenue, and broader economic

benefits through collaborations with other industries like retail, manufacturing, construction, and transportation;

(6) *school food environments* with the goal of improving the dietary habits, culinary skills, and food literacy of children and young people by creating different food programs in schools; and,

 (7) *urban agriculture* based on supporting local food production in the urban area and encouraging citizens to participate in urban agriculture activities such as community gardens.

3.2.2   Thunder Bay + Area Food Strategy Community Food System Report Card

Figure 3: TBAFS Community Food Security Report Card 2015

Source: Thunder Bay's Food System Report Card, https://tbfoodstrategy.com/tag/foodsysreport/
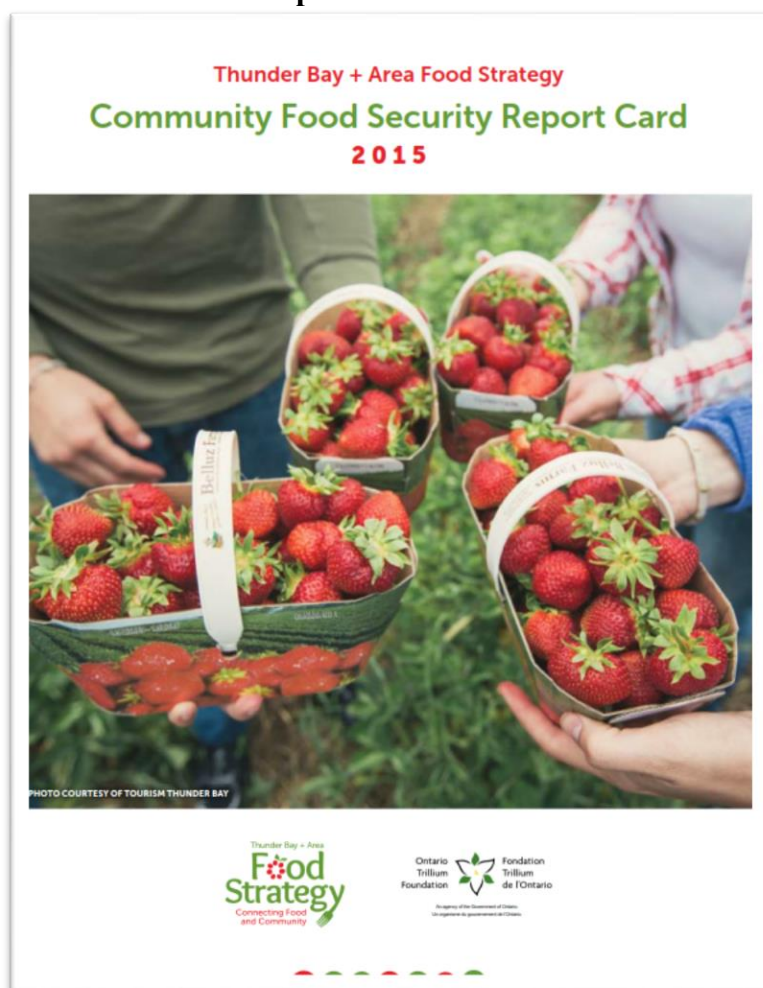
In 2015, the TBAFS created a food system report card to assess the community's food system with a focus on key areas that were important to communities in northwestern Ontario (Figure 3). The primary goal was to provide an overview of the regional food system's issues and opportunities based on a set of indicators designed to help researchers, organizations, and policymakers understand and evaluate the state of the region's food system. The Report Card

was organized around the TBAFS's seven pillars with identified indicators to address these seven pillars, all of which were meant to integrate the essential components of a healthy, equitable, and sustainable food system. These pillars are specific to the northern communities to reflect the region and demonstrate food system levers for change. The forest and freshwater foods pillar, for example, was included in the assessment because it relates to the traditional food system of northwestern Ontario for thousands of years, and both Aboriginal and non-Aboriginal peoples continue to rely on local forests and freshwater for food; and hunting, fishing, and gathering remain important parts of northern culture. This pillar shows the importance of place-based approaches to food system assessments under different circumstances. The 2015 Report Card was provided only as a pdf (online and hardcopy).

Figure 4: TBAFS Community Food System Report Card 2023

Source: Thunder Bay's Food System Report Card, https://tbfoodstrategy.com/tag/foodsysreport/

In January 2023, the TBAFS presented an updated assessment of the trends, challenges, and opportunities within Thunder Bay's regional food system (Figure 4). Given significant changes over more than five years, including the prominent

influence of COVID-19 and climate change, the TBAFS felt it imperative to develop an updated

Report Card that accurately reflected the current state of the regional food system along with

new and evolving trends. This revised version, renamed the Community Food System Report

Card, built on the TBAFS' original seven pillars from the 2015 edition, incorporated 119

indicators to comprehensively assess the region's food system. The 2023 Report Card is

provided in an online platform. In addition to the quantitative data gathered through indicators,

both the 2015 and 2023 versions incorporated qualitative data in the form of some highlighted

stories or vignettes that showcase food initiatives working within each of the food system pillars.

For instance, within the food access pillar, there is a highlight story about the Culture Kitchen

program at the Roots Community Food Center. This story describes the ongoing work and

illustrates how these efforts contribute to enhancing food access within the region. The table

below provides examples of the 119 indicators from the 2023 Report Card, categorized within

each of the food system pillars and address food sovereignty goals within Thunder Bay and Area.

Table 3.1: Examples of the Report Card 2023 indicators

Food system pillars	Indicators
Food Access	Median total annual family income (after tax) of all low income family types in Thunder Bay
	Percentage of adults (18+) who are overweight or obese in the Thunder Bay District health region
Forest and Freshwater Food	Number of established forest and freshwater foods businesses
	Estimated number of moose harvested in the Thunder Bay Wildlife Management Unit (WMU 13)
Food Infrastructure	Number of farmers' markets
	Number of abattoirs
	Number of personal composters sold
Food Procurement	Number of health care facilities purchasing food from farms within 100 kilometers of Thunder Bay
	Number of Indigenous organizations and communities purchasing food from farms within 100 kilometers of Thunder Bay
Food Production	Number of farm operators 55 years of age and over
	Number of farms producing hay/fodder crops

School Food Environment	Number of schools with a food garden
	Number of schools with Student Nutrition Programs
Urban Agriculture	Number of community gardens
	Number of organizations engaged in urban agriculture as a way to build community

3.3 Research Approach

This study employed a qualitative research approach and a case study methodology to investigate research questions based on the perspectives of individuals that have been involved with the TBAFS Report Card. Qualitative research allows in-depth insight into underexplored phenomena (Denzin & Lincoln, 2011). Case study research is "a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed in-depth data collection involving multiple sources of information and reports a case description and case themes" (Creswell & Poth, 2018, p. 96). The type of qualitative case study selected for this research is a single instrumental case study, which allowed me to dig deep into the research questions by examining a single case. According to Creswell & Poth (2018), "in a single instrumental case study, the researcher focuses on an issue or concern and then selects one bounded case to illustrate this issue" (p. 98).

Canadian Northern food systems demonstrate a complexity that continues to be influenced by settler colonialism and other government policies, geography, limited infrastructure, the wage-based economy, as well as the region's harsh climate (Spring et al., 2020). I have selected the TBAFS Report Card as a single instrumental case study, a specific illustration of a complex food system assessment in northwestern Ontario, in order to investigate its creation, perceived value, limitations, and future opportunities based on the perspectives of food system actors in Thunder Bay. Crowe et al. (2011) suggest, "case studies may be approached in different ways depending on the epistemological standpoint of the researcher, that is, whether they take a critical, interpretative, or positivist approach" (p. 4). Given my epistemological position and

what I discussed in positionality statements, this case study was guided by a critical epistemological approach to questioning my own assumptions, while taking the wider political and social environment into account. The objective of embracing a critical approach was to go beyond surface-level descriptions and delve into the deeper structures and power dynamics that shape knowledge production.

3.3.1 Community-Based Research

Drawing on my background in agricultural systems and my interest in knowing more about the local food system in the Thunder Bay region, I was eager to actively participate in the Report Card update process, which centered on collaborative knowledge co-creation with diverse community members. Given that this updating process corresponds with my constructivist viewpoint, I grew more interested in involving partners in some stages of my research, beginning with planning and research questions. Israel et al. (1998) notes, "consistent with constructivist and critical theory paradigms and their emphasis on the socially created nature of scientific knowledge, a fundamental characteristic of community-based research as defined here is the emphasis on the participation and influence of nonacademic researchers in the process of creating knowledge" (p. 177). They continue, recognizing the community as a unit of identity, building on strengths and resources within the community, facilitating collaborative partnerships in all phases of the research, integrating knowledge and action for the mutual benefit of all partners, and promoting a co-learning and empowering process that addresses social inequalities are some of the key principles of community-based research (Israel et al., 1998).

My involvement with the TBAFS and other community groups during the Report Card update process inspired me to seek input from community members for conducting research that takes the community's priorities into account and will ultimately contribute to the community's

betterment. As a result, I sought input from key TBAFS members who were also involved in the Report Card's creation to initiate the study's planning and development of research questions. Another reason that I used community-based research was to enhance the quality and credibility of my study by incorporating the experiential knowledge of those directly involved in the creation of the Report Card. Additionally, it allowed me to collaborate with partners possessing a diverse range of skills and expertise to tackle the complex issues present within the community.

Community-based research can enrich and improve the quality and outcomes of research through various methods that emphasize co-learning and action based on critical reflection (Minkler, 2005). I believe that conducting my research within a community-based approach, and collaborating with some research partners from TBAFS members, executive committee, and staff, brought significant value to my study. I received support and engaged in a co-learning process for the development of research design and questions that reflect issues of real concern of the community I am newly a part of, facilitating the identification and recruitment of research participants. I was provided with an opportunity to know some food actors in the community and their approach to change the regional food system. It helped me with accuracy and cultural sensitivity mostly in the process of developing interview questions.

3.4 Methods

3.4.1   Data Collection

My research with the TBAFS explored the development and outcomes of a sustainable food system assessment and its contribution to building a sustainable and equitable food system. I sought reflections and perspectives from the Report Card's creators, as well as the food practitioners that were the primary targeted users. The aim was to collect data and assess the Report Card's perceived intention, in relation to its value and impact as well as feedback on the

identified food system categories and indicators. The process of gathering data for my research

began in mid-November 2022 and was completed at the end of December 2022. Throughout this

process, two types of data were collected: interviews with selected participants and field notes.

Primarily, data was gathered through in-person and virtual interviews with eight participants

from two groups: 1) three participants that played a central role in the TBAFS Report Card's

creation, 2) five participants from civil society organizations, who were actively engaged as food

system practitioners and utilized the TBAFS Report Card. Participants from group 1 were

selected through purposeful targeted sampling from the TBAFS membership list, and

participants from group 2 were chosen through criterion sampling based on who utilized the

TBAFS Report Card results and could share their reflections. I consulted with the TBAFS

coordinator to help identify the most appropriate participants for the study in each category.

Group 1 participated in a focus group interview spanning two hours, and group 2

participants took part in semi-structured interviews lasting about 30 minutes. I opted for a focus

group format when conducting the interview with group 1 to facilitate a more interactive

discussion among the three participants in hopes that this would enhance their collective

recollection of the Report Card creation process. The TBAFS Report Card was sent to

participants in advance of the interviews so that they could review it, reflect on it, and to respond

to the interview questions. The focus group interview took place in-person at the Sustainable

Food System Lab in Lakehead University's PACI Building, and all the semi-structured

interviews were conducted through Zoom. When the participants gave consent, the interviews

were recorded. I used my laptop to record the discussion. All data was stored in my password

protected Lakehead University Zoom account. The same procedure was followed with group 2.

In addition to recorded interviews, filed notes were taken. Field notes were my written records of

observations and reflections made during the interview process. I engaged in active listening and observation, taking note of verbal cues like any important statements made by participants in response to questions, as well as non-verbal cues such as body language, gestures, and facial expressions. I had a piece of paper accessible to write down my immediate thoughts and impressions. These field notes played a crucial role in gaining a deeper understanding of the interviewee's perspective within their environment, and they complemented the interview transcriptions for better data analysis.

3.4.2   Recruitment Process

Potential participants received an email with the recruitment text (see Appendix A). Participants who expressed interest in being interviewed were provided with an information letter (see Appendix B) to review as well as a consent form (see Appendix C) for their review and signature. These documents outlined the purpose of the study, the interview process, and their rights as participants. This study had an interview guide for group 1 and a separate guide for group 2 (see Appendix D). Furthermore, because the interview with group 1 was conducted in the form of a focus group, participants needed to be informed and confirmed that they were being interviewed alongside other participants. Thus, there were separate information letters and consent forms, one for group 1 (the Report Card creators) and another for group 2 (the Report Card users).

Three potential participants from group 1, expressed their willingness to participate in a focus group discussion, sharing valuable insights on the creation of the Report Card. The recruitment process for group 2 was not finalized with the initial potential participants, as some were either unable or unwilling to take part. This process persisted until five participants, who

were both interested and actively engaged with the Report Card, were identified and agreed to participate.

3.4.3   Overview of Participants

All eight participants were provided with the choice of whether they wished to be identified in the final report. This selection was made through the consent form sent prior to the interviews. Moreover, I gave the participants the opportunity to indicate their preferred way of identification during the introductory section of each interview. Introductory questions delved into their understanding of a sustainable and equitable food system, as well as the challenges they perceive in its development in Thunder Bay. This proved beneficial in enhancing the analysis of the participants' perspectives.

3.4.3.1 Group 1: Creators of the Report Card

I describe group 1 participants below and provide summaries of their responses to introductory questions that explain their understanding of a sustainable food system and contributes to an understanding of their approach to this work.

Charles Levkoe

Charles Levkoe is an Associate Professor at Lakehead University, Department of Health Sciences. He serves as the Chair of Thunder Bay + Area Food Strategy. He did not participate in the creation of the initial Report Card in 2015. However, he collaborated with TBAFS and other stakeholders for the revised version released in 2023. When I asked him about his perspective of a sustainable food system, he explained that a sustainable food system ensures that everyone can access healthy, culturally appropriate food without harming the environment. He added that equity is crucial for sustainability, describing an equitable system as one that not only provides access to such food for everyone but also enables individuals to make decisions about how their

food system functions. In response to the challenges that he sees in developing a sustainable food system, he noted challenges within Thunder Bay extending beyond its geographical location. For example, he highlighted the city's role supplying resources to the other places, primarily in southern Ontario. This has led to increased extractive practices, like mining, intensifying to meet the demands, ultimately shaping Thunder Bay into an industrial center. He also pointed to the impact of capitalism and colonialism on food systems, highlighting how they have centralized power and restricted people's participation in their food systems.

Kendal Donahue

Kendal Donahue was one of the main creators of the Report Card's first edition. Receiving the three-year grant to support the creation of the Report Card, she was employed as the TBAFS coordinator at that time. Following this, she collaborated with a diverse group of stakeholders in the region, guiding the development of the Report Card. This involved engaging in various meetings with community members to collectively identify the most pertinent indicators. She mentioned that while there were some pre-identified indicators in the Strategic Action Plan, the collaborative effort led the TBAFS to identify more comprehensive and place-specific indicators that could provide an accurate status of Thunder Bay's food system in real time. In the updated version of the Report Card, she brought forth her valuable experience from the initial edition and played a role in refining the indicators and gathering data. Articulating her vision of an equitable and sustainable food system, she pointed to what was written in the first version of the Report Card: "a healthy, equitable, and sustainable food system that contributes to the economic, ecological, and social well-being and health of the City of Thunder Bay and Area." She added that localization through community economic development is also important in building a better food system, highlighting the positive impact of local food procurement. When discussing

challenges, she talked about the far-reaching issues of inequity and poverty within the system, which are deeply rooted and difficult to influence.

Karen Kerk

Karen Kerk joined the TBAFS team as the coordinator in 2017. Her responsibilities included liaising with various stakeholders to update and revise the Report Card's content. In collaboration with Charles Levkoe, she deliberated on the future direction of the Report Card and made decisions, one of which was to update the work every five years, aligning with the frequency of data updates provided by Statistics Canada, including information from the Census of Population and Census Family Income Measure featured in the Report Card. She responded, "in a sustainable food system, there exists sufficient nourishment for everyone in the region, contributing to the well-being of the community and its resources." When discussing the equality aspect of the food system, she also mentioned the idea of the food system being more intentional as opposed to its free, flowing market structure. She discussed the geographical obstacles that Thunder Bay encounters, which pose a challenge to its food system. These include a short growing season and its isolated location with a relatively low population, which has resulted in limited food infrastructure in the region.

3.4.3.2 Group 2: Users of the Report Card (Food Practitioners from CSOs)

Below, I outline the participants in group 2 along with summaries of their professional roles and how they utilized the Report Card content. The findings chapter will expand on these viewpoints and illustrate the values that the Report Card provided to its users.

Airin Stephens

Airin Stephens holds the position of Program Director at Roots Community Food Centre. The interview was conducted on December 16, 2022, via Zoom. In her opinion, the Report Card

effectively highlighted the challenges within the food system and provided valuable insights into areas that require support, further research, and deeper understanding. She referenced the 2015 version of the Report Card to facilitate discussions about Thunder Bay's food system dynamics.

Jeff Burke

Jeff is the owner and operator of Brule Creek Farms. The interview was conducted on December 23, 2022, via Zoom. He thinks that the Report Card is very well researched and could highlight a very broad spectrum of the food system components and also web them together. Some indicators in the Report Card were particularly enlightening to him, as they revealed trends and shifts in food system issues over time.

A Public Health Professional

One of the participants of group 2 was a public health professional who I referred to as "Participant #6" in this study. The interview with Participant #6 was conducted on December 22, 2022, via Zoom. Participant #6 values the Report Card for its coverage of health across various pillars, as it helps raise awareness about health issues within the food system. They view the Report Card as a valuable source of local information that was used in their efforts to plan evidence-based health promotion programs based on the community's specific needs.

Bonnie Krysowaty

Bonnie Krysowaty holds the roles of researcher and program manager at the Lakehead Social Planning Council (LSPC) and also serves as the coordinator of the Thunder Bay Poverty Reduction Strategy. The interview with Bonnie Krysowaty was conducted on November 30, 2022, via Zoom. She holds the belief that the local indicators presented in the Report Card greatly contribute to her efforts in the Poverty Reduction Strategy. Specifically, they have incorporated some of the food access indicators into their work. Furthermore, the demographic

data provided in the Report Card enables them to devise more targeted solutions and identify resources to offer support.

Lee-Ann Chevrette

Lee-Ann Chevrette is the Community Safety and Well-being Specialist with the City of Thunder Bay. The interview with Lee-Ann Chevrette was conducted on December 20, 2022, via Zoom. She expressed her appreciation for the Report Card's incorporation of the forest and freshwater food element, which serves to educate people about the local food resources accessible to the community. In her Voluntary Local Review of the United Nations Sustainable Development Goals in partnership with Lakehead University, they incorporated some local data on food insecurity related to Zero Hunger goal. She anticipates that the local data gathered in the Report Card, especially pertaining to the food access pillar, will be instrumental in enhancing their future efforts.

3.5 Data Analysis

From mid-January until the end of February 2023, I transcribed interview data and added relevant field notes. The transcriptions of the interviews were submitted to the participants for review, and they had the opportunity to make modifications. After finalizing the interview data transcriptions, I began the process of coding the data to find themes. I used an a priori coding technique as the relevant codes had already been identified. I began by immersing myself in data to become familiarized with it. This involved reading and re-reading all the materials related to the case study, including interviews and other relevant field notes. Following this, I started generating the initial codes and applying short labels that represent key concepts, themes, and ideas within the data. I implemented the initial codes to the corresponding sections of my data. This was a manual process involving the highlighting of each individual piece of data and

associating it with its respective codes. I then reviewed the codes and began comparing them. I attempted to identify parallels and contrasts between them, and then I grouped similar codes together to form case themes. During this phase, I discovered that some of the initial codes did not speak to the research questions and hence had to be excluded from the analysis.

The next step was to fine-tune the codes and categories. This entailed going over and updating the codes for clarity and accuracy. This phase was completed to ensure that each code appropriately represented the underlying data. I discussed this coding process and decisions with my supervisor. This helped to ensure that my interpretations were grounded and that I hadn't overlooked important aspects. After developing a comprehensive set of codes and categories, I proceeded to analyze the data for overarching themes and patterns. This phase involved synthesizing the information to identify broader insights that contributed to answering the research questions. I returned to the participants with my findings to ensure that my interpretations aligned with their experiences. This was particularly important for ensuring the validity of my findings. After identifying the case themes, I started writing my final thesis. In the final report, I used the coded data to support my findings and established how the codes and themes relate to the study questions and objectives.

3.6 Ethics

This study received ethical approval from the Lakehead University Research Ethics Review Board, and all requirements of the approval were followed throughout the research process. This included the successful completion of the TCPS 2 – the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans. There were no associated risks for me and advantages of doing this research provided me with valuable experience in conducting interviews and carrying on qualitative research. Moreover, this research contributed

to fulfilling the requirements my master's degree. Below, I looked at the possible benefits and risks of this research for the participants.

By gathering participants' perspectives on the Report Card's strengths and weaknesses, I aimed to enhance its effectiveness in future iterations. This offers a more comprehensive view of Thunder Bay's food system, highlighting both its challenges and possibilities as well as offering its solutions to take next steps in building a sustainable food system. Ultimately, this enriched understanding will empower Report Card users to identify areas in need of intervention and enable them to take action within their professional capacities. Through these collective efforts, we aim to contribute to the development of a more sustainable and equitable food system in Thunder Bay.

Participants might have felt uncomfortable criticizing the work of the Report Card, but these risks were mitigated by making participants aware that they could stop the interview, refuse to answer any questions, and choose to remain anonymous.

This chapter laid the groundwork for this study to explore the outcomes of a sustainable food system assessment in building sustainability and equity. The methodology section described my positionality within this research, offered context information, and discussed the research approaches that I used to conduct this qualitative single case study research. The methods section described the process of data collection from two groups of participants, including a brief overview of them, as well as how data was analyzed. Building upon the insights provided in this chapter regarding the background of the Report Card, the TBAFS, and the food practitioners who used the Report Card and participated in this research, the next chapter presents the key findings from the data collected through a focus group and interviews and analyzed based on my constructivist perspective.

CHAPTER 4: FINDINGS

This chapter presents the key findings derived from interviews conducted with the two participant groups. These discoveries are intended to shed light on the research questions and objectives outlined in the introduction. The first section of this chapter presents three themes identified from the focus group consisting of creators of the Report Card (Charles Levkoe, Karen Kerk, and Kendal Donahue). These themes encompass an exploration of the following aspects: the motivation behind the Report Card, the goals and objectives that steer the creators in their endeavors with the Report Card, and the frameworks integrated into their collaborative efforts. The second section of the findings chapter presents perspectives of the Report Card's users, with a focus on their impressions of the Report Card, how they've engaged with its content, and their suggestions for enhancement.

4.1 Motivation for creating the Report Card

4.1.1 Developing a comprehensive food system assessment addressing food system challenges and possibilities

The creators of the Report Card spoke about their motivations to develop a comprehensive snapshot of what is happening in Thunder Bay's food system and its changes over time. Building on the creator's viewpoint on the sustainability and equity of Thunder Bay's food system and its challenges, as discussed in the previous chapter, they aimed to delve more profoundly into local food issues that transcend the region's geographical boundaries and address the fundamental challenges. They aimed to share their exploration of the regional food system by generating the Report Card, with the motivation of enhancing awareness and encouraging the organizations, policy makers, and the public to participate in building a better food system. Describing the

region's food system challenges, they identified the unique aspects of Thunder Bay, including its northern geographical location and being in the plant hardiness zone 4b, and also its remoteness, motivating them to focus on developing a food system assessment with a place-based approach. Therefore, they customized the assessment metrics to the seven pillars of the TBAFS, which are the place-specific characteristics of Thunder Bay food flows. Charles Levkoe noted, "the motivation has been that the Report Card become the basis of everything we do at some level [at the TBAFS], like recognizing gaps, to recognizing what we don't have, to recognize how things have changes, and how we have to look at things together…I hope that every region could do their own version of the report card and figure out how to do it in a contextually relevant way." The creators hoped that the updated Report Card would serve as a valuable resource for policymakers and other groups to make informed decisions about food systems issues.

Through the application of a place-based approach and identification of regional indicators to show the status of the food system using statistics, the creators came to the realization that the region's food system encompasses aspects that extend beyond numerical data. These events took the form of stories of food initiatives within each pillar, which aimed to convey the food story in a more meaningful manner and further enhancing the customization of the Report Card. By including both qualitative and quantitative data, they sought to provide a comprehensive understanding of what is happening in the community and how these food-related endeavors contribute to strengthening each TBAFS pillar within the food system. Kendal Donahue explained, "We wanted to shine a light on the different things that were happening in the area and some of these things are not easy. And they wouldn't make up the metric but they're still important to capture."

According to Charles Levkoe, "the idea was to have all this regional information in one spot to be able to present how the food system works and show what a sustainable food system in Thunder Bay could look like." In bringing together the local data, the creators believed that while addressing single issues and reporting on changes over time may be more appealing and newsworthy, it would not provide a holistic picture of the food system. They believed that categories of data become more meaningful when addressed jointly and the trade-offs between them are taken into account. According to Karen Kerk, "what we're talking about is to get people to understand that these systems are dynamic, and you really need to look at it through the system lens." She also believed that isolating a small component does not provide a comprehensive understanding, and the larger context will be overlooked. She further stated that the goal of the TBAFS is to assist people in comprehending the whole system and the interconnectedness of all the different parts of the food system, where a change in one area can have repercussions elsewhere. Charles Levkoe added that, "the whole point is not to look at one aspect but to look at it all together to understand the food system in Thunder Bay, the challenges and opportunities. We have to look at things together." The creators of the Report Card emphasized the importance of system thinking, breaking down silos and looking at the data all together, even though this process may be more challenging and complex.

Charles Levkoe holds the view that the food system cannot be neatly captured by single statistical measures, and those messiness and complexities are part of the assessment process. He mentioned looking at other report cards that adopt an economic-centric approach, portraying the food system differently by prioritizing food production, increased exports, and evaluating its condition based on these factors. He believes that such reports tend to highlight a limited set of economic indicators as sustainability goals of a food system, presenting skewed image of the

food system. He stated, "the way they're representing the food system is very economically focused, you could look at it and think the food system is in an excellent shape with lots of exports and productions going on . . . but the point is that messiness is how food systems work and what I like about the TBAFS Report Card is that it captures the messiness."

4.1.2   Building a network among regional food system stakeholders

The Report Card was a community-based research initiative with a collaborative and participatory approach. This approach was intended to encompass the food system work and capture a broad range of food system aspects, as well as build a common understanding of the challenges and opportunities among them. Therefore, the creators worked with community members and organizations and included their perspectives in different processes of this effort. Community members actively participated in the process of identifying the most relevant indicators to address food system challenges and possibilities, as well as playing a crucial role in collecting data to support those indicators.

For example, one of the participating community food organizations was Roots Community Food Centre, providing valuable insights on different food elements such as school food environment indicators and assisting with the collection of local data. The creators explained that the process of developing the Report Card included holding several working groups and consultations with key stakeholders across the public, private and non-profit sectors, and it served as a collaborative effort to develop relationships and evolve into building a network. Charles Levkoe said, "I think the final report doesn't show all the work, all the work is actually kind of the point that we're making those connections, we're talking to people about things to bring it all together." Karen Kerk agreed and added, "I was hoping that we were going

to use it to educate about all the different prices, to bring different stakeholders to the table to work together and to build on some of the opportunities that we present in the Report Card."

The creators' motivation behind doing this community-based research was to facilitate the building of a network through several key mechanisms such as collaborative efforts, shared common goals and strategies to build a sustainable food system within the region, exchange of knowledge which strengthened relationships and connections among community members and at the end advocacy and collective action to address larger systemic issues. Kendal Donahue explained how this inclusion and consultation of stakeholders in creating the Report Card improved the connection between the TBAFS and the community and played an important role in building a network. She noted, "there is advocacy involved in this work and building a network and a common understanding are all part of it." This was demonstrated through the creation of the original Report Card, which happened one year after the establishment of the TBAFS, and further contributed to the development of the TBAFS and its public outreach and ongoing activities.

4.1.3   Serving as a tool to build networks outside of the region

The creators of the Report Card underlined the crucial role of food in addressing sustainability challenges within cities by bridging environmental and socio-economic issues. They mentioned that municipalities tend to overlook the significant potential of food as an opportunity to tackle these interconnected concerns and that there is a need for increased awareness and information on this matter. Charles Levkoe believed that food serves as a powerful tool for city building. Similarly, Kendal Donahue shared the belief that municipalities have a strong connection to food, which often goes unnoticed due to a lack of active consideration of food and its potential influence within their vast jurisdiction. She gave the

example of when the city was building Walmart, one of Thunder Bay's largest grocery stores, the

municipality pushed to have the bus route run to the front of the store to improve access. This

example highlighted the connection between transportation and food, emphasizing the need to

actively consider how food is intertwined with various aspects of life. According to her,

> I remember with the food strategy something we learned was Walmart didn't want back when they were building big Walmart and intercity. I think the city had been pushing to have the bus route go to the front of the store because if you don't have a car then that would actually be super convenient, and they didn't; they push back, and they wanted the bus route back on Memorial and they wanted to prioritize parking. Well, that has big implications, if you're going to do a grocery shop and you have to go get the food, and then carry it all back, all of those are barriers.

Discussing the creators' shared beliefs regarding the power of food in addressing

interconnected issues in cities, the creators also highlighted the Report Card's role as a

communication tool that extends beyond Thunder Bay. This motivation focused on the intention

to provide individuals in other places with the means to understand the state of Thunder Bay's

food system and facilitate communication about the crucial issues and challenges outlined in the

Report Card, such as poverty and climate change. These issues require broader solutions and the

contribution of other cities. The creators believed that it is crucial to recognize that many of the

food system's problems are not confined to the local region but are prevalent beyond Thunder

Bay. Charles Levkoe noted, "we need global solutions to these problems, and we need to build

networks and connections outside of the region … the TBAFS in Thunder Bay is building that

network here and the Report Card is part of it." Moreover, the creators believed that if every

region created its own report card, a collective assessment of food systems will offer a better

understanding of existing issues, leading to more effective and comprehensive solutions.

Charles Levkoe placed further emphasis on the Report Card's importance as a tool for

engaging in broader discussions and establishing networks beyond the region. He mentioned that

he had already discussed these efforts within the Ontario Food Collaborative, an association of waste management, public health, community-based and academic partners connecting to achieve the common goal of promoting actions that support healthy eating and food waste prevention. He highlighted the role of the Report Card in serving as a tool to illuminate the unique features of Thunder Bay's food system, while also serving as an example for other communities seeking to create their own assessments. He hoped that the Report Card could facilitate community conversations and build connections with other regions, as some of the challenges, such as poverty and climate change, transcend local boundaries.

It was underlined that using a system-thinking approach and involving a variety of community members in the process of creating the Report Card helped build a network within the region. Yet, it evolved and became a tool for engaging in broader conversations outside of the Thunder Bay region, helping to elevate the network to the next level of development. However, Charles Levkoe pointed out that their motivation to establish a network, representing diverse perspectives, and engaging in critical conversations, is not a simple task. The process of crafting the Report Card entailed various meetings and discussions to reach a consensus. For example, in a working group of TBAFS members and Social Services Administrations to further develop the food access pillar, there were different opinions on ways forward and how best to address inequities. Kendal Donahue stated that "not everybody agrees on the identified pillars, there are lots of different opinions…that complexity and discord also found their way to the Report Card."

4.2 Goals and Objectives that guide the Report Card

4.2.1   Food sovereignty goals

Expanding upon their viewpoint regarding a sustainable and equitable food system in Chapter 3, the creators' sustainability goals that guided the Report Card resonated closely with food sovereignty. They described a food system that protects the natural environment, promotes diverse local economic development, and improves the community's access to nutritious, sufficient, and culturally appropriate food, as well as the need for communities (especially food producers and harvesters) to play an active role in food system decision-making. Furthermore, they believed that addressing challenges and designing solutions to achieve a food system with these characteristics required a holistic approach that takes into account all the different interconnected aspects of the food system, which are often addressed independently. Consequently, their sustainability goals and their approach to achieve them align with the principles of food sovereignty which include a comprehensive consideration of the interconnected well-being of communities, the environment, and local economies while emphasizing regional food self-reliance.

Therefore, the application of food sovereignty principles in the Report Card, encompassing aspects such as ensuring sufficient culturally appropriate food, environmental preservation, local control, and the right to participate in the food system, guided the creators to devise indicators to address these principles within the TBAFS seven pillars. The creators of the Report Card highlighted factors that act as barriers to people's access to food, including poverty and inequity, social and geographic isolation, as well as the corporate concentration within the northern food system. According to Charles Levkoe,

There's been this shift in the way food systems work to a degree where there are some people who profit greatly, and a lot of times big companies, and a lot of people who don't have enough to eat or don't have good food to eat. So that's the equitable part can't take away from the food system … it's important everywhere, but I think you see it more here in northwestern Ontario, because we're not surrounded by a million markets and grocery stores. In Toronto, you can walk out your front door, and every corner has a convenient store that sells fresh products, because they pick it up at the food terminals. Whereas here we're reliant on, in most cases, big corporate grocery stores to get that food here and if they're charging too much, which we know they are, they make a ton of profits at the expense of producers, harvesters and the public.

Therefore, the creators aimed to capture the underlying causes of these barriers that are rooted in principles of social and environmental justice. For example, in addressing food access issues, they initiated the development of income-related indicators.

The creators of the Report Card highlighted the crucial role of power and politics, emphasizing that addressing some of these barriers, such as poverty, necessitate transformative governance structures. Kendal Donahue pointed out that issues related to food access and equity lie beyond the direct influence of the TBAFS. She added that these issues often encompass multiple layers of government involvement and that the mechanisms needed to influence changes are extremely complex. However, the creators believe that addressing these fundamental issues requires collaborative efforts to be able to engage in food system governance and make changes. Kendal Donahue highlighted the positive potential of the food procurement pillar in supporting the local economy and addressing social justice concerns. However, she acknowledged that the procurement model's foundations in the corporate market create obstacles in prioritizing equity and health over the economic aspects that govern the corporate driven system.

4.2.2   Narrating the food system story employing place-based qualitative and quantitative data

The creators of the Report Card were determined to weave together the story of the regional food system, assembling it into a cohesive narrative that would enable people to grasp

its meaning and significance. Kendal Donahue stated, "we wanted to tell a story on our own…and it was really important for us to introduce the indicators by situating them in a local context and doing some interpretations." She explained that the initial work, funded through an Ontario Trillium Foundation grant, was primarily focused on reporting about their work and aligning with the Strategic Action Plan aimed at addressing the food system needs of the region. However, it evolved into the creation of the Report Card. According to Kendal Donahue, certain pre-identified indicators outlined in the grant application were deemed inadequate in capturing the comprehensive narrative of the regional food system and lacked the ability to exert influence.

In pursuit of the goals and objectives to embed indicators within local contexts and capture a unique food narrative, the creators of the first edition of the Report Card engaged in discussions with multidisciplinary food research communities. The aim was to identify place-specific indicators that held relevance, exerted influence, and could be replicated effectively. Kendal Donahue noted, "in creating the Report Card we had to have conversations about pretty much every single indicator." She further explained that the creators had to go through a process of determining what information or data was being collected, vetting it by different working groups, considering the expertise of specific individuals for certain topics, and finally interpreting the gathered data. As an example, for the Forest and Freshwater Food pillar, she connected with the Ontario Ministry of Natural Resources and Forestry and Ontario Nature to collaborate in forming working groups aimed at defining indicators and seeking assistance for the next stages of the Report Card project.

Kendal Donahue elaborated on the process of conducting multiple meetings with representatives from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to establish indicators for the food production pillars. Given the stated objective of enhancing

public awareness of the regional food system through the Report Card, the creators chose to interpret the identified indicators to provide its users with comprehensive information. As an example, when the creators chose to include the number of farms as an indicator of food production, they recognized the need to establish clear definitions for what constitutes a farm, establish criteria for inclusion, and offer interpretations for indicators that required clarification. Kendal Donahue further highlighted the significance of thoughtful interpretation of indicators, emphasizing that a comprehensive understanding of how identified indicators contribute to each of the food pillars necessitated providing explanations for them.

Merely interpreting each individual indicator in isolation would fall short of fulfilling their goals of creating a meaningful understanding of the food system. Instead, the creators contemplated putting indicators together and interpreting them as a cohesive narrative. This approach would enable them to make sense of the region's food story and effectively communicate it to others. Kendal Donahue noted, "the analysis of indicators in isolation wouldn't have told anyone anything, so putting them together like a narrative so that people could make sense of them was really important." Charles Levkoe added that "if we did an analysis of data on one pillar at a time, we would be barely scratching the surface." He further emphasized the importance of considering the pillars in relation to all other elements, recognizing that certain issues encompass more than just a single food element, including Indigenous issues that intersect with all of the pillars. The updated Report Card in 2023 closely mirrored that of the first edition.

During the conversation about their goals that guided the Report Card, the creators underscored the challenges involved in implementing assessments of sustainable food systems that are tailored to specific places. They pointed out some of the challenges encountered in both

the initial and updated editions. Kendal Donahue noted, "anytime you are developing something new that is really complicated, you have to have a lot of conversation and it's not like we had a clear place that we were trying to get, so we were feeling out what the format was going to be as we went further." In the process of revising the indicators, Charles Levkoe discussed the presence of tension, particularly concerning indicators related to health. He pointed out that certain statistics, like Body Mass Index (BMI), are considered highly significant for public health experts, but he believes body size is not inherently linked to health and such measurements are questionable.

The creators also pointed out a significant challenge related to data gaps, particularly concerning the Indigenous population. They elaborated on the existence of valuable indicators, like data on cultural food practices that are lacking available information. Charles Levkoe attributed this data gap to the fact that these aspects are often overlooked due to the absence of perceived economic value, resulting in missed opportunities for data collection. He strongly underscored that the Report Card played an additional role in making these gaps visible, bringing attention to the significance of reporting on some valuable indicators that currently lack available data. Karen Kerk also held the belief that conducting research at the local level adds to the challenge of accessing data, as such data either does not exist or is difficult to obtain. She noted, "for food access, the most research has been done and data gathered across the country, and we don't have all that same level of research locally, so we framed the situation with their work and then try to support it with what we can find locally."

The next section of the findings chapter provides an in-depth exploration of themes collected from interviews with Report Card users. This section aims to convey perspectives on the Report Card's value, how they utilized it, and their suggestions for its enhancement. Five

participants from the second group (Airin Stephens, Bonnie Krysowaty, Jeff Burke, Lee-Ann Chevrette, and Participant #6) represented diverse and overlapping sectors which are categorized in the three themes.

4.3 Benefits of the Report Card

4.3.1   Value of the Report Card

All of the users placed a significant value on the Report Card's ability to encompass a wide range of aspects within Thunder Bay's food system. The depth and breadth of research undertaken in the creation of the Report Card were widely appreciated by its users, and they recognized the substantial effort invested in capturing the various elements of the region's food system and the interconnections between them. Airin Stephens expressed her admiration for the Report Card, highlighting its effective engagement with various aspects of the community's food system, leading to interest and support from different sectors. Moreover, she emphasized that the extensive coverage of the Report Card demonstrated the significant effort and scope invested in its creation, showcasing its comprehensive approach to understanding and addressing the complexities of the food system. Both Lee-Ann Chevrette and Bonnie Krysowaty shared a similar perspective regarding the Report Card's value in incorporating various elements of the food system. Lee-Ann Chevrette expressed her satisfaction with the Report Card's layout, while also commending the inclusion of data and its presentation of changes over time. She explained, "I didn't expect that it would be sort of broken up into those categories, but I think that was very effective because it gives people a better idea of those dimensions that contribute to food security or insecurity in our community."

The participants shared the view that food system issues are often addressed in isolation, neglecting their interconnections with vital domains like agriculture, poverty, human health, and

natural resources. Jeff Burke believed that the Report Card acted as a bridge, brought together various elements that shape the food system, and effectively addressed those gaps. Users' perspectives praised the Report Card's ability to present a comprehensive view of the food system, enabling stakeholders to grasp the intricate interconnections shaping Thunder Bay's food landscape. They further believed that this capacity makes the Report Card not only valuable for informing individuals but, more significantly, as an influential tool that has the potential to empower informed decision-making and promotes sustainable food practices within the community. Jeff Burke further highlighted the Report Card's importance to the city and food organizations, as it could provide valuable guidance on how to allocate their funding and efforts strategically. He stated,

> It's hard to look at where the gaps are, so by taking and utilizing the Report Card, I think it's really helpful to highlight some aspects of the food system and web them all together, and then be able to access whether an organization is trying to access funding or trying to allocate funding, and where is that pole we should be directed.

Bonnie Krysowaty held the belief that the Report Card is a valuable source of local information and an excellent addition to data compilation in Thunder Bay. She added that undertaking in-depth research to identify food system challenges and compiling thorough data that is constantly updated over time would provide valuable information for both municipal leaders and community members and also be valuable for her work.

From standpoint of Participant #6, the Report Card was able to effectively communicate the multifaceted nature of the food system. This individual further noted that certain people might be unaware of the significant role that Forest and Freshwater Food play in the region, and the Report Card could serve to highlight its vital contribution. Lee-Ann Chevrette echoed a similar perspective and stated,

> When we talk about things like food infrastructure and procurement, I don't really know that a lot of people are thinking about that in our community, they might be thinking about food access and affordability, but maybe not so much the other pieces. I think it's also those sections like Forest and Freshwater Food that is really important, especially in our area, you know people need to understand the important contributions that make to our food system.

She believed that the Report Card illuminates additional community-specific components, notably Forest and Freshwater Food, which bear unique importance within Thunder Bay's food system. It therefore has the potential to educate the community to understand the contribution of other crucial elements to building a sustainable and equitable food system. In speaking about the importance of the Forest and Freshwater Food pillar she added, "there is a lack of knowledge around the food sources that are available in our community that can be safely accessed."

One of the users found the Report Card particularly valuable due to its extensive focus on health. Participant #6 expressed their admiration for the Report Card's emphasis on health across various elements such as Food Access, School Food Environment, and Food infrastructure. They highlighted how making connections between access to good food and maintaining good health deeply resonated, and they appreciated that this theme was consistently represented throughout the Report Card.

Airin Stephens found the underlying idea behind the Report Card to be valuable, as it aimed to push boundaries and shed light on some fundamental issues such as poverty and inequity, contributing to barriers in accessing an adequate and culturally appropriate diet. She highlighted several food inequity issues within the region's food system, encompassing factors like challenging geographical conditions that hinder food cultivation, lack of local food infrastructure, and prevailing issues of hunger and poverty. Additionally, she touched upon issues encompassing wages for individuals across the food supply chain, the financial challenges

faced by farmers, and the erosion of cultural cooking practices and traditional Indigenous food systems. She believed that these are fundamental challenges ingrained in the food system and that there is a need to improve people's understanding of these issues. From her perspective, a paradigm change is required to acknowledge the varied roles that food plays in people's lives, which go beyond health. Her stance is that adopting the food sovereignty framework signifies a transformative shift capable of holistically addressing these foundational challenges and the Report Card was successful in incorporating food sovereignty goals across seven pillars of the food system. Airin Stephens also emphasized the importance of raising awareness about the necessity to have access to sufficient and culturally appropriate food in a manner that respects individuals' dignity. She commended the Report Card for its educational role in addressing this concern. Bonnie Krysowaty also highlighted the Report Card's inherent value in its profound exploration of the roots of food system challenges, effectively uncovering the fundamental origins of issues such as food inequity, poverty, and affordability.

4.3.2   Learning from the Report Card

4.3.2.1 The role of different categories

Given the distinct professional backgrounds of each user, they found themselves more familiar with certain elements of the Report Card than others. They believed that the segmentation of the Report Card into seven regional food system pillars significantly enhanced their understanding of several aspects that were less familiar to them, along with their respective impacts on Thunder Bay's food system. Furthermore, they noted that the division of the food system into specific regional categories significantly enhanced the Report Card's usability for individuals and organizations engaged in different facets of the food system.

Airin Stephens and Lee-Ann Chevrette shared a common standpoint. They both believed that the Report Card's comprehensive exploration across various areas and demonstration of their respective roles in establishing a sustainable food system have deepened and broadened their comprehension. Lee-Ann Chevrette developed an interest in the School Food Environment and Urban Agricultural pillars, recognizing their critical contributions. She delved deeply into the urban agriculture pillar, specifically amplifying the significance of the community garden indicator and emphasizing the necessity of incorporating them into everyone's life. From her viewpoint, the duty of food cultivation should extend beyond farmers, allowing everyone, even on a modest scale, to engage in their own food production. She further underscored the role of community gardens in fostering connections to and awareness of the origins of food. Airin Stephens expressed that while she may be more engaged with specific elements like Food Access, the Report Card significantly deepened her comprehension of other facets within the food system and enhanced her understanding of how they collectively influence the regional food system.

Jeff Burke highlighted his evolving understanding through his collaboration with the TBAFS, where the social dimensions of the food system gained clarity. He noted that his concept of a sustainable food system expanded to encompass local economic development and enhance community access to locally sourced food. He stated, "the Report Card highlights some of the things about our food system that I didn't realize existed or the numbers that I thought were completely wrong…it definitely was very eye-opening to me some of these stats and some of the information that has come up through the Report Card." Participant #6 also pointed out that the Report Card enhanced their understanding of the roles played by various components in the food system, placing special emphasis on deepening their awareness of the significance of Urban

Agriculture within the regional food system. Additionally, they noted that Report Card also helped them in identifying potential areas that could be addressed to maximize its contribution to fostering a sustainable food system.

4.3.2.2 The role of indicators and their elaboration in effectively communicating food system challenges

Almost all of the users indicated that the Report Card helped them identify the challenges that exist within the regional food system comprehensively. Some of them additionally highlighted that the identified indicators, along with the incorporation of data and explanations clarifying what the data signifies, effectively enhanced the communication of the challenges present in each of the identified pillars.

Participant #6 highlighted the importance of providing statistical data and elaborating on what this data tells us in deepening their comprehensive understanding of the challenges related to accessing healthy food. Bonnie Krysowaty also pointed out that the presence of various indicators capturing issues around the food access pillar, coupled with data allocation and explanations, contributed to her enhanced comprehension of the food access challenges within the region.

Lee-Ann Chevrette emphasized the Report Card's contribution to improving her grasp of the challenges present in the Food Access and Food Production pillars. She further noted that, in addition to the commonly known issues related to accessing good food, such as food cost and affordability, she became aware of dignity-related concerns in food access. She pointed out that her awareness expanded to encompass challenges tied to treating individuals with respect while striving for food access. In the context of food production, Lee-Ann Chevrette further highlighted the significance of the indicators tracking the count of local farmers within the

region. Some of the indicators tracking the local farmers in the Report Card 2023 include the number of farm operators under 35 years of age, which fell from 35 to 10 between 2011 and 2021. Additionally, the average age of farm operators which increased from 53.2 to 56 during the same period. These indicators prompted her to realize that a majority of the farmers are of older age, while younger individuals are showing less interest in pursuing farming as a profession in the region. She added that these statistics highlight a significant challenge associated with the potential erosion of valuable food production knowledge in the years ahead.

Several participants highlighted the importance of indicators that monitor trends in data over time, reflecting increases or decreases in numbers. They pointed out that representing this information over different years in a trend line format enriched their comprehension of capturing challenges and vulnerabilities within each food pillar. Jeff Burke expressed his viewpoint on the significance of indicators in tracking trends over time. He emphasized that, while some of these indicators may not convey much when observed in isolation, examining them through trend lines provides a better understanding of the challenges at hand. Participant #6 reinforced the same point in saying that "I guess indicators are most useful when they are measured over time."

Lee-Ann Chevrette further emphasized how food access indicators have contributed to her deeper understanding of the regional situation, particularly underscoring the indicators related to the count of food banks and charitable feeding programs. She underlined that these indicators have revealed an increasing trend in numbers, and she believed this is an indication of the mounting cost of food and the increasing challenges faced by the community in accessing food. In the 2023 version of the Report Card, the indicator tracking the number of food banks shows an increase from 19 to 22 between 2015 and 2021, and the average number of meals served by emergency meal programs each month increased from 9,000 to 14,279.

4.3.2.3 The role of qualitative data and vignettes

Users of the Report Card highlighted the significance of vignettes in gaining a deeper understanding of regional food system dynamics. They mentioned that these narratives of food-related initiatives effectively showcased individuals and groups actively contributing to advancing the region's food system toward sustainability and equity. They believed that these narratives transcend the statistical data, introducing an additional dimension to the Report Card that enhances its relatability. Moreover, the users believed that by portraying concrete possibilities and offering practical insights into addressing food system pillars, these narratives offer readers a tangible framework that allows them to learn from the Report Card in a practical manner. They added that this approach contributes to presenting various possibilities for people to learn about those who are actively engaged and how they are working to improve the food system.

Lee-Ann Chevrette and Bonnie Krysowaty underscored how the stories of food initiatives effectively bring a personal touch to the portrayal of the regional food system, offering readers compelling examples of potential actions within each sector. They noted that these initiatives showcase efforts within the region to enhance food system sustainability and strongly resonate with people seeking a deeper connection with the report's content. According to Lee-Ann Chevrette, "those stories give a really strong local feel to the report…it felt a lot more personal and intimate in some way to learn about the impact of some of those programs and other initiatives that were happening in the community."

4.3.3   How the Report Card has been used

4.3.3.1 Using the Report card as an evidence-based decision-making document

All the participants emphasized the importance of evidence-based decision-making within their professional roles, especially when it comes to planning programs to develop more specified solutions and allocating funds. They emphasized the pivotal role that data plays in guiding these processes and recognized the challenges in accessing local data, noting its lack of availability otherwise. They highlighted the Report Card's significance as a valuable resource, efficiently centralizing local data in one accessible spot. Furthermore, they regard its comprehensive exploration of the food system elements with an extensive data allocation to portray the areas necessitating more attention as a compelling, evidence-based document that holds advantages for strategic planning and the distribution of funds. Participant #6 noted the Report Card's application in their work and stated,

> We always want to use a population health approach when we are planning programs and make sure that our programs are evidence-based and based on the needs of the community, so the Report Card serves the purpose of being a valuable piece of local information and a good evidence document that we can use to plan programs.

Bonnie Krysowaty emphasized the importance of localized indicators in her professional work. She noted that she relies on various Food Access indicators that address poverty within the region in the poverty reduction strategy. She also highlighted the importance of demographic data concerning vulnerable groups, including single parents, Indigenous people, and individuals with disabilities. She noted that such demographic data, which is captured in the Report Card, plays an important role in provincial and national strategies. She believed that this data aids in developing more precise solutions, allocating resources effectively, and offering targeted support to these specific groups. From her point of view, the Report Card's thorough exploration and

allocation of data led to different strategies she engages with, including the Community Safety

Wellbeing, Drug Strategy, and Housing and Homelessness Coalition Advisory Board, etc.,

relying on the localized data compiled through this effort.

Lee-Ann Chevrette also shared her utilization of the data from the 2015 Report Card,

particularly focusing on food insecurity data, in her work related to Community Safety and Well-

being. She highlighted its relevance in some areas they engage with, including poverty reduction,

anti-racism, and discrimination, emphasizing that the repercussions of food insecurity within the

community would play a role in these discussions as well. She underscored the significance of

localized data in formulating solutions to enhance financial empowerment and equity within the

region and pointed out the role of the Report Card in gathering this data from different food

elements and putting them all together. From her standpoint, the Report Card serves as a

valuable source of local data for designing solutions related to issues such as poverty and

inequity in the community.

From a producer-processor standpoint, the Report Card has the potential to be utilized by

many farm groups, including Thunder Bay Soil and Crop Improvement Association. Jeff Burke

believed that the Report Card's illustration of areas needing more attention and work within the

region could facilitate farm organizations in conceptualizing on-farm trials and pursuing funding

for their implementation, aligned with the community's needs.

4.3.3.2 Using the Report card as a tool for different purposes

Lee-Ann Chevrette brought up an added layer of practicality to the Report Card, going

beyond its numerical data. She highlighted that its usefulness extends to sparking inspiration for

other endeavors, supporting their advancement, and directing them toward future strides. For

example, she mentioned utilizing some of the data from the 2015 Report Card in collaboration

with Lakehead University for a Voluntary Local Review (VLR) [3] of the United Nations

Sustainable Development Goals. From her perspective, both versions of the Report Card

significantly contributed to the VLR process and continue to inform their work moving forward.

When discussing the utility of the Report Card in her work, she included,

> Data around food insecurity has been used in some of my work, related to community
> safety and well-being. We also did, in partnership with Lakehead University and some
> other partners, a VLR of the United Nations Sustainable Development Goals. One of
> the Sustainable Development Goals is Zero Hunger and so we used some local data
> from the Report Card around food insecurity in the VLR…I think that information in
> the old Report Card and in this new Report Card will be very helpful to inform that
> work moving forward.

She saw the Report Card as a source of inspiration for guiding other initiatives and indicating

steps for progress. Airin Stephens held a parallel perspective, recognizing the Report Card's

potential as an inspiring tool that could guide cities and organizations within and beyond

Thunder Bay in prompting them to formulate their own report cards and showing them starting

points as well as moving forward steps. She gave an example of being in the conference in

Sudbury knowing that the Sudbury Food Policy Council views the TBAFS as a council pushing

the boundaries with developing different interesting documents such as the Report Card and the

Emergency Food Report. Jeff Burke echoed the same viewpoint regarding the potential utility of

the Report Card as an interactive tool for engaging in conversations with various groups within

and beyond the region.

Moreover, Airin Stephens foresaw that the new 2023 edition of the Report Card would also

serve as a tool to offer users a comparative viewpoint on food system issues spanning from 2015

to the present. She added that this would help in discerning the trends and the direction of

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[3] The Voluntary Local Review is available at https://www.lspc.ca/vlr/

developments over this period. She held the viewpoint that these comparative insights would play a central role in identifying areas demanding increased attention and would serve as a guiding factor in making decisions about new programming, planning, or approaching tasks from a fresh perspective within her professional domain.

4.3.3.3 Characteristics of the Report Card that enhance its usability

The importance of having multiple rounds of the Report Card and keeping the data updated was underscored by all participants. The Report Card users held the perspective that it offered them a comprehensive understanding of the current state of the region's food system. From their viewpoint, it helped them assess the effects of specific interventions, effectively navigate emerging trends, and come up with coordinated approaches to addressing food system issues. As a result, users of the Report Card believe that these iterations contribute to bolstering the credibility and utility of this endeavor. Participant #6 emphasized the importance of having multiple rounds of the Report Card and stated,

> We want to see changes over time, we want to see if certain interventions are actually having an impact. If we have a time series of data, we can make those associations and see how we are progressing and if there needs to work in different areas.

Lee-Ann Chevrette stated, "I think having different rounds of the Report Card is really important, we can see if there are trends happening, we can see how things are changing over time, and then we can respond accordingly." Airin Stephens further underscored the significance of updating the Report Card in 2023, placing particular emphasis on the period following the outbreak of Covid-19, during which numerous changes occurred.

Another point that was frequently highlighted by multiple participants is the enhancement of the Report Card's usability through its presentation on an online platform in the updated 2023 version. They believed that presenting it online would significantly improve its accessibility,

allowing a broader range of individuals and organizations, both within and outside of Thunder Bay, to easily access and utilize its content. Moreover, they held the belief that presenting the Report Card on a virtual platform can serve as an inspirational tool and guide for other cities and organizations to leverage its content to identify starting points for their own initiatives.

Jeff Burke firmly believed that a virtual presentation adds versatility to the Report Card and makes it more convenient to use and share its content with others. He pointed out the Report Card's potential as an interactive tool for engaging in conversations with groups such as the City Council emphasizing that the virtual format could enhance this aspect. He underscored the significance of presenting it in a virtual format, envisioning it as a practical and interactive resource that can be conveniently carried along for such engagements. Bonnie Krysowaty and Participant #6 shared the perspective that delivering the Report Card through a virtual platform is beneficial and increases accessibility. Bonnie Krysowaty additionally noted that the online platform would enable various organizations, like the Lakehead Social Planning Council, to directly link to the Report Card information, guiding individuals who are interested in using and learning more.

4.4 Challenges/Limitations in the Report Card

A challenge identified by Participant #6 in relation to the Report Card revolved around its extensive length, necessitating a significant time commitment to read and effectively engage with its content. They believed that this might discourage people from thoroughly reading even a single section of the Report Card. Furthermore, apart from the challenge of its extensive length, they noted that the Report Card lacks different forms of knowledge translations. They added that the Report Card's content could resonate with individuals of diverse educational backgrounds and that some may struggle to fully understand the materials. Therefore, they highlighted the

significance of developing a communication strategy that serves a wide range of audiences by presenting information in a manner that accommodates different reading levels and lengths, ensuring a broader reach for learning and understanding.

Participant #6 suggested summarizing the key points of each pillar that need more focusing into concise one to two-page sections that include infographics for those who prefer bite-sized information, rather than lengthy readings. Furthermore, they suggested providing different knowledge translations for materials that should serve diverse audiences, while emphasizing the incorporation of simplified content formats and what helps convey the information more easily. They hold the view that these strategies would enhance the usability for a wide range of users and facilitate the sharing of the Report Card on different platforms. "I think it will be helpful to have different levels of information, and if someone just wants an overview of what it says that should be available in one or two pages, or maybe each pillar has one-page infographics or something because not everyone wants everything," they said.

Bonnie Krysowaty also pointed out the challenge posed by the Report Card's length. Her recommendation aligned with Participant #6: "that might be a suggestion to have some smaller reports and infographics based on those smaller pieces of information that you really want to draw out and bring to people's attention."

One of the participants brought up a challenge concerning the indicators within the Report Card. Participant #6 highlighted that some indicators on the Report Card lack clarity in terms of their connection to the improvements of the pillars they are meant to represent. From their point of view, some indicators in the Report Card should either be removed or have their connection to the enhancement of their respective pillar clarified. They stressed the significance of taking a critical approach during indicator development and posing the question, "Does this indicator

genuinely reflect progress in fulfilling the enhancement criteria of the pillar?" Furthermore, they

believed that adopting this critical perspective will prevent the document from becoming

lengthy, while also allowing for the inclusion of indicators directly related to the growth of a

food system pillar.

Participant #6 expanded on the difficulties related to understanding the meaning of some

indicators, especially for individuals without expertise in the field. They believed that non-

experts might find it challenging to grasp the significance of these indicators as well as their

connection to a pillar. They recommended incorporating additional context in some areas within

the Report Card for next rounds. According to the participant #6,

> I guess some of the indicators need a little bit more explaining, like the number of people volunteering for student nutrition programs. That's a pretty specific indicator and I'm not really sure what that tells me about a healthy school food environment or the number of schools participating in the great big crunch, I know what that is but I don't think a layperson reading it would know what that is, or why that shows that we have a good healthy school food environment.

Lee-Ann Chevrette pointed out a limitation within the Report Card's ability in effectively

communicating an understanding of the food system issues surrounding the Food Access pillar,

particularly concerning the recognition of poverty as one of the root causes of food insecurity

within the community. She strongly contended that portraying poverty as the primary cause of

food insecurity or lack of access to nutritious food unfairly shifts blame onto individuals who are

experiencing poverty, essentially assigning them responsibility for the issue. She held the belief

that inequity is the fundamental cause of food insecurity, which in turn serves as the underlying

cause of poverty. She underscored that existing inequities within the system bring harm to some

individuals and groups in the community, resulting in challenges regarding food access. She

pointed that this important aspect is not well clarified in the Report Card, potentially causing a misunderstanding that poverty is one of the root causes of people lacking access to good food.

Some participants also brought up the challenges of identifying explicit solutions to the food system issues outlined in the Report Card. Airin Stephens believed that the solutions are recognized based on the next steps. In other words, she believed once potential solutions are identified, they need to be put into action by carrying out the prescribed steps or strategies to address the problem or achieve the desired goals. She noted that these nest steps are not explicitly outlined in the Report Card. She recognized that, upon reading the document, you are left with unanswered questions concerning the exact mechanisms of how, what, and who will lead the agenda forward. Jeff Burke also believed that the Report Card can serve as a starting point for individuals or organizations to formulate their own solutions based on the challenges and possibilities outlined in it.

4.5 Reflections and Next Steps

Several participants recognized that addressing fundamental issues such as inequity and poverty may fall outside the direct scope of the Report Card. Instead, these issues necessitate collaborative efforts and advocacy through various organizations. Bonnie Krysowaty said, "there needs to be more of a collective impact or a concentrated effort to ensure that everyone does have access to healthy foods that are culturally appropriate." Users believed that the Report Card's strength lies in informing and facilitating connections between various organizations, enabling them to collaborate in influencing governance structures and effecting meaningful changes. As a result, participants suggested that the most essential next step is to bring this network developed by the Report Card and TBAFS forward and continue to expand that network with different strategies and organization inside and outside of Thunder Bay in order to make

changes. Bonnie Krysowaty noted that some of the goals and objectives highlighted in the Report Card align with the ongoing efforts of other strategies such as the Poverty Reduction Strategy, and its success is influenced by the collective impact being generated through TBAFS. She stressed the necessity of TBAFS's ongoing efforts and lobbying in pursuing these goals effectively.

Airin Stephens suggested that the Report Card's next steps should encompass establishing connections between the various food system pillars and facilitating dialogue among them. She contended that in the pursuit of a sustainable and equitable food system, all these components are interlinked, and any endeavor within these different domains should align toward a common goal while fostering a robust network among them. To accomplish this, she highlighted the pivotal role of the TBAFS in orchestrating measures to harmonize each section, showcasing their interconnection, and nurturing a collaborative network as they progress.

According to Lee-Ann Chevrette, the Report Card effectively showcased several regional food initiatives and their endeavors to enhance the food system, providing valuable insights into the potential opportunities associated with each aspect of the food system. She suggested that, alongside these potential opportunities, the Report Card should present its own solutions to the food challenges, which could be achieved by adding some recommendations sections. "I would like to see either a recommendation section at the end of the report or at the end of each section. This is perhaps why I was not able to answer the question about identifying solutions in the Report Card, and I think consideration should be given to adding a section on recommendations," she said.

In alignment with the viewpoints of fellow participants, Participant #6 proposed a more explicit and exclusive approach to each section of the seven pillars for describing the next steps

in the Report Card. She placed an emphasis on delivering recommendations and practical solutions to the general public, offering guidance on how to actively participate and take action concerning various aspects of the food system. She believed that while organizations within the field may derive solutions from the provided information, some individuals who read about these challenges and are concerned may seek ways to actively contribute to food system improvement, prompting questions such as "What steps can I take now?" or "How can I become involved?"

Lee-Ann Chevrette recommended more exploration of entrenched structural violence and systemic inequities within the system for the next round of the Report Card. She underscored the significance of providing explanations that elucidate how these factors would affect individuals experiencing poverty, consequently resulting in challenges related to accessing food. From her perspective, this clarification is essential to foster a better understanding of the root causes of food access challenges, discourage the blame directed at individuals experiencing poverty, and represent an important path forward for the community. She further stated that when tackling this fundamental issue, solutions should primarily focus on exerting significant pressure on systems and structures to become more equitable, with the subsequent effect of benefiting individuals living in poverty and reducing food insecurity. According to her, "there needs to be more explicit information about inequity in the Report Card and [it should address] the need to push hard on systems and structures to be more equitable and in turn, so I think that it would have an impact on those people who are experiencing poverty, for example, and subsequently food insecurity."

Another reflection focused on enhancing the quantitative section of the Report Card. Jeff Burke recommended the incorporation of additional testimonials from food initiatives, with a specific emphasis on presenting narratives from their point of view. He argued that although the existing highlight stories offer valuable insights into the region's possibilities, they are rooted in

the author's perspective. He emphasized the need for these stories to be supplemented by firsthand testimonials directly provided by the food initiatives themselves, ensuring a more authentic representation of their experiences, rather than solely relying on the author's viewpoint.

Some users also brought up the idea of printing copies of the Report Card for those who may not have computer and internet access. They acknowledged the advantages of having the Report Card available online, but emphasized the importance of ensuring equitable access for all community members, including those without internet access. They suggested distributing some copies to the public libraries, Roots Community Food Centre, City Hall and other locations where people of varying knowledge levels may be interested in accessing these informative documents. According to Lee-Ann Chevrette, "it's also important to be able to provide paper copies, recognizing that not all people have access to a computer and to be able to read these reports online…we need to make sure that there is equitable access to these documents."

This Chapter has explained key findings of this research through five themes; 1) the motivation behind creating the Report Card, 2) goals and objectives that guided the Report Card; 3) the value of the Report Card for CSOs, 4) limitations/challenges within the Report Card, and 5) reflections/next steps to improve the Report Card. From the first section of this Chapter, I described that the motivation behind creating the Report Card focused on providing a comprehensive assessment with an integrated set of indicators in order to provide a holistic picture of the Thunder Bay's food system. The creators employed food sovereignty principles into the assessment process and attempted to customize them within the TBAFS seven pillars, which are specifically relevant to northern regions. They hoped to weave all of this together into a story to enable Report Card readers to better understand and engage with its content. In addition to their efforts to create an educational tool, the creators of the Report Card were also

motivated to conduct an assessment that could foster engagement in food governance among different food actors through the initiatives of the TBAFS. They tried to achieve this goal by bringing various stakeholders together and involve them in the assessment process. They hoped that their approach would provide the opportunity for fostering the establishment of networks among different strategies in Thunder Bay that share common objectives of creating a sustainable and equitable food system.

In the second section of this Chapter, I described the findings from interviews with the users of the Report Card. The overall impression of the Report Card content was positive, and almost all of the participants praised it for being a comprehensive, integrated assessment that helped them widen their understanding of food challenges in the region. The users also highlighted the value of the Report Card in being a great source of local data that could serve as an evidence-based decision-making document, thus guiding CSOs to allocate their resources strategically. Moreover, they underscored another value of the Report Card as a potential tool to inspire initiatives beyond the region to undertake their own versions of food system assessments, thereby contributing to the pursuit of integrated solutions.

In the second section, some responses from users regarding the values of the Report Card align with what the creators had hoped to achieve from their efforts. This implies that the Report Card has followed the path laid out by its creators and met the objectives put forth at its creation. Something repeated in this Chapter was the creators' intention to foster network building and the pursuit of common sustainability goals among various CSOs. Users acknowledged this goal and perceived it as a valuable outcome, with the potential to elevate this network to a higher level beyond Thunder Bay region. While the overall impression of the users was positive, they also presented some suggested next steps and reflections that could enhance the Report Card for its

future rounds. The following Chapter contextualizes these key findings within the existing

literature to provide a detailed exploration of the research questions.

CHAPTER 5: DISCUSSION

In this study, I conducted interviews with two different groups of participants: the first was a focus group consisting of three creators of the Report Card, and the second involved interviews with five users of the Report Card, with the aim of addressing the question: How can food system assessment contribute to sustainability and equity? I developed three sub-questions asking: 1) How do goals and objectives guide food system assessments and shape indicators and measurements? 2) What values do food system assessments serve for civil society organizations? 3) How do food system assessments contribute to food system governance and bring about broader changes? From the first group, I inquired about the motivations behind creating the Report Card and goals and objectives that guided its development. In the second group, I aimed to gain an understanding of the Report Card users' perspectives on its values, their utilization of it in advancing a sustainable and just food system in the region, and their input on possible improvements for upcoming iterations.

In this chapter, participant perspectives are synthesized, and I reflect on the literature to present an interpretation of how food system assessments contribute to sustainability and equity. The findings indicate that conducting comprehensive food system assessments, guided by a well-defined framework and explicit sustainability goals can contribute to enhancing the sustainability and equity of the evaluated food system. Following an appropriate framework, employing place-based measurement tools that address the specific needs of the area and encompass both challenges and solutions to achieve established sustainability objectives are other important factors. Contribution of food system assessments to greater sustainability and equity happens when sustainability frameworks and indicators, established in the participatory assessment processes, provide an accurate, comprehensive, and integrated portrayal of the food system. This

holistic portrayal serves to raise awareness and inspire community engagement and collaboration. Hence, establishing sustainability objectives rooted in diverse frameworks, employing integrated place-specific indicators, and fostering network development emerge as the key factors influencing the contribution of a food system assessment in promoting sustainability and equity. Consequently, the discussion in this chapter is situated within three critical elements that are essential for crafting robust and impactful sustainable food system assessments, and their interplay with the established literature on food system governance, conceptual frameworks, and measurement tools.

5.1 Sustainability goals

As pointed out by scholars in the literature review chapter (e.g., Moragues-Faus, 2020; Kloppenburg et al., 2000), sustainability is a contentious term subject to debate and can be interpreted in various ways based on the political and ideological stance of the individuals. Therefore, without a clear conceptual foundation, sustainability remains an ambiguous concept. In the assessment of sustainable food systems, the first imperative step is to establish a clear sustainability framework and explicitly state the goals that the assessment seeks to evaluate. In the literature, these frameworks are mainly categorized into four trends established by Holt-Giménez & Shattuck (2011): Neoliberal, Reformist, Progressive, and Radical. Those utilizing frameworks based on the Neoliberal and Reformist trends lack a systems thinking approach. Their focus is intentionally narrowed to portray a positive image of particular aspects of the food system, neglecting holistic perspectives. The sustainability goals originating from these frameworks predominantly concentrate on the production aspect of the food system and the measurement tools are designed to assess factors like increased food production, higher sales and exports, and greater profits for large corporations.

On the other hand, frameworks from Progressive and Radical trends, are focused on system thinking and capturing different elements compromising a food system. The processes may be complex and messy, but according to what is reported in the literature and findings chapters, this complexity mirrors the nature of a food system. Such a system encompasses various interconnected aspects, which are too often addressed independently (if at all) due to the difficulty of capturing different elements and acknowledging their interconnectedness. As described in the literature, by adopting a systems approach, these frameworks take into account the environmental, social, and economic dimensions together. Their sustainability goals revolve around cultivating a food system that works with the environment, employing ecologically sustainable practices. They also aim to empower individuals to participate across the entire food chain, from production to consumption. Furthermore, they seek to bolster the local economy, for example, through initiatives like local food production and procurement, thereby contributing to community growth and social well-being. Reported by academic literature, the process of food system assessment utilizing these frameworks is rooted in active participation and inclusivity of various community members to ensure that the sustainability goals set are in align with the broader community's needs.

Drawing from the creators' perspective in the findings, the Report Card embraced a food sovereignty framework most aligned with the Radical trend. In the literature, Spring et al. (2020) pointed out that in remote areas such as the Northwest Territories, the sustainability of food systems is closely linked to the health of the ecosystems, aligning with many principles of food sovereignty. Given the remote nature of Thunder Bay, it may be more dependable to utilize the food sovereignty framework in establishing sustainability goals for its food system. Furthermore, food sovereignty is an evolving place-based approach whose main principles encompassing

aspects such as ensuring sufficient culturally appropriate food, environmental preservation, local control, and the right to participate in the food system could be adopted by different regions based on specific characteristics of each food system.

Using the food sovereignty framework to evaluate Thunder Bay's food system, the Report Card provided guidance to its creators in formulating goals and objectives aligned with the TBAFS's seven strategic pillars identified and chosen during a Community Food Summit in March 2013. These pillars—food access, forest and freshwater foods, food infrastructure, food procurement, food production, school food environment, and urban agriculture—were designed to integrate the essential components of a healthy, equitable, and sustainable food system specific to northern communities. Report Card users underscored the forest and freshwater food pillar as a component particularly relevant to northern food systems and appreciated its inclusion in the report. Some users also expressed their appreciation for adopting food sovereignty framework to set sustainability goals, considering the Report Card as an excellent example of how the food sovereignty framework can be implemented in the regional food system.

Embracing a food sovereignty framework not only directed the Report Card towards a place-based approach and the adjustment of sustainability goals and measurement tools according to the community's needs, but it also guided the Report Card to incorporate system thinking approaches, consistent with the inherent nature of the applied framework. Therefore, the framework led to a comprehensive food system assessment taking into account different elements of the regional food system. This approach is highly valued by users who see that it sets the Report Card apart from other assessments. Unlike some other assessments that concentrate on specific aspects, the Report Card is appreciated for providing a more comprehensive and accurate portrayal of the true complexity of the food system. Almost all users agreed that

breaking the food system down into these seven pillars could help them see how different elements contribute to the sustainability and equity of the regional food system, particularly those elements that were unfamiliar to others, therefore helping them increase their awareness of the food system challenges and opportunities within those pillars.

As highlighted by different scholars in the literature (e.g., Giménez & Shattuck, 2011; Levkoe & Blay-Palmer, 2018), a primary objective of food sovereignty is to advocate the communities' right to govern their own food and agriculture, with the aim of addressing inequities within the food system. Advocating for the goals of food sovereignty, the Report Card aimed to tackle fundamental food system issues revolving around food inequities. According to the creators of the Report Card, they intended to illustrate the occurrences within the regional food system and address challenges that go beyond those Thunder Bay faces due to its geographical location, encompassing factors like weather and remoteness, and instead delving into fundamental challenges. The food access pillar within the Report Card stands out as a crucial element capable of addressing issues such as inequity and poverty in accessing good food. These objectives were transparent to users, who also perceive the Report Card's commitment to addressing these fundamental food system challenges as one of its core values, pushing boundaries and boldly addressing issues that are deeply embedded in systemic structures.

Hence, the crucial step of explicitly formulating sustainability goals and objectives, which guided appropriate approaches to assess the food system and develop measurement tools, took place in the creation of the Report Card. The adoption of a food sovereignty framework, along with employing place-based and system thinking approaches to address fundamental challenges within the food system brought significant values to this endeavor. These approaches contribute

to heightening the awareness of food actors regarding some food system elements that may not have been extensively engaged with. As a result, this assists them in comprehending the various interconnected food elements, addressing diverse food system challenges, and identifying areas that require further attention and support. Furthermore, the Report Card stands as a practical example for Civil Society Organizations (CSOs) to implement food sovereignty in the region.

5.2 Sustainability Indicators

The significance of indicators in bridging the knowledge gap between science and policy and enhancing decision-making processes has been emphasized up to this point in this thesis. As underscored in the literature, there is a recognized need to develop a comprehensive and integrated set of indicators capable of effectively addressing interconnected challenges within the food system, such as agriculture, poverty, human health, and natural resources, that are often addressed independently. The framework employed in formulating sustainability goals during the assessment process significantly influences the development of sustainability indicators. Adopting a food sovereignty framework guided the Report Card creators to develop measurement tools addressing food system challenges in a comprehensive, integrative, and place-based manner. The approach engaged various stakeholders in a participatory process, inviting them to contribute their opinions and avoiding dependence on pre-identified indicators, which led to the development of a set of indicators collaboratively, capturing the most relevant food events in the region and integrating them cohesively.

The selection of optimal indicators and determining their quantity requires the establishment of specific criteria. As outlined by Tanguay et al. (2010), developing transparent and rigorous selection criteria is crucial to improve the credibility and scientific validity of the chosen indicators, while also ensuring their effectiveness in informing decision-making

processes. In the focus group interview, the creators of the Report Card stated that they selected indicators based on their relevance to the scale, stability, and availability. However, transparent and rigorous selection criteria were not explicitly included in the Report Card. Some users found certain indicators challenging to comprehend at different knowledge levels, while others considered some indicators irrelevant for capturing sustainability goals, thus contributed to the overall lengthiness of the final report.

Users praised the Report Card as a valuable source of local data, not only informing the public about the food system's status, but also serving as a guide for food organizations directing funds and resources to areas in need of support. Food actors in Thunder Bay relied on the data gathered in the Report Card to gain insights into the local situation and used specific indicators to identify community needs for their programming and planning efforts. Moreover, as Bauler (2012) and Tanguay et al. (2010) expressed indicators' functionality are in providing information about conditions over time, and users of the Report Card also underscored the importance of indicators revealing trends over time to comprehend changes or the effectiveness of interventions in specific areas. Consequently, users commended the idea of updating the Report Card for another round and displaying how indicators change over time, expressing a desire for more updates in the future by the TBAFS.

The qualitative aspect of the Report Card that highlighted stories about food initiatives was also praised by its users. During the development of sustainability indicators in the Report Card, the creators recognized the value of capturing events in the regional food system that go beyond mere numbers. The narratives of food initiatives are valuable for food actors, adding a personal touch to the report and making it more place-specific. Importantly, these stories illustrate

opportunities within each food sector that can be leveraged to advance the regional food system toward the sustainability goals outlined in food sovereignty principles.

As stated in the literature and as seen in the Report Card, sustainability indicators, both qualitative and quantitative, are derived from a sustainability framework that is comprehensive to capture different aspects of the food system, such as social, environmental, and economic aspects, and is also place-based, addressing community needs, have the most potential to inform CSOs of a more holistic integrated view of the food system and, more importantly, can guide them to areas in need of attention for programming and planning. Furthermore, sustainability indicators possessing the mentioned attributes can represent an important experiment in governance, as discussed in the section that follows.

5.3 Food Sovereignty Movements

There are different forms of CSOs engagement in food system governance within the existing literature, all with an aim of pursuing more sustainable food systems. The extent to which these organizations engage in governance structures to regain decision-making authority within food systems is contingent upon their ideological stance and sustainability objectives. Andree et al. (2019a; 2019b) introduced the Governance Engagement Continuum, delineating this engagement spectrum. It spans from multistakeholderism, aligning with sustainability goals rooted in neoliberal and reformist perspectives, to co-governance and self-governance, catering to those with sustainability goals grounded in progressive and radical ideologies. The food governance engagement outcome of CSOs in food system assessment can be strongly influenced by the sustainability goals and indicators outlined in previous sections.

According to Binimelis et al. (2014) and Levkoe & Blay-Palmer (2018), the process of developing food sovereignty indicators in a local context, from defining the objectives to

selecting the indicators, enhances the self-reflexivity of the different local food sovereignty movements to come up with shared future plans and to build a network. The process of developing food sovereignty indicators in the Report Card involved the collaboration of various CSOs, such as Thunder Bay Poverty Reduction Strategy and Roots Community Food Centre with the TBAFS to identify the most relevant indicators that could address issues within the food system precisely. CSOs and the TBAFS engaged in community-based research with participatory practices that facilitated sharing common goals and objectives related to building sustainability and equity. In their collaborative work, they all united in their desire to establish food sovereignty principles, while aligning with the needs of the community, and contributing to the establishment of alliances for food sovereignty at a local level. One of the primary objectives of the Report Card creators was to design it as a versatile tool, aiming not only to unite stakeholders advocating for food sovereignty, but also to inspire various cities to develop their own food assessments based on food sovereignty principles, thus contributing to the growth of trans-local food sovereignty movements.

As highlighted in the literature, collaborative food networks and social movements play a crucial role in food governance engagements, contributing to more effective institutional arrangements and democracy within the framework of social construction. According to Young et al. (2022), the trans-local aspect of urban food governance has the potential to elevate food networks to new levels by establishing diverse networking and communication channels between cities, facilitating the exchange of knowledge and collective learning, and supporting the development of integrated urban food policies or programs.

Within the development of the Report Card by the TBAFS, regional CSOs were involved in certain decision-making processes. This participation contributed to an increased engagement

of CSOs in the governance of the food system. CSOs can wield discursive power through contributing in selecting the sustainability indicators that framed regional food issues. Moreover, this participation also played a role in advancing the food sovereignty movement within the region, emphasizing common goals and shared program plans. Various strategies working towards addressing inequity within the region could seize the opportunity to collaborate and focus on their shared common goals. Furthermore, the objective was to extend the Report Card impact beyond Thunder Bay, fostering a trans-local movement that could potentially contribute to the formulation of integrated urban food policies or programs. The possibility of a trans-local movement facilitated by the Report Card could empower CSOs to establish more effective institutional arrangements, thereby enabling them to exert greater structural power.

5.4 Research Limitations and Suggestions for Future Research

A limitation of this research is the relatively small number of participants in group 2, comprised of users of the Report Card from food practitioners, which could have exceeded five. Due to time constraints, I opted to conduct interviews and analysis within this scope, but obtaining feedback from a larger pool of users would undoubtedly contribute to a more comprehensive answer to the research questions. Furthermore, this study revealed that the impact of regional food system assessments could extend beyond the local level, so, if feasible in terms of time and resources, future research could further explore the impact of a food system assessment in building a more sustainable and equitable food system at a trans-local level. Therefore, a suggestion for future research involves exploring the impact of the food system assessment by incorporating broader feedback from users, including food practitioners, policymakers, and the general public, within and beyond the local level. Future research could also focus on providing valuable insights into the impact, particularly concerning food system

governance in terms of both democracy and efficiency. The efficiency part might include exploring shared policy and/or program generations, within and beyond the regional level. This approach may potentially reduce conflicts of interest and contribute to more unbiased answers, given that some food actors using the assessment results are not involved in its creation process.

In this chapter, I focused on three critical elements that are essential for conducting rigorous and impactful sustainable food system assessments. In the case I examined, the TBAFS Report Card could contribute to the enhancement of the sustainability and equity of the regional food system by formulating a comprehensive food system assessment grounded in food sovereignty principles and indicators. This contribution occurred by expanding the awareness of CSOs about regional food issues and facilitating the establishment of networks among them to share common goals and plans. As a result, it played a role in boosting the involvement of regional CSOs in food system governance and has the potential to elevate this engagement to the next level within the trans-local food sovereignty movement.

In addition to exploring the Report Card contribution in enhancing sustainability and equity, this research was aimed to receive feedback from its user to improve its content for future rounds. Users of the Report Card provided useful comments on its content. Some examples of frequent feedback include: presenting information in a manner that accommodates different reading levels and lengths, ensuring a broader reach for learning and understanding, shedding light on the connection of some certain indicators to addressing food system issues, offering firsthand testimonials directly provided by the food initiatives themselves and not only from the Report Card authors, and providing explicit solutions to the food system issues outlined in the Report Card, such as by including a recommendation section at the end of each food pillar.

CHAPTER 6: CONCLUSION

This study investigated the impact of a food system assessment and its contribution to the evaluated food system's sustainability and equity. Impact varies depending on how food system assessments are developed. By neglecting the incorporation of frameworks within a systems approach for setting sustainability goals and indicators, some assessments attempt to offer only a few components that are usually economically focused to claim that the food system is doing well and that the way to greater sustainability is being paved, while disregarding the devastating social and environmental impact that the dominant system may produce. These assessments not only play a role in enhancing the sustainability and equity of the food system but also have the potential to misguide Civil Society Organizations (CSOs). In comparison, the Thunder Bay + Area Food Strategy Food System Report Card (the Report Card) tried to show what is happening accurately, even if there are various challenges aligning with food sovereignty and its core values. Those who used the Report Card highly appreciated this aspect, finding it inspiring and effective. It served as a significant revelation for regional food actors, fostering a deeper understanding of various elements of the food system and highlighting areas that require more attention and support. This stands out as a crucial contribution of the Report Card to the advancement of a better food system. Despite complexity and intricacies, the Report Card served as an eye-opener for different food organizations, guiding them towards recognizing both challenges and opportunities within the regional food system that demand concerted efforts.

The research approach employed in developing the food system assessment also has an important role in its contribution to the development of a more sustainable and equitable food system. Creating the Report Card through community-based research and involving a broad range of food actors in identifying relevant indicators contributed to establishing local food

sovereignty alliances. However, there is an opportunity for the Report Card to further enhance

community engagement by including community members to create a collective definition of a

sustainable food city to set goals aligned with food sovereignty principles. This additional step

would foster greater trust between the TBAFS and community members. Therefore, the place-

based, reflexive, and co-productive practices employed in the Report Card could also serve as a

tool for social change.

The development and regular updating of the Report Card provided a significant

opportunity for CSOs to engage in self-reflexivity and co-productive practices. CSOs advocating

for food sovereignty in the region collaborated with the TBAFS, participating in decision-

making processes and establishing shared common goals. This marked a significant impact of the

Report Card, contributing to more participatory urban food system governance and laying the

groundwork for food sovereignty alliances within the region. It also holds the potential to extend

partnerships beyond the region and contribute to the broader trans-local food movement.

However, within the confines of this research, no explicit program or policy generations could be

identified as an outcome of the Report Card. Nevertheless, civil society participants

demonstrated the exercise of both discursive and structural power by collectively identifying

food metrics and collaboratively establishing procedures, such as decision-making rules.

Therefore, I conclude that the Report Card contributed to food governance engagement in the

form of co-governance, positioning itself in the middle of the Governance Engagement

Continuum. This conclusion is shown in the figure below (Figure 5). There is potential to elevate

food governance engagement by involving CSOs in various stages of developing the Report

Card for future rounds. This could be achieved by granting CSOs more structural power in

deciding on food system pillars and indicators, addressing challenges and opportunities, as well

as proposing solutions and future steps. In this case, the role of the Report Card in food

governance involvement could take the form of polycentric governance.

Figure 5: The Report Card's Role in Food Governance Engagement
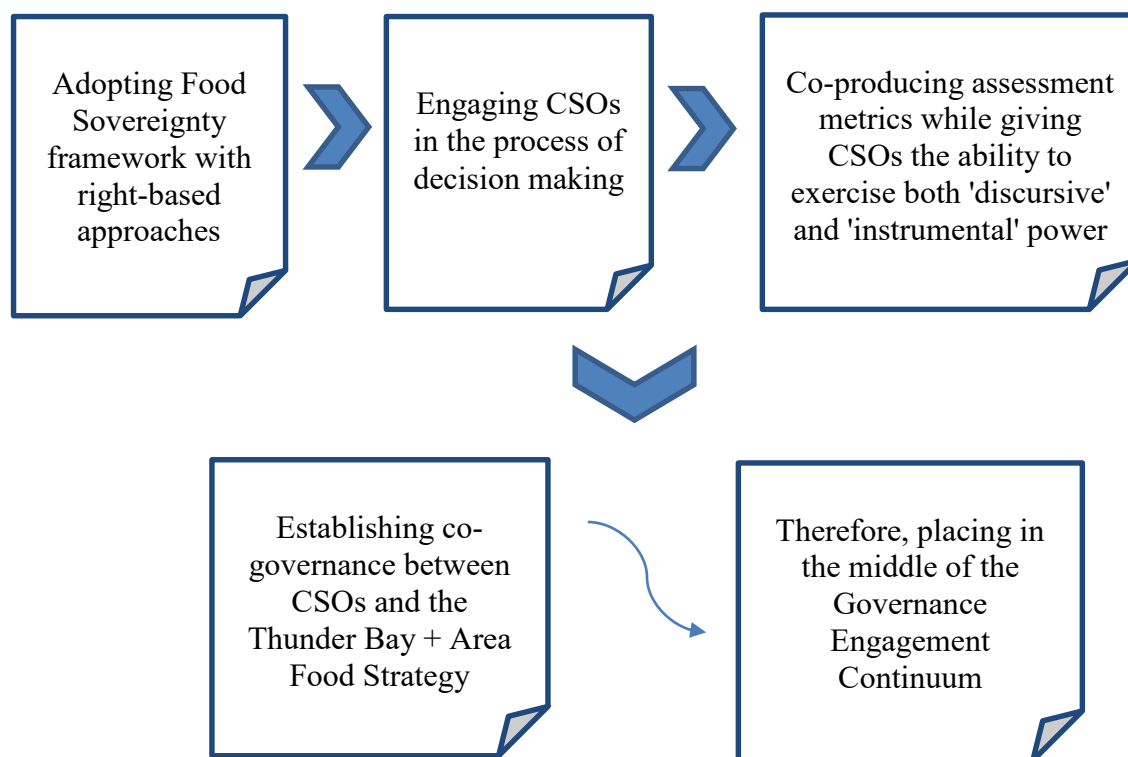
6.1 Research Contributions

In my exploration of the literature on sustainable food system assessments, I found that

only a few assessment projects take an additional step to scrutinize their outcomes. However,

these few studies are limited in their efforts to seek feedback from the community that has used

assessment on its contents and suggestions for improvement. As a result, with this in mind, this

study attempted to address that gap in the literature by investigating the outcomes of a

sustainable food system assessment with a focus on the single case of the TBAFS Report Card.

In 2023, the TBAFS released the updated Community Food System Report Card. As a

community-based research project, I contributed to updating and revising the indicators to report

on the current state of the regional food system and track changes. Conducting a study on the outcomes of the original food system Report Card was effective in refining the indicators and filling gaps and assessing the impact of this effort. Hence, this study holds value for the TBAFS and communities throughout northern Ontario, as well as for academic research and other stakeholders engaged in food system evaluations. In addition, other municipalities that attempt to assess their food systems might find this research useful as they need to explore how their assessments might contribute to building a sustainable food system in the direction of developing a comprehensive educational tool and going forward to making changes.

Upon reflecting on this study, it becomes evident that affording the community the right to participate in the decision-making process and providing opportunities for engagement in food system governance are crucial factors in ensuring that assessments contribute to fostering greater sustainability and equity within their community. Therefore, conducting food system assessments on a participatory research approach would be crucial in this matter. Concerning the Report Card, while food actors were engaged in the process of identifying and revising indicators, it is essential that this involvement is integrated from the beginning—starting with establishing sustainability goals and identifying indicators to address those goals. The Report Card was built on TBAFS's seven pillars and specifically addressed the complexities of the northern food flow. However, it is possible to identify or revise these food categories depending on the perspectives of food actors, determining whether it is necessary to include or exclude any categories. I believe that increased involvement would result in the Report Card incorporating the most relevant and essential indicators or food elements, preventing the report from becoming lengthy. Moreover, a variety of perspectives would contribute to providing more insightful

explanations and analyses of the data, particularly concerning the aspect of 'what each food pillar tells us'.

In conclusion, increasing participation of different actors in various stages of the Report Card or any other food system assessment would alleviate its limitations/challenges while also encouraging networking among varied actors, setting the groundwork for the formation of food coalitions. These food movements are critical for bringing about systemic changes in the food system and moving it toward greater sustainability.

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APPENDICES

Appendix A: Recruitment Text

Email title: Request for participation in a research study on Exploring Food System Assessments as a Contribution to Sustainability and Equity: A Case Study of the Thunder Bay Area Food Strategy Report Card

Dear Potential Participants,

I'm writing to invite you to take part in a research study about Exploring Food System Assessments as a Contribution to Sustainability and Equity: A Case Study of the Thunder Bay Area Food Strategy Report Card. This research seeks to explore the perspectives and experiences of the Thunder Bay and Area Food Strategy's Food Systems Report Card creators and users to identify its outcomes on building a sustainable and equitable food system. Participation will include a 60 minute in-person interview in October and November 2022.

Your participation is entirely voluntary, and you will have the option of remaining anonymous or being identified in the final report.

If you are interested in participating, please contact me at mghorban@lakeheadu.ca.

Sincerely,

Maliheh Ghorbankhani

Master of Science in Forestry Student

Faculty of Natural Resources Management

Lakehead University

Appendix B: Information Letters

1. Information Letter for Thunder Bay + Area Food Strategy's Food Systems Report Card Creators

Exploring Food System Assessments as a Contribution to Sustainability and Equity: A Case Study of the Thunder Bay Area Food Systems Report Card

Dear Potential Participants,

This sheet gives some basic information on the research, what you can expect, how the data will be handled and used in the future. If anything is unclear or you want more information, please feel free to ask any question you wish, our contact details are at the end of this document.

What is this research about?
The research will investigate the development and outcomes of a sustainable food system assessment and its contribution to food system governance in order to build a sustainable and equitable food system. I will seek reflections from creators, practitioners and policymakers about the Thunder Bay Area Food Systems Report Card creation, value and impact as well as feedback on particular indicators.

What is being requested of me?
You are being invited to participate in this research because you are one of the **creators** of the Report Card and your reflections will be a valuable contribution to this research. I am asking you to take part in a focus group to share your thoughts on the Thunder Bay Area Food Systems Report Card and to assist this study in investigating the report card's values and limitations to improve it as a means of building a sustainable and equitable food system in the Thunder Bay region. As a focus group, the discussion will include at least two other participants. Your participation is completely voluntary; you may refuse to answer any questions, or withdraw from the study at any time.

Are there any benefits or risks I should be aware of?
This interview will provide a better understanding of outcomes of food system assessments and its contribution to food system governance to build a sustainable food system. This research would improve the Thunder Bay Area Food Systems Report Card and its indicators and therefore its users would benefit from the result of this research.

Of note, Maliheh Ghorbankhani and Charles Levkoe (both researchers on this project) have been involved in the creation of the Thunder Bay Area Food Systems Report Card. In addition, Charles Levkoe serves as an executive member of the Thunder Bay Area Food Strategy. While there are very few perceived risks from participating in this research, we recognize that some questions may be perceived as uncomfortable, and you may not want certain information made available. Your participation is voluntary and you are only being asked to offer information you feel comfortable sharing.

Due to the COVID-19 pandemic, in-person research carries greater or additional risk. If the interview is held in person, the interviewer will wear a medical mask and ensure sanitizing/cleaning is done at the interview location.

How should I expect to be treated?
This research aims to maintain the highest standards of ethical conduct and integrity. Centrally, this means that in participating in this research you should feel that you, and your contribution to this research, have been treated with respect. Participation is entirely voluntary and all information offered will be treated in good faith. You are welcome to refuse to participate, withdraw from the research at any time and refuse to answer any of the questions asked without any negative consequences for yourself or your organization. You can also choose whether or not to be identified in the final report. Even though your anonymity will be respected by your choice of being identified or not, due to the small number of people involved in the project, there is a high probability that anyone related to the project could infer who said what. All questions about the research, its aims and outcomes will be answered openly and honestly. While we retain final editorial control over what we choose to write, you are free to withdraw any information you have contributed at any stage by contacting us and indicating your wish to do so.

This study has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or research@lakeheadu.ca.

What will happen to the data after it is collected?
In all cases, nothing you say will be attributed to you individually. Your anonymity will always be the number one priority. Only Maliheh Ghorbankhani's and Charles Levkoe will have access to the interview transcript and identifiable materials (including audio recordings, hand-written notes and your consent form). All raw data, audio recordings and typing up of interviews will be encrypted and stored on password protected computers and in locked filing cabinets for up to five years. We aim to share results of this research in Maliheh Ghorbankhani's master's thesis, peer reviewed academic articles, and in a report to the Thunder Bay Area Food Strategy.

If you have further questions about these processes or feel uncomfortable with any aspect of them, please let us know at any time.

Thank you again for your time and assistance,

Maliheh Ghorbankhani
Master of Forestry Student, Lakehead University
mghorban@lakeheadu.ca

Charles Z. Levkoe
Associate Professor and Canada Research Chair in Equitable and Sustainable Food Systems, Lakehead University
clevkoe@lakeheadu.ca; 807-346-7954

2. Information Letter for Thunder Bay + Area Food Strategy's Food Systems Report Card Users

Exploring Food System Assessments as a Contribution to Sustainability and Equity: A Case Study of the Thunder Bay Area Food Systems Report Card

Dear Potential Participants,

This sheet gives some basic information on the research, what you can expect, how the data will be handled and used in the future. If anything is unclear or you want more information, please feel free to ask any question you wish, our contact details are at the end of this document.

What is this research about?
The research will investigate the development and outcomes of a sustainable food system assessment and its contribution to food system governance in order to build a sustainable and equitable food system. I will seek reflections from creators, practitioners and policymakers about the Thunder Bay Area Food Systems Report Card creation, value and impact as well as feedback on particular indicators.

What is being requested of me?
You are being invited to participate in this research because you are the report card's **user** and your reflections will be a valuable contribution to this research. I'm asking you to take part in an interview to share your thoughts on the Thunder Bay Area Food Systems Report Card and to assist this study in investigating the report card's values and limitations to improve it as a means of building a sustainable and equitable food system in the Thunder Bay region. You need to be informed that the interview will be conducted in the form of a semi-structured interview. Your participation is completely voluntary; you may refuse to answer any questions, or withdraw from the study at any time.

Are there any benefits or risks I should be aware of?
This interview will provide a better understanding of outcomes of food system assessments and its contribution to food system governance to build a sustainable food system. This research would improve the Thunder Bay Area Food Systems Report Card and its indicators and therefore its users would benefit from the result of this research.

Of note, Maliheh Ghorbankhani and Charles Levkoe (both researchers on this project) have been involved in the creation of the Thunder Bay Area Food Systems Report Card. In addition, Charles Levkoe serves as an executive member of the Thunder Bay Area Food Strategy. While there are very few perceived risks from participating in this research, we recognize that some questions may be perceived as uncomfortable, and you may not want certain information made available. Your participation is voluntary and you are only being asked to offer information you feel comfortable sharing.

Due to the COVID-19 pandemic, in-person research carries greater or additional risk. If the interview is held in person, the interviewer will wear a medical mask and ensure sanitizing/cleaning is done at the interview location.

How should I expect to be treated?
This research aims to maintain the highest standards of ethical conduct and integrity. Centrally, this means that in participating in this research you should feel that you, and your contribution to this research, have been treated with respect. Participation is entirely voluntary and all information offered will be treated in good faith. You are welcome to refuse to participate, withdraw from the research at any time and refuse to answer any of the questions asked without any negative consequences for yourself or your organization. You can also choose whether or not to be identified in the final report. Even though your anonymity will be respected by your choice of being identified or not, because the sample is so small (8 participants), due to the small number of people involved in the project, there is a high probability that anyone related to the project could infer who said what. All questions about the research, its aims and outcomes will be answered openly and honestly. While we retain final editorial control over what we choose to write, you are free to withdraw any information you have contributed at any stage by contacting us and indicating your wish to do so.

This study has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or research@lakeheadu.ca.

What will happen to the data after it is collected?
In all cases, nothing you say will be attributed to you individually. Your anonymity will always be the number one priority. Only Maliheh Ghorbankhani's and Charles Levkoe will have access to the interview transcript and identifiable materials (including audio recordings, hand-written notes and your consent form). All raw data, audio recordings and typing up of interviews will be encrypted and stored on password protected computers and in locked filing cabinets for up to five years. We aim to share results of this research in Maliheh Ghorbankhani's master's thesis, peer reviewed academic articles, and in a report to the Thunder Bay Area Food Strategy.

If you have further questions about these processes or feel uncomfortable with any aspect of them, please let us know at any time

Thank you again for your time and assistance,

Maliheh Ghorbankhani
Master of Forestry Student, Lakehead University
mghorban@lakeheadu.ca

Charles Z. Levkoe
Associate Professor and Canada Research Chair in Equitable and Sustainable Food Systems, Lakehead University
clevkoe@lakeheadu.ca; 807-346-795

Appendix C: Consent Forms

1. Consent Form for Thunder Bay + Area Food Strategy's Food Systems Report Card Creators

![Lakehead University logo]

Name of Participant _____

(Please print)

- I have discussed the details of this research project and agree to participate in the research.

- I understand that the purpose of the research is to share my perspectives and feedback on the Thunder Bay and Area Food Strategy's Food Systems Report Card.

- I understand that my participation in this study will bring minimal risks or harm.

- I understand that my participation in this study is voluntary and that I may withdraw at any time for any reason without penalty.

- I understand that there is no obligation to answer any questions that I feel are invasive, offensive or inappropriate.

- Unless explicitly agreed to otherwise, I understand that information I provide will never be attributed to myself individually.

- I understand I may ask questions of the researcher at any point during the research process.

- I understand that there are risks of contracting COVID-19 during in-person research.

- I understand that the interview will be conducted in the form of a focus group with two other participants.

- I agree to have this interview recorded (please circle one):   Yes   No

- I would like to receive a copy of the research results (please circle one):   Yes   No

- I would like to be identified in the final report (please circle one):   Yes   No

I am fully aware of the nature and extent of my participation in this project as stated above.

_____   _____

Participant's Signature   Date

If you have any questions or concerns about this study, please contact Dr. Charles Levkoe (clevkoe@lakeheadu.ca; 807-346-7954). If you have questions about your rights as a research participant in general, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or research@lakeheadu.ca.

2. Consent Form for Thunder Bay + Area Food Strategy's Food Systems Report Card Users

![Lakehead University logo]

Name of Participant _____

(Please print)

- I have discussed the details of this research project and agree to participate in the research.

- I understand that the purpose of the research is to share my perspectives and feedback on the Thunder Bay and Area Food Strategy's Food Systems Report Card.

- I understand that my participation in this study will bring minimal risks or harm.

- I understand that my participation in this study is voluntary and that I may withdraw at any time for any reason without penalty.

- I understand that there is no obligation to answer any questions that I feel are invasive, offensive or inappropriate.

- Unless explicitly agreed to otherwise, I understand that information I provide will never be attributed to myself individually.

- I understand I may ask questions of the researcher at any point during the research process.

- I understand that there are risks of contracting COVID-19 during in-person research.

- I understand that the interview will be conducted in the form of a semi-structured interview.

- I agree to have this interview recorded (please circle one):   Yes   No

- I would like to receive a copy of the research results (please circle one):   Yes   No

- I would like to be identified in the final report (please circle one):   Yes   No

I am fully aware of the nature and extent of my participation in this project as stated above.

_____   _____

Participant's Signature   Date

If you have any questions or concerns about this study, please contact Dr. Charles Levkoe (clevkoe@lakeheadu.ca; 807-346-7954). If you have questions about your rights as a research participant in general, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or research@lakeheadu.ca.

Appendix D: Interview Guides

1. Focus Group Guide for Thunder Bay + Area Food Strategy's Food Systems Report Card Creators

Theme	Question
Introductory Questions	How would you like to be identified?
	What does a sustainable and equitable food system mean to you?
	What are the challenges in Thunder Bay to building a more equitable and sustainable food system?
Main Questions	What were your goals and motivations for creating the Report Card?
	What are the underlying ideas (e.g., goals and objectives) that guide the creation of the Report Card?
	How did those ideas help to select indicators?
	What was the process of choosing those indicators?
	What outcomes are you expecting from your efforts to develop a sustainable food systems assessment?
	Who do you hope will use it? And How?
	What are the most valuable parts of the report card?
	Is there anything you think needs to be changed in the report card?
Wrap-up Questions	Is there anything else you would like to share that I have not asked you about the report card?
	Thanks for your participation. If you have any questions or want to add more, please feel free to contact me.

2. Interview Guide for Thunder Bay + Area Food Strategy's Food Systems Report Card Users

Theme	Question
Introductory Questions	How would you like to be identified?
	What does a sustainable and equitable food system mean to you?
	What are the challenges in Thunder Bay to building a more equitable and sustainable food system?
	What are your general reflections on the TBAFS Report Card?
Main Questions	What do you think are the underlying ideas (e.g., goals and objectives) that guide the Report Card?
	Does the Report Card raise your awareness of food system issues? Why or why not?
	Has the Report Card helped identify challenges in the food system? If yes – what are they?
	Has the Report Card helped identify solutions to those challenges in the food system? If yes – what are they?
	Are the indicators useful? Why or why not?
	Are the categories useful? Why or why not?
	Are the vignettes useful? Why or why not?
	Is the new virtual platform useful? Why or why not?
	Is it useful to have two rounds of the Report Card to compare (2015 and 2022)? Why or why not?
	How has the Report Card has been used in your work or with people you work with?
	How could the Report Card be improved?
Wrap-up Questions	Is there anything else you would like to share that I have not asked you about the report card?
	Thanks for your participation. If you have any questions or want to add more, please feel free to contact me.

Appendix E: TCPS 2 Certificate of Completion

PANEL ON
RESEARCH ETHICS
Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Maliheh Ghorbankhani

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

1164019

Date of Issue: **27 September, 2021**