

Using Participatory Action Research to Support Civil  
Society Action for a Sustainable Food System in  
Yellowknife

by

Carla Johnston

Bachelors of Arts with Honours in International Development  
Studies, Trent University

A thesis submitted to the Faculty of Graduate and Postdoctoral  
Affairs in partial fulfillment of the requirements for the degree of

Master of Arts

in

Political Economy

Carleton University  
Ottawa, Ontario

© 2018

## **Abstract**

Grounded in the Participatory Action Research (PAR) methodologies, this thesis examines the opportunities and challenges associated with encouraging multi-stakeholder collaboration around the vision of a more just and sustainable food system for Yellowknife, Northwest Territories (NWT). In partnership, the researcher and community research partners identified the following research question: How can community members and organizations, local businesses, and decision-makers from the City of Yellowknife collaboratively engage around the vision and principles of the Yellowknife Food Charter to improve the policy arena for a just and sustainable food system for Yellowknife? Grounded in political economy theories of sustainable food systems and governance, this thesis addresses this question through praxis - the cycle of reflection and action. To reflect, this thesis examines the role of PAR in realizing actions for the food charter, focusing on the importance of decolonizing research through trust and partnership, and on community ownership of research questions and process. It also makes recommendations for building trust in research through explicitly discussing the expectations of a PAR process with local research partners prior to and throughout the research. As action, the Coalition collaboratively identified the need for a municipal food strategy to improve the local policy arena and this thesis includes a set of policy briefs to be used by the Coalition to present to the local municipality. These briefs are contextualized by a historicized account of the Yellowknife food system.

## **Acknowledgements**

This thesis could not have been done without a great deal of support and guidance from a large number of people. First, I am grateful to my research partners: the Yellowknife Food Charter Coalition and Ecology North. Their dedication and drive for just and sustainable food systems in Yellowknife and throughout the NWT is a constant source of inspiration. Thank you for including me in your work, being patient as I learned about Yellowknife, and pushing me to think both deeply and broadly about how to benefit the Yellowknife food system through our collaborative work. Also, to all of the wonderful people I have connected within Yellowknife, from members of the Yellowknife Farmers Market and the Yellowknives Dene First Nation to my new friends, housemates and co-workers. Thank you for sharing your incredible city with me, it has stolen a place in my heart.

Next, thank you to the FLEdGE network for all of the opportunities it has provided, including the research assistantship to conduct research on food systems in Yellowknife that is the core of this thesis. Being part of FLEdGE has helped me grow as an academic through witnessing and being part of all of the incredible food systems research taking place in the network.

To Andrew Spring, thank you for introducing me to your connections in Yellowknife and including me in your (super awesome) research projects in the NWT. Also, for being supportive through the ups and downs of the research process and always being up for a chat about big-picture thinking.

I owe a great deal of gratitude to my supervisors, Peter Andr ee and Alison Blay-Palmer. Thank you for guiding and encouraging me throughout the PAR process and

being understanding when I hit rough patches. Through your work and our discussions, you have helped me shape my passion for food into the knowledge of food systems I have today. Thank you for your always insightful feedback on my ideas and writing; you have helped me become a better writer stylistically and when building my arguments. To Donna Patrick, thank you for being my external advisor and I look forward to your comments on this thesis.

Thank you to the Institute of Political Economy for providing a space to learn and conduct research through the critical approaches of political economy. These approaches were part of my original (and continue to be) source of inspiration to pursue a Master of Arts degree and continue with academia.

Finally, to my family and friends, thank you for supporting me through this process of highs and the lows. To my Mom, thank you for being my unconditional cheerleader and a great listener. To my partner, thank you for all of your support (even from afar) and making sure I have fun and relax.

## Table of Contents

<b>Abstract.....</b>	<b>ii</b>
<b>Acknowledgements .....</b>	<b>iii</b>
<b>Table of Contents .....</b>	<b>v</b>
<b>List of Tables .....</b>	<b>ix</b>
<b>List of Figures.....</b>	<b>x</b>
<b>List of Acronyms .....</b>	<b>xi</b>
<b>List of Appendices.....</b>	<b>xii</b>
<b>1 Chapter: Introduction .....</b>	<b>1</b>
1.1 State of Food Systems in the NWT .....	6
1.2 Introducing my Research Partners.....	8
1.3 Conclusion.....	9
<b>2 Chapter: Theory and Methods- Political Ecology, Sustainable Food Systems</b>	
<b>Governance and Participatory Action Research .....</b>	<b>11</b>
2.1 Political Economy/Ecology of Food.....	12
2.2 Just and Sustainable Food Systems .....	18
2.3 Just and Sustainable Food System Governance .....	26
2.4 Methodology: Participatory Action Research .....	32
2.4.1 Methods.....	38
2.5 Conclusion.....	42
<b>3 Chapter: PAR by Fire .....</b>	<b>43</b>
3.1 Community-Academic Partnerships.....	44
3.2 PAR by Fire: experiencing wariness in research .....	46
3.3 Did I do PAR? .....	57
3.4 Recommendations: Building Trust in Community-Academic Partnerships.....	63

3.4.1	Provide rigorous capacity to local actors’ projects .....	64
3.4.2	Provide endorsement and support to local actors’ projects .....	65
3.4.3	Provide opportunities for local actors to ‘pick up the pen’ .....	65
3.4.4	Work relationship-building time into research plan.....	66
3.4.5	Discuss the methodology of PAR with local partners.....	67
3.4.6	Discuss research expectations continually .....	67
3.4.7	Give them something to ‘pick apart’ when time is short .....	68
3.4.8	Practice and communicate emotional distance as a form of relationship building ..	69
3.5	Conclusion.....	70
<b>4</b>	<b>Chapter: Setting the Stage for Food Systems Policy in Yellowknife.....</b>	<b>72</b>
4.1	Historicizing Yellowknife’s Food System .....	74
4.2	A Food Policy Approach: Food Systems Thinking and Self-Determination .....	83
4.3	Conclusion.....	90
<b>5</b>	<b>Chapter: Briefs.....</b>	<b>92</b>
5.1	A Yellowknife Local Food Strategy Using Food Systems Thinking .....	92
5.1.1	What is Food Security? .....	92
5.1.2	What is a Food System?.....	93
5.1.2.1	What is Food Systems Thinking?.....	94
5.1.3	Beyond Agriculture.....	95
5.1.4	Yellowknife’s Food System.....	95
5.1.5	Examples of Food Systems Thinking in Yellowknife.....	96
5.1.5.1	The Yellowknife Farmers Market .....	96
5.1.5.2	Food Rescue .....	98
5.1.6	A Yellowknife Local Food Strategy Using Food Systems Thinking.....	98
5.2	Environmental, Economic, and Health Impacts of Local Food in Just and Sustainable Food Systems.....	99

5.2.1	Economic Impacts .....	100
5.2.2	Social Impacts .....	103
5.2.3	Health Impacts .....	104
5.2.4	Environmental Impacts .....	104
5.2.4.1	What is Organic? .....	105
5.2.4.2	What is Agroecology? .....	106
5.3	How Can a City Influence Just and Sustainable Food Systems? Current Planning Context: Barriers and Opportunities .....	106
5.3.1	Current Planning Context: Barriers and Opportunities .....	107
5.3.1.1	Barrier: There are no Strategies or policies regarding food systems .....	107
5.3.1.2	Barrier: current land zoning and other by-laws have minimal references to food systems .....	108
5.3.1.3	Opportunity: The City of Yellowknife already engages in food system activities	110
5.3.1.4	Opportunity: urban food policies work to achieve multiple City objectives.	110
5.4	How Can a City Influence Just and Sustainable Food Systems? Best Practices of Urban Food Policies .....	113
5.4.1	Best Practices of Urban Food Policies .....	114
5.4.1.1	Governance .....	114
5.4.1.2	Policy Supports and Soft Infrastructure .....	116
5.4.1.3	Economic Development .....	118
5.4.1.4	Supporting Indigenous Food Systems and All Harvesting Practices .....	119
5.4.1.5	Improving Food Security through Systemic Change .....	119
5.4.1.6	Promoting Healthy, Just and Sustainable Food Systems .....	120
5.4.1.7	Food Chain Infrastructure .....	120
5.4.1.8	Institutional Procurement .....	121

5.4.1.9	Knowledge Infrastructure .....	121
<b>6</b>	<b>Chapter: Conclusion.....</b>	<b>122</b>
6.1	Looking to the Future .....	125
	<b>Appendices.....</b>	<b>126</b>
	Appendix A Yellowknife Food Charter .....	126
	Appendix B.....	128
B.1	Presentation to City Council 2016 .....	128
B.2	Letter to City Council 2017.....	132
B.3	Presentation to City Council 2017 .....	134
	Appendix C List of Changing Research Questions .....	139
C.1	Ethics Application.....	139
C.2	Next Iteration .....	139
C.3	Next Iteration .....	139
C.4	Next Iteration .....	140
C.5	Final Iteration.....	140
	<b>Bibliography or References.....</b>	<b>141</b>

## List of Tables

Table 1: Recommendations for Building Trust in Community-Academic Partnerships..	63
Table 2: Northern Ontario Farm and Food Processor Multiplier Effects by District .....	102
Table 3: Governance Best Practices .....	115
Table 4: Policy Supports and Soft Infrastructure Best Practices .....	116
Table 5: Economic Development Best Practices .....	118
Table 6: Supporting Indigenous Food Systems and All Harvesting Practices .....	119
Table 7: Improving Food Security through Systemic Change Best Practices .....	119
Table 8: Promoting Healthy, Just and Sustainable Food Systems Best Practices .....	120
Table 9: Food Chain Infrastructure Best Practices .....	120
Table 10: Institutional Procurement Best Practices .....	121
Table 11: Knowledge Infrastructure Best Practices.....	121

## List of Figures

Figure 1: Food System Wheel.....	21
Figure 2: Just and Sustainable Food Systems .....	27
Figure 3: Maps of the Yellowknife Region and the Akaitcho Territory.....	75
Figure 4: Food System Wheel.....	93
Figure 5: Food Systems Wheel and City Objectives .....	111

## List of Acronyms

CSA	Community Supported Agriculture
FLEdGE	Food: Locally Embedded, Globally Engaged
GDP	Gross Domestic Product
GNWT	Government of Northwest Territories
GNWT ENR	Government of Northwest Territories department of Environment and Natural Resources
GNWT ITI	Government of Northwest Territories department of Industry, Tourism and Investment
MA	Master of Arts
NGO	Non-Government Organization
NWT	Northwest Territories
PAR	Participatory Action Research
RA	Research Assistant
REB	Research Ethics Board
SSHRC	Social Science and Humanities Research Council
YKCGC	Yellowknife Community Garden Collective
YKDFN	Yellowknives Dene First Nation
YKFM	Yellowknife Farmers' Market

## List of Appendices

Appendix A: Yellowknife Food Charter.....	126
Appendix B: Advocating for a Yellowknife Local Food Strategy.....	128
B.1    Presentation to City Council 2016.....	128
B.2    Letter to City Council 2017.....	132
B.3    Presentation to City Council 2017.....	134
Appendix C: List of Changing Research Questions .....	139
C.1    Ethics Application Questions .....	139
C.2    Next Iteration.....	139
C.3    Next Iteration.....	139
C.4    Next Iteration.....	140
C.5    Final Iteration.....	140

# 1 Chapter: Introduction

The common stereotypes around food in the North<sup>1</sup> quickly become unraveled when directly participating with the civil society action group, the Yellowknife Food Charter Coalition and the territorial non-governmental organization (NGO), Ecology North, as part of this thesis research. First, the idea of the North being an inhospitable climate for humans, let alone thriving food systems, opens to show rich, innovative and resilient food systems interacting together in Yellowknife, Northwest Territories (NWT) through hunting, fishing, harvesting, gardening/agriculture and imported foods to create a uniquely Northern food system. In connection, while the recent headlines of high food prices and elevated levels of food insecurity in the North are present and of grave concern, one also becomes aware of the heterogeneity of northern food systems as well as the inequality and colonial legacy within those statistics. In particular, there is little difference in the cost of food between Yellowknife and Edmonton, yet emergency food services in Yellowknife continually see an increase in use and one is more likely to be at risk of food insecurity if they are Indigenous (Lutra Associates Ltd., 2010; Council of Canadian Academies, 2014; Tarasuk, Mitchell, & Dachner, 2016). Further, the picture of the isolated North is only partially true. While there are concerns of food shortages when the only road into Yellowknife is closed<sup>2</sup>, the Yellowknife food system is also deeply

---

<sup>1</sup> On a discursive note, 'The North' will be used to refer to the Yukon, the Northwest Territories and Nunavut and other communities from the southern provinces that recognize themselves as being northern. This is to recognize that there are parallel food system issues in many northern communities in the territories and provinces. 'The North' has geo-political connotations when it is referred to as the 'Global North'. While this paper does not use the phrase in this way, there is a disappointing irony about the levels of food insecurity in northern Indigenous communities and Canada's Global North status.

<sup>2</sup> Weeks of intermittent blockages on Highway 3, the only road into Yellowknife, occurred in the summer of 2014 due to severe forest fires. This caused delays in the delivery of food supplies to Yellowknife's grocery stores (CBC News, 2014).

connected to the global food system with an increasing reliance on imported foods from all over the world.

Breaking down stereotypes and understanding the realities of Yellowknife's food system, including its contradictions and inequalities, are at the heart of the political economy research for this thesis. To do so, Participatory Action Research (PAR) was used to create research partnerships between the Yellowknife Food Charter Coalition, Ecology North and the research group FLEdGE (Food: Locally Embedded, Globally Engaged). With the context of Yellowknife's food system in mind, the primary and secondary research questions for this thesis were written collaboratively with the Yellowknife Food Charter Coalition. The primary research question is as follows:

How can civil society groups, local businesses, community members and decision-makers from the City of Yellowknife engage around the vision and principles of the Yellowknife Food Charter to improve the policy arena for a just and sustainable food system for Yellowknife?

As secondary questions:

1. To what extent do land-use, economic development and traditional economy policies from the City of Yellowknife support the development of a just and sustainable food system for Yellowknife?
  - a. How can these policies encourage small business incentivization in the food system?
  - b. How can these policies expand Indigenous access to culturally appropriate foods?
2. What food policies are present in the North, Canada and North America that would be relevant to the Yellowknife context?
3. What is the role of participatory action research in realizing actions for the food charter? <sup>3</sup>

The chapters of this thesis work to answer these research questions. Chapter two

---

<sup>3</sup> These questions evolved into their current form through the direct involvement and ownership of the research partners in the research process. Through various iterations, these questions changed extensively from those in the original thesis proposal. These changes are discussed in Chapter 3. For a list of the various iterations of questions, see Appendix C.

introduces the theoretical and methodological underpinnings of the research to answer these questions, including political ecology, just and sustainable food systems governance and PAR. The above research questions could be read as a purely technical exercise of policy changes. However, when using a food systems approach that considers the cultural, ecological, social and economic aspects of food, these questions become politicized, demanding an understanding of broader factors that shape decision-making in public policy. Political ecology and just and sustainable food systems theory is used to frame these understandings. Further, PAR helps to bring the political into the practice of food system governance, by creating horizontal partnerships with local research partners for producing informed actions. PAR is used to link theory with the practical experiences of local food system actors in Yellowknife.

Chapter three helps to answer the final research question: what is the role of PAR in realizing actions for the food charter? This chapter is based on my experiences of attempting to bring about a PAR project with my research partners. It argues that a PAR framework creates space to build trust in community-academic partnerships where the community may be wary of research and academia. This is particularly relevant to northern Indigenous communities that have experienced exploitative and repressive research practices in the past. This chapter is written in a way that should also be useful for other first-time PAR users, as it provides recommendations for building trust through the role of the academic in community-academic partnerships as well as collaborative research design. These recommendations come from a process of academic self-reflection on my experiences of receiving research direction as well as talking and creating actions with my partners and others in the Yellowknife food system.

Chapter four sets the stage for answering the primary research question by politicizing the understanding of the Yellowknife food system through a historicized account of the hunting, fishing, gathering, gardening/ agriculture and imported food aspects of the food system. Importantly, the addition of hunting fishing and gathering expands the typical definition of ‘food systems’. This is not just a simple addition; it is political. The continuing legacy of colonialism has undermined and oppressed Indigenous food systems. Therefore, bringing hunting, fishing and gathering into the purview of food systems must address these inequalities and contradictions. Further, this addition also has implications for collaborative governance because hunting, fishing and gathering, gardening/agriculture and imported foods are not regularly governed together and there are entrenched silos relating to these areas of the food system. This chapter is also a precursor for the policy briefs that are presented in chapter five by using this historicized view to critique the current approach of analyzing the system solely from the view of income security and the cost of food. Finally, the chapter examines the approach of using food systems thinking that supports Indigenous self-determination to guide food systems governance in Yellowknife.

The policy briefs in chapter five seek to bolster all areas of the food system including hunting, fishing, gathering and gardening/urban agriculture. The policy briefs are written with the audience of the City of Yellowknife in mind, answering the primary and secondary research questions. The first two briefs outline what using a food systems approach for a local food strategy would look like as well as the benefits of addressing food systems at the municipal scale. The third brief looks at current policies and strategies of the City of Yellowknife that relate to land-use, economic development and

the traditional food system, to analyze how they may be promoting or hindering a localized food system. Lastly, examples of other food strategies that could be applied to the Yellowknife context are presented.

Through the culmination of all of its chapters, this thesis provides benefit to my research partners, the Yellowknife Food Charter Coalition and Ecology North, as well as makes contributions to the literature of political ecology and PAR. My partners have benefitted through the addition of capacity and backing for their projects, including carrying out informed-actions, increasing the partners' long-term capacity and creating tangible materials to move their goals forward. Further, the partners were integrated in the knowledge creation process, creating a horizontal community-academic partnership. In terms of contributions to literature, this thesis along with others expands the typical definition of 'food system' to include hunting, fishing and gathering (Council of Canadian Academies, 2014; Spring, 2018). In particular, this thesis emphasizes that this is not a simple addition, but is quite political. This is an important addition in relation to Northern food systems, but also for all analysis of food systems. Confronting colonial legacies and the erasure of Indigenous food practices within food systems is something that needs to be included more often in food systems governance and literature. As a contribution to the literature of collaborative governance and PAR, this thesis can be read as a case study of using PAR to be more political in governance processes, including in policy decision-making. Many of the insights throughout this thesis have come from my experiences of getting direction from, talking and creating actions with people in the Yellowknife food system and then coming back to literature and reflecting on how these experiences relate. This has created an iterative and horizontal knowledge creation

process, where the true experts of the Yellowknife food system- the local actors within it- have been integral to the food systems governance agenda. In this way, discussions of how policy decisions implicate existing institutions as well as the access and control of resources have been grounded in local actors. The remainder of this introduction presents the research context of this thesis work, including the state of food systems in the NWT, what food system actions have already taken place, and an introduction of my research partners the Yellowknife Food Charter Coalition and Ecology North.

### **1.1 State of Food Systems in the NWT**

Food systems in the NWT (and the North) have unique characteristics compared to other regions of Canada. Hunting, fishing and gathering have traditionally been and continue to be strong pillars in Northern food systems. While in the past gardening and agricultural production has been minimal, enthusiasm and activity in local food production, including farming, is on the rise. However, there are lingering tensions of the role of gardening and agriculture in the colonial history of the NWT, including their use in residential schools. Currently, imported foods make up a large portion of food consumed in the North. As well, food insecurity in the Northwest Territories (NWT) is the second highest in Canada, with over 24% of households experiencing moderate to high levels (Tarasuk, Mitchell, & Dachner, 2016; Council of Canadian Academies, 2014). At the same time, there are further signals that all is not well with food systems in the NWT. The obesity rate in the NWT is 10% higher than the Canadian average (GNWT, 2011b) and there has been a well-documented nutrition transition among the NWT's Indigenous populations from land-based diets to imported foods of low nutritional value with detrimental health effects (Receveur, Boulay, & Kuhnlein, 1997;

Sharma, et al., 2009; Zotor, et al., 2012; Sheehy, et al., 2014). As well, climate change is fundamentally altering landscapes in the NWT (Price et al., 2013), limiting access and availability of traditional food sources.

In terms of governance of food systems in the NWT, some parts of the system are heavily governed while others lightly so. Further, there is no policy or strategy that looks at food systems in a comprehensive way<sup>4</sup>. In terms of hunting, fishing and gathering, the traditional governance of the NWT's Indigenous peoples is an active part of the mesh of governing structures. These governance practices<sup>5</sup> have been used for time immemorial and include practices and institutions for managing the land as a common-pool resource (Parlee et al., 2005; Parlee & Berkes, 2006; McMillan & Parlee, 2013). In terms of government policies and regulations, harvesting<sup>6</sup> is legislated through the *Wildlife Act* (S.N.W.T., 2013, c. 30), with numerous sub-regulations associated with it. As well, Indigenous governments and the Government of the Northwest Territories (GNWT) work towards co-management of wildlife (GNWT, 2011a; GNWT, 2016). Fishing is regulated through the *Northwest Territories Fisheries Regulations*, which are a section of the federal *Fisheries Act* (R.S.C., 1985, c. F-14). There is also the NWT *Freshwater Fish Marketing Act* (R.S.N.W.T., 1988, c. F-11). Agriculture is a burgeoning policy area with

---

<sup>4</sup> There is precedent in the North of taking a comprehensive approach to food, such as Nunavut's Food Security Coalition, which was established through the Government of Nunavut's poverty reduction strategy. The Coalition has a diverse membership including many government departments as well as organizations and businesses throughout the territory that examine food security through various pillars relating to the food system (Nunavut Food Security Coalition, 2014).

<sup>5</sup> 'Governance' is often wrongly reduced to mean the state and policy-making. Instead, it is now widely accepted that other actors, including civil society and businesses as well as forces such as the market and cultural practices are also part of these decision-making processes (Minnery, 2007).

<sup>6</sup> 'harvesting' is a term regularly used in the North to refer to hunting and trapping. It is also sometimes used to refer to fishing and gathering. In this thesis, 'harvesting' is primarily used to mean hunting. If it is used to mean another activity that will be specified.

*Northwest Territories Agriculture Strategy: The Business of Food: A Food Production Plan 2017-2022* (GNWT, 2017). Imported foods have regulations associated with transportation (GNWT, n.d.) as well as trade agreements within Canada and abroad. As well, the federal *Nutrition North Program* subsidizes perishable and commercially-processed traditional foods shipped by air to fly-in only communities of the NWT<sup>7</sup> (Government of Canada, 2017). The *Public Health Act* (S.N.W.T., 2007, c.17) as well as the *Occupational Health and Safety Regulations*, as part of the *NWT Safety Act* (R.S.N.W.T., 1988, c. S-1), relate to all parts of the food system.

Civil society and community-based actions have a large role in food systems in the NWT. Champions of food systems and food policy have been the Northern Farm Training Institute, Ecology North, the Yellowknife Farmers Market, the Fort Smith Farmers Market, the Yellowknife Food Charter Coalition, the Inuvik Community Greenhouse, the Inuvialuit Regional Corporation, Indigenous governments, hunting and trapping associations, the On-the-Land Collaborative as well as farmers, harvesters, fishers and community garden groups across the territory. Some civil-society driven policy initiatives have included the *Hay River Strategy for Sustainable Agricultural Development* (Serecon, 2014) that was spearheaded by local residents. The *Yellowknife, Ndilo and Dettah Food System Assessment and Community Action Plan* was commissioned by the Northwest Territories and Nunavut Public Health Association in 2010 (Lutra Associates Ltd., 2010).

## **1.2 Introducing my Research Partners**

This research was produced in partnership with Ecology North and the

---

<sup>7</sup> It is important to note that Yellowknife is not an eligible community for the Nutrition North program.

Yellowknife Food Charter Coalition. It emerged out of a research assistant position established through a Social Sciences and Humanities Research Council (SSHRC) Partnership Grant known as FLEdGE – **F**ood: **L**ocally **E**mbodied, **G**lobally **E**ngaged. Ecology North is a territorial NGO based in Yellowknife, NWT. Ecology North was founded in 1971 in response to arsenic pollution in Yellowknife and has since broadened its mandate to include projects tackling issues around climate change, waste reduction, water quality, local food production and environmental education (Ecology North, 2017). Ecology North’s mission is “Bringing people and knowledge together for a healthy northern environment” (Ecology North, 2017). Through this mission, Ecology North encourages public participation in resolving environmental issues through a commitment to environmental, social, and community well-being (Ecology North, 2017). The Yellowknife Food Charter Coalition is a civil society action group created in 2014 through the Yellowknife Farmers Market to respond to the need for more cross-sector dialogue around food security in Yellowknife. As the Coalition states,

“A Food Charter sets a community mandate for broad-based action on local food security. It can bring people concerned about food security to work together. The Yellowknife Food Charter promotes a just and sustainable food system for all Yellowknifers... The Yellowknife Food Charter is a point of entry for groups and individuals to gather, generate ideas, and identify how to collectively respond and create projects that increase food security for Yellowknifers” (YKFM, 2016).

Seeing the need to create space for integrated solution-building, the Coalition created a food charter as a guide for diverse actors within the Yellowknife food system. Please reference Appendix A for a copy of the Yellowknife Food Charter.

### **1.3 Conclusion**

Understanding the realities of Yellowknife’s food system, including its

contradictions and inequalities, are at the heart of the political economy research in this thesis. The methodology of PAR was used to create research partnerships between the Yellowknife Food Charter Coalition, Ecology North and the research group FLEdGE (Food: Locally Embedded, Globally Engaged). This grounded the discussions and actions of food systems governance in Yellowknife with those that act within it. The following chapter lays out the theories and methodologies that were used in this thesis: political ecology, sustainable food systems governance and PAR.

## **2 Chapter: Theory and Methods- Political Ecology, Sustainable Food Systems Governance and Participatory Action Research**

This chapter outlines how the theories and methodologies of political ecology, participatory action research and sustainable food system governance informed my research. To begin, I discuss my main theoretical frame of political ecology as an extension of political economy. Within this frame, I explain the theories of sustainable food systems, historicizing and politicizing food systems and critical Indigenous/decolonial theory. Next, governance is discussed, focusing on food systems governance that seeks to connect the economy, social justice and environmental sustainability. Within this section, the relationships between civil society actors, the economy and governance are discussed, including the challenges and opportunities of engaging with formal government institutions and their policy frameworks. This theoretical approach is paired with Participatory Action Research (PAR) methodology. Challenging traditional research paradigms, PAR has the goal of creating research partnerships where all participants work together to examine a problematic situation and to find ways to change it for the better. In this research, PAR was used to create research partnerships with the Yellowknife Food Charter Coalition and Ecology North to support community-defined, action-based change for Yellowknife's food system.

The theoretical and methodological approaches of this research helped to shape its primary and secondary research questions. The primary research question is as follows:

How can civil society groups, local businesses, community members and decision-makers from the City of Yellowknife collaboratively engage around the vision and principles of the Yellowknife Food Charter to improve the policy arena for a just and sustainable food system for Yellowknife?

As secondary questions:

- To what extent do land-use, economic development and other related policies and strategies from the City of Yellowknife support the development of a just and sustainable food system for Yellowknife?
  - a. How can these policies encourage small business incentivization in the food system?
  - b. How can these policies expand Dene, Inuit and Metis access to culturally appropriate foods?
- What food policies are present in the North, Canada and North America that would be relevant to the Yellowknife context?
- What is the role of participatory action research in realizing actions for the food charter?

These questions focus the research on relationships of governance within the food system, especially on questions of how government institutions can work with civil society and how policy can help shape the food system. While these questions can be interpreted as a purely technical exercise, the research partners and I recognize that the Yellowknife food system is fraught with contradictions, inequalities and dispossession which need to be acknowledged and addressed to form policy that will create a just and sustainable food system. As well, food systems are ever evolving and influenced by the actors and actions taken within them. As a result, it is necessary to look at food system governance through a political ecology lens and PAR brings this critical approach into the research process itself to create change by actors within the food system.

## **2.1 Political Economy/Ecology of food**

While political economy defies an easy definition, I broadly define it as the exploration of the complex relationships between the economic, political and cultural forces that make up the local, regional and global systems of our worlds, in the past, present and future. This definition is influenced by traditional understandings of political economy, but its wording is purposefully left ambiguous as a decolonial practice,

allowing for multiple epistemological and ontological interpretations of the words. In terms of traditional understandings of political economy, Gilpin (1987, p. 8), asserts that

“the parallel existence and mutual interaction of “state” and “market” in the modern world create “political economy”; without both state and market there would be no political economy”.

While the conceptions of the state and market are important political economic forces, this understanding of political economy erases the myriad of ways that the political and economic can be organized (Gibson-Graham, 2006). As a result, my definition leaves the words “economic” and “political” open to allow for multiple understandings of these words. Bringing in the word “cultural” also opens my definition of political economy. This is in acknowledgement that varying cultures bring with them diverse rationalities, creating a plurality of political economies (Rojas, 2007, p. 585).

Decolonial theory influences political economy through the critique of universalism and highlighting the power imbalances colonialism creates in our modern world. In terms of the critique of universalism, the influential work of Edward Said (1987) highlights that history is subjective based on the different ways of knowing (epistemology) and understanding the world (ontology). When history from the understanding of the colonizer is seen as universal, it creates the repressive categories of “backwards” and “primitive”, or those peoples and places that do not match the world of the colonizer. However, through the acceptance of multiple histories, multiple categories for understanding people and places come to light. Further, Dipesh Chakrabarty (2000) notes that the goal of bringing out multiple epistemologies and ontologies is not to create a mega-universal truth that incorporates all of them. Instead, he argues that there is a ‘incomprehensibility’ between them, or in other words they do not share a common

language. Therefore, different ways of knowing and understanding must be seen as a plurality and that there must be space for these multiple (and sometimes competing) rationalities. In terms of power, decolonial theory highlights that we cannot understand the modern world without discussing coloniality because our world today is created through it (Quijano, 1999; Escobar, 2011). Colonialism is rooted in dispossession, from the accumulation of wealth by the colonizer from colonized resources to the removal of means to govern one's own people. This dispossession has made up and continues to evolve in our world today, creating an unequal playing field of power.

Importantly, my definition of political economy uses the language of systems. This invokes the use of systems thinking, which recognizes that complex issues are linked and that multiple actors, human and non-human, in a system are connected. In a system, when one actor or dynamic changes, it has repercussions on the rest of the system (MacRae & Donahue, 2013). To explain further, systems thinking relates to the Marxian concept of dialectics. Following Ollman's (1993, p. 11) definition, dialectics means:

“...replacing the common sense notion of “thing”, as something that has a history and has external connection with other things, with notions of a “process,” which contains its history and possible futures, and “relation,” which contains as part of what it is its ties with other relations”.

In this way, an object, actor or dynamic is not a discrete thing with its own history but becomes the way that it is through the constant remaking of other things that it is connected to. It also has a reciprocal relationship with these other things, helping to shape them through a constantly changing process. This means that there are rarely single explanations of phenomenon; instead, they are the result of entangled and interconnected relationships. This definition of political economy, grounded in decolonial practice and systems thinking forms the basis of the theoretical approach of this thesis work.

Political *ecology* is used in the theoretical framework of this thesis as an extension of political economy. Political ecology is another field of study that has been defined in many ways, but broadly, it is the relationship between politics, economics and the environment, with the explicit understanding that ecological systems cannot be separated from the broader political economic systems around them (Robbins, 2012). Among its many iterations, the definition of political ecology that guides this thesis comes from Watts (2000). Political ecology is

“to understand the complex relations between nature and society through a careful analysis of what one might call the forms of access and control over resources and their implications for environmental health and sustainable livelihoods” (p. 257).

This definition highlights an important aspect of political ecology; it seeks to understand centers of power in nature because political and economic relationships can be changed and adjusted to be more just and sustainable. In this way, political ecology can bring hope into environmental and other crises. Further, political ecology is not a cohesive theory, but borrows from many critical schools of thought (Robbins, 2012). The theories that constitute the political ecology of food in this thesis are described further below.

Importantly, political ecology is in opposition to supposed objective, apolitical understanding of ecological systems. There is no such thing as an apolitical decision; they are always political, since they hold consequences for the access and control of resources (Watts, 2000). In the context of this thesis, this begs the question: is food and food insecurity in Yellowknife and the NWT political? To get an affirmative answer, one does not have to look very far. For example, there are regular debates on caribou hunting and other harvesting practices between Indigenous leaders and GNWT decision-makers, which filter all the way down to the public comment boards on local media articles

(Sarkadi, 2015) However, questions of food and food insecurity in the NWT are regularly met with apolitical responses. Examples I have encountered include: that the increase in population in the NWT makes it impossible to sustainably harvest off the land (ie: the tragedy of the commons); that transportation costs will always make northern food expensive, but that southern food will always have competitive advantage over local food; and it is the careless hunter that causes wildlife decline. While there are multiple politicized counter-arguments to these examples, a common thread is that blame is placed on local forces and actors. Political ecology using systems thinking would tell one to,

“Trace the contextual forces that constrain and direct more immediate outcomes, and write an explanation of these outcomes that is also, simultaneously, a map for the way value flows out the landscape, through local communities, and towards sites of accumulation far away” (Robbins, p. 88, 2012).

In chapter 4, I examine some of these broader systems that affect food and food insecurity in Yellowknife. To balance this far-reaching thinking, Gibson-Graham (2006) remind us that staying connected to local forces and actors brings context-specific subjectivities that can be inspiration for alternative ways forward. Therefore, my political ecology of food has threads from the local to the global.

My political ecology of food also draws on critical Indigenous theory. Indigenous self-determination is deeply tied to just and sustainable food systems. Importantly, self-determination is not given to Indigenous peoples by the state. Simpson (2008) argues,

“recovering and maintaining Indigenous worldviews and applying those teachings in a contemporary context represent a network of emancipatory strategies Indigenous Peoples can employ to disentangle themselves from the oppressive control of occupying state governments” (p. 15).

In other words, Indigenous worldviews are a framework for self-determination. As Indigenous self-government has shown in the North, self-determination does not

unilaterally mean secession from the state; it can be collaborative. However, the decision-making capacity of Indigenous peoples cannot be removed in this collaboration (Nicol, 2013). In terms of food systems, Alfred & Cornthassel (2005) highlight traditional diets as an important part of self-sufficiency and connecting with the lands that are integral to Indigenous knowledge and ways of life (p. 613).

This theoretical perspective also draws on other works of the political ecology of food. Food regime analysis (Friedmann & McMichael, 1989) historicizes global food systems to highlight how different forms of capital accumulation in food systems have shaped and supported global power arrangements, as well as created contradictions that produce transitions to new regimes. Mintz's (1985) *Sweetness and Power* provides an excellent example of a food's role in the broader political economy. At the time of the industrial revolution, rural Britons were struggling to fulfill their farm-based diets because the social, political and economic structures that had supported that food system were changing. Sugar was the alternative to fill that void. At the same time, the increasing consumption of sugar worked to fuel these changes, with colonial sugar profits funding new industrial ventures and sugar plantations having some of the first assembly-line-like production methods (Mintz, 1985). Understanding the food's role in political economy can shed new light on northern food insecurity and the nutrition transition.

The political ecology of food also highlights how the current industrialized, global food system is not based on what is available in local environments, culturally appropriateness of foods, nutritional value, nor the welfare of those that produce food, but on the needs of a capitalist logic that is not connected to a specific ecology or culture (Mintz, 1994; Cronon, 1991; Lind and Barham, 2004; Winson, 2013). This lack of

connection means that people and ecology can be forgotten about in food systems, other than their roles as consumers and a place of resource extraction, respectively. In Yellowknife, this logic helps to explain how food insecurity can be simplified as a lack of income security, food-related health issues are only an issue of personal responsibility, and dependence on imported foods can be largely ignored (Lutra Associates Ltd., 2010).

Political ecology of food, as an extension of political economy, is the theoretical framing of this thesis. Political economy is defined using the theories of decoloniality and systems thinking to recognize that there are multiple understandings of the political and economic and that it is intertwined, iterative relationships that make up our world. Political ecology fits within this frame by highlighting the role of ecological systems within the broader political economy, making them inherently political. Food is political as the decisions that are made about it have consequences for the access and control of resources. In my political ecology of food, Indigenous self-determination is championed, and the global, industrial food system is shown to lack connection to specific people and ecology. These theoretical underpinnings of my political ecology of food described above help to shape my understandings of just and sustainable food systems in the next section.

## **2.2 Just and Sustainable Food Systems**

Following the critical approach in this chapter, ‘just and sustainable food systems’ is not given a set definition. Rather, they are recognized as being subjective to time and space (Hinrichs, 2010). This is particularly important when looking at Northern food systems, which have the unique characteristics of hunting, trapping and gathering that are often left out of works that examine food systems. In this context, Wesche & Chan (2010) note,

“The vulnerability of each [Northern] community to changing food security is differentially influenced by a range of factors, including current harvesting trends, levels of reliance on individual species, opportunities for access to other traditional food species, and exposure to climate change hazards” (pg. 361).

Despite these specificities, the broad themes of just and sustainable food systems needing to be ecologically sustainable, socially and culturally nourishing, and economically viable can connect context-specific localities (Blay-Palmer & Koc, 2010). As well, Hinrichs (2010) notes that the decisions of what ecological, social, cultural and economic sustainability looks like in a locality needs to come from a political and collaborative process, grounded in everyday practice. Therefore, governance is an integral part of just and sustainable food systems and is discussed further in the next section.

Further, just and sustainable food systems embrace the principals of food security and food sovereignty. Food security is a state “when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO, 2003). Food insecurity in the NWT is the second highest in Canada, with over 24% of households experiencing moderate to high levels (Tarasuk, Mitchell, & Dachner, 2016). While food security has been criticized for being technocratic and reformist (Holt-Gimenez, 2011), others have expanded the concept to be more transformative. Power (2008), highlights that for Indigenous peoples, both the market and traditional food systems must be sufficient and safe for there to be food security. Food sovereignty seeks to transform the political and economic power structures of mainstream food systems. It is defined as, “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems”

(Declaration of Nyéléni, 2007). Ultimately, food sovereignty is an action; it is about finding ways to take control of food systems to place decision-making power in the hands of those that rely on that system. Building on food sovereignty,

“Indigenous food sovereignty strives for indigenous empowerment using everyday action both outside of and in counterpoint to the state’s colonial forces that deprive and isolate people from land, culture, community and traditional food and medicinal resources. Thus, indigenous food sovereignty is a holistic approach that embodies “being” an indigenous person, considering their place-based identity” (Kamal & Thompson, 2013, p. 4).

Food sovereignty is expanded by Indigenous struggles for decolonization and self-determination. Indigenous food sovereignty places specific importance on fishing, hunting and gathering as key to sustainable food systems (Desmarais & Wittman, 2014).

When understanding just and sustainable food systems, one must look at ‘food systems’. Food systems is a framework that “reflects the awareness of how actions by one group in the system affects other groups, as well as the environment, the economy, the fabric of society and the health of the population” (MacRae & Donahue, 2013).

Developed in collaboration with the Yellowknife Food Charter Coalition, we define food systems as all the activities, outcomes and actors in a food cycle. Activities include: land and natural resource management, production, harvesting, processing, packaging, distribution, marketing, buying, selling, sharing, consumption, celebration, and disposal back to the land of food and food-related items. Outcomes are the environmental, social, economic, health, political and cultural consequences of the food cycle. Finally, the actors are all those involved in food cycle activities, including those that make decisions about them, as well as advocates for food-related activities and outcomes. This understanding of food systems is depicted in figure 1 below.

**Figure 1: Food System Wheel**



In the NWT and across Northern Canada, just and sustainable food systems are quite diverse, with common themes. Ecologically, climate change is affecting landscapes and wildlife across the North. These changes are affecting traditional harvesting and fishing practices as these practices rely on the integrity and continuity of local ecosystems (Wesche & Chan, 2010; Wesche et al., 2016; Spring, 2018). As a result, Wesche et al. (2016) has shown that in relation to wild foods, the food security pillars of availability, accessibility, quality, and use, are all affected by climate change. Further, views on the management of landscapes and wildlife can be a contentious topic in the North. Parlee, Sandlos & Natcher (2018) argue that there is a ‘policy-science gap’ when it comes to wildlife management that excuses the detrimental environmental disturbances of resource extraction on wildlife and places bans on harvesters as the primary form of management. At the same time, views throughout the NWT on the role of resource extraction within landscapes vary (Angell & Parkins, 2010). In terms of agriculture,

questions of what sustainable agriculture looks like in northern localities have yet to be answered in many communities<sup>8</sup>.

To be socially and culturally nourishing, just and sustainable food systems in the North need to respect and support traditional knowledge as well as local food producers and harvesters. Wesche et al. (2016) argue that land-based programming is effective in contributing to long-term food security and food sovereignty in NWT communities, as they support cultural continuity and increased knowledge of the land as well as harvesting, preparation and consumption practices. Many studies have highlighted the rapid ‘nutrition transition’ that northern Indigenous communities are experiencing, with decreasing traditional food use and increasing consumption of store-bought low-nutritional value foods (Sharma, et al., 2009; Zotor, et al., 2012; Receveur, et al., 1997). Further, it has been shown that traditional foods are nutrient-dense and their regular consumption is associated with better diet quality (Sheehy, et al., 2014). In the context of this nutrition transition and food insecurity in the North, Indigenous communities have highlighted the need for more education in traditional knowledge (Douglas, et al., 2014; Wesche & Chan, 2010) and recognition that the health of people is deeply connected to the land and traditional ways of life (Parlee et al., 2005; Parlee et al., 2007). Harvesting studies in the NWT have shown that while contemporary communities provide a different context than previous generations, the transfer of traditional knowledge and norms have been successful (Parlee & Berkes, 2006; Wray & Parlee, 2013; McMillan & Parlee,

---

<sup>8</sup> In my view, sustainable agriculture comes from diversified agroecological systems, in line with IPES Food (2016). However, this is not the view of everyone across North, let alone with food actors in Yellowknife. Currently, the author is working with food system actors from across the NWT, and the question of ‘what is sustainable agriculture?’ and how it fits in with local ecosystems is a primary topic.

2013). While, the social and cultural implications of farming and gardening, are not well studied in the North, they are seen as important adaptations to food insecurity (Douglas, et al., 2014). Finally, the need for food producers to be a valued part of society is also echoed in the North.

Economically, just and sustainable food systems in the North need to recognize that the social and market economy both have a large role to play, with active norms and institutions supporting both. Common property arrangements are a continued norm of the social economy (Parlee et al., 2005; Parlee & Berkes, 2006; McMillan & Parlee, 2013). In the market economy, addressing poverty is an important part of achieving just and sustainable food systems (Council of Canadian Academies, 2014). However, economic prosperity for all must balance tradeoffs to environmental, cultural and social sustainability (Blay-Palmer & Koc, 2010). The Yellowknife Food Charter Coalition and Ecology North both seek to see food production as a viable northern livelihood that connects people to the land. Finally, it is important to recognize that the social and market economy are not mutually exclusive. For example, many have noted that sharing of harvested foods is prevalent, but that it is increasingly expensive for harvesters to get out on the land to hunt and gather (McMillan & Parlee, 2013; Douglas et al., 2014).

Politically just and sustainable food systems need to recognize that power in the context of colonial relationships affects food systems in the NWT. Through colonialism, the Indigenous peoples of the NWT were removed of their sovereignty and self-determination over their food systems. For example, the creation of the first federal Act for the preservation of game was implemented in 1894, placing an outside governing system on the primary sources of food of the Indigenous peoples in the NWT (The Dene

Nation, 2016). These colonial governance tactics were markedly patriarchal as well as ethnographically ignorant and racist (Sandlos, 2007). Indigenous resistance to these structures was strong, resulting in the evolution of governance to the current practices of co-management between territorial and Indigenous governments. Importantly, power imbalances continue to play a role in co-management. For example, Nadasdy (2003) highlights that co-management systems in the North have struggled to fit together Indigenous knowledge and western science. In particular, western science is regularly privileged while Indigenous traditional knowledge is epistemologically misunderstood as simply scientific data on plants and animals (Sandlos, 2016). Despite these struggles, territorial governments have used their power to claim co-management as a success of collaborative governance (Nadasdy, 2003). Further, food systems in the NWT have been influenced by and help to shape colonial power in the form of assimilation tactics, privileging the market economy and devaluing the traditional economy, cultural practices and Indigenous way of life. Agriculture and gardening were used in residential schools, creating a difficult and complex relationship between Indigenous peoples and this form of food-getting. Experiences range of outright disdain for agriculture to seeking to connect with the land through gardening. Parlee, Sandlos & Natcher (2018) make the important point that the ‘knowledge-policy gap’ relating to current wildlife management practices has parallels to historic management practices that were “explicitly about advancing private interests in northern lands and resources at the expense of Indigenous cultures and livelihoods” (p.1). Colonial power relations are still on-going within NWT food systems.

When considering just and sustainable food systems in Yellowknife, many of the aspects of northern food systems relate, but the NWT capital is unique in many ways.

Yellowknife is the largest urban center with around half of the population of the NWT and is the hub of the wage economy. It is a multicultural city of Indigenous peoples and immigrants from within Canada and around the world. While food insecurity rates are not specified for the city, the *Yellowknife, Ndilo and Dettah Food Assessment* notes high use of emergency food services as well as the increasing price of nutritious food and high cost of housing puts stress on people vulnerable to food insecurity (Lutra Associates Ltd., 2010). The traditional food system is an active part of the city's food system with statistics showing 37% of Indigenous households hunted or fished and 20% gathered berries (NWT Bureau of Statistics, 2014a & 2014b). Further, food sharing is actively practiced in Ndilo and Dettah using community freezers. Hunting, harvesting and fishing is also widely practiced by non-Indigenous people in the city. At the same time, Yellowknife is within a caribou-hunting ban zone, as the Bathurst caribou herd that comes into the region is at drastically low levels. While these bans are supported by the YKDFN due to the herds levels, this does not mean that the management approaches of this herd are not highly contested (Sarkadi, 2015). As well, the environmental legacy of arsenic pollution from Giant Mine have reduced the ability to gather berries and other wild edibles from the local lands around Yellowknife (O'Reilly, 2015). Urban gardening is also prevalent in Yellowknife, with over 300 community gardeners (YKCGC, 2017) and many home gardens. Commercialized urban agriculture is minimal, but there is growing interest and initiatives through the Yellowknife Farmers Market. Rural food-producing areas near the city and in other regions of the NWT also contribute to the local

food supply<sup>9</sup> for the city. Just and sustainable food systems in Yellowknife need environmental, social, cultural and economic interconnection between traditional foods, agriculture and imported food. This connection can come through governance of the local food system.

Just and sustainable food systems are diverse and iterative, but at the same time they have parallels of needing to be politically explicit, ecologically sustainable, socially and culturally nourishing, and economically viable. They also embrace the goals of food security and food sovereignty. All parts of ‘food systems’ affect these principals and goals through the interconnections of food-related actors, activities and outcomes. In the context of the NWT and Yellowknife, food systems include hunting, gathering, fishing, agriculture and imported foods. For the Yellowknife food system to be just and sustainable, it needs to embrace the political nature its interconnected components and how they affect the ecological, social, cultural and economic well-being of the land and peoples in Yellowknife and the NWT. Importantly, this political process needs to be brought into the decision-making realm of the food system through just and sustainable food systems governance.

### **2.3 Just and Sustainable Food System Governance**

Figure 2 is a representation of just and sustainable food systems that has been used by the Yellowknife Food Charter Coalition. Connecting all themes is participation and collaboration, based on the notion that efforts are strengthened and collective action

---

<sup>9</sup> A note on ‘local food’ in Yellowknife. Agricultural products can be considered local despite travelling 500km or more from its place of production within the territory. The agriculture sector in the NWT is small, and distances between communities are vast, resulting in local produce travelling long distances. Traditional foods are less likely to travel as far, as these are deep-rooted, localized systems.

can take place when multiple actors work together (YKFM, 2016). In this way, the Yellowknife Food Charter is used as a tool to foster collaborative governance.

**Figure 2: Just and Sustainable Food Systems**



Before reviewing theories of collaborative governance, the term ‘governance’ must be explained. I see governance as the political and power-laden processes of decision-making about the rules, norms, institutions and allocation of resources that guide our actions. Governance can take place on micro to macro levels, such as how an organization structures its internal decision-making to collaboration on international scales (Kooiman, 2003). While governance is often wrongly reduced to mean the state and policy-making, it is now widely accepted that other actors, including civil society and businesses as well as forces such as the market and cultural practices are also part of these decision-making processes (Minnery, 2007). However, this is not to say that all of these actors and forces are on equal ground or have the same amount of influence in decision making. The connections between these actors and forces are complex, political and context-specific, which means they require critical reflection (Jessop, 1998). In work with the Yellowknife Food Charter Coalition, the Charter is seen as a governance tool to

help shape decisions and actions by local actors towards a common goal. As well, The City of Yellowknife, with its formalized policy and planning tools is seen as a powerful actor that could have influence over the rules, regulations and allocation of resources that support a just and sustainable food system (MacRae & Donahue, 2013). However, the Coalition needed to make the case to the City for the need of food policy and they want these policies to come from and promote collaborative processes.

The definition that shapes the understanding of collaborative governance (co-governance) in this thesis is as follows. Collaborative governance is,

“the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished” (Emerson, Nabatchi & Balogh, 2011).

Co-governance seeks to shift away from hierarchical and siloed decision-making to bring together government and non-government actors in a horizontal or system-like fashion. Collaborative governance is regularly referenced in relation to issues, such as food insecurity, that are complex and not easily solved with a single policy or department, but require multiple sectors, programs and initiatives to work together to make an impact (Blomgren Bingham, Nabatchi & O’Leary, 2005; Candel, 2014). Further, collaborative governance is seen as helping to achieve a deeper practice of inclusive democracy where the perspectives of all citizens, including those of the most marginalized, are essential to decision-making (Carlson & Chappell, 2015; McKeon, 2017). However, others have noted that collaborative governance does not equate consensus, therefore tradeoffs still need to occur (Carlson & Chappell, 2015) and that it is not created in a vacuum, but within existing power structures. As an example, Nadasdy (2003) highlights that wildlife

co-management systems between Indigenous authorities and the state in Canada's territories have struggled to fit together differing worldviews and knowledge systems, yet powerful state structures have claimed them as a success of co-governance.

It is important to note the role of neoliberalism and devolution in the emergence of collaborative governance as a more widely accepted form of governance.

Neoliberalism is an ideology that champions economic rationality through the limiting of government interventions and replacing them with trade liberalization and market-based solutions (Heynan et al 2007). Further, Harvey (2005) notes that neoliberalism is a process of continued capital accumulation by dispossession. Devolution, as a regular tactic of neoliberalism, is where previous responsibilities of higher level governments are downloaded onto lower level government or nongovernment actors<sup>10</sup>. Devolution is carried out through an elaborate network of contracting, intergovernmental grants and loans, and other indirect approaches allowing government to increase its reach without increasing its size (Kettl, 2000). In terms of governance, neoliberalism and devolution have brought a mix challenges and opportunities. Neoliberalism's deepening of market logic has made it difficult to imagine other social-economic-environmental relations other than those in the capitalist market (Guthman, 2008). At the same time, devolution in places like the Canadian territories has also allowed for more localized control (Sandlos, 2007). Finally, the nongovernment groups involved in developing and implementing policy and services regularly do not have the same access to resources that a government has (Kettl 2000, O'toole 1997), but through picking up the slack that neoliberalism has

---

<sup>10</sup> Here devolution is meant in a generic sense, rather than a formal sense. However, formal devolution has occurred in the NWT (and Yukon) when the federal government devolved responsibilities to the territorial elected assembly starting in 1967 through to 2013.

created it has allowed these groups to develop capacity to demand a place at the governing table.

Within the context of neoliberalism, there has been an increasing role for civil society and social movements in governance. Civil society are non-government groups, including formal and informal organizations and societies, which are usually understood as occupying the middle ground between the state that is “up there” and the people that are “on the ground” (Ferguson & Gupta, 2002). Social movements are collective and sustained challenges, based on a common purpose or solidarity, in pursuit of societal change (Tarrow, 2011). Ferguson & Gupta (2002) notes that as civil society and social movements take up more practices of governing, they no longer fit well into the traditional understanding of the middle ground, as they both embody local dynamics and are a product of powerful national, regional and global forces. At the same time states have not lost their powerful role as governing bodies, therefore there is some necessity to treat state, civil society and social movements within a similar frame of spatiality. Collaborative governance can be a practice of this sharing of common ground.

Governing just and sustainable food systems is an area where increasing the role of civil society and social movements through collaborative governance is regularly called upon and practiced (Koc et al., 2008). Renting, Schermer & Rossi (2012) call on the role of ‘civic food networks’ comprised of consumers and producers to shift governance of food systems away from strictly the market and governments. Through a review of other works, Blay-Palmer (2010) notes that local groups are able to champion individual and community subjectivities to create food-centric polities and that this creates opportunities for the redistribution of power in food systems. Many of these calls

for a grounding of food governance are framed within the food sovereignty movement, which seeks to place power and decision-making of food systems back in the hands of those that rely on them: food system actors (Carlson & Chappell, 2015). Further, when food systems thinking is brought into governance it shows the complexity of actors involved in a food system. Therefore, having these different actors collaborate in governing increases the opportunity of making decisions that have positive outcomes throughout the system (MacRae & Donahue, 2013).

There have been many examples of collaborative governance within food systems. Brazil has a highly successful example of a national strategy to reduce food security challenges with governance brought to local, tripartite social councils with participatory responsibilities and processes that include budgeting (Blay-Palmer, 2010). In Canada and the USA, more than 300 food policy councils have started since 2000, where citizen groups undertake activities to identify food system issues that could be addressed through policy initiatives (Sussman and Bassarab, 2017). Food charters are another tool used across North America to drive policy and community action around food. They are usually a set of principles that outline what a sustainable food system should look like in the context of the local area. They help to increase cross-sector dialogue; address questions about where sustainability, equity, and the food system meet; increase public awareness and engagement; and influence policy decisions. Food charters have mostly been used in urban settings, connecting cities with their local food system and promoting urban food production (Hardam & Larkham, 2013).

For Yellowknife, there is some local governance within the food system, as well as territorial policy. In terms of local governance, Indigenous traditional knowledge and

the rules for hunting and the sharing economy cannot be forgotten as an active and continued form of governance in the food system. Further, the Yellowknife Food Charter has been used to guide actions in Yellowknife as well as a tool for civil society to gather around to put pressure on the City of Yellowknife to adopt local food policy.

Governing just and sustainable food systems in Yellowknife is a power-laden process of decision-making about the rules, norms, institutions and allocation of resources that guide actions within the food system. Collaborative governance has been used in many food systems to bring a horizontal and cross-sector approach between governments, businesses, NGOs and civil society. In the context of neoliberalism, more opportunities have been created for civil society to demand and have a stronger role at the governing table. In Yellowknife, this has played out with the Food Charter Coalition calling for the City of Yellowknife to take a role in governing the local food system in collaboration with food system actors. Further, they call for this co-governance to champion a just and sustainable food system that recognizes its political nature. As part of the research for this thesis, I used Participatory Action Research methodology to assist the Yellowknife Food Charter Coalition in their attempts to influence food system governance in Yellowknife. The next section describes this methodological approach.

#### **2.4 Methodology: Participatory Action Research**

PAR is a critical research methodology focused on creating partnerships that work together to change the status quo through informed action. To explain, PAR can be broken down by the words in its name. ‘Participatory’ reflects the collaborative process where participants identify problems together, the methods for research are chosen to be context-specific and the production of knowledge is seen as a group process. ‘Action’ is

embedded in PAR with the specific goal of creating actions to address the problem that was identified by the participants (Kendon, Pain, & Kesby, 2007). ‘Research’ is the thoughtful observation, reflection, problematization and analysis of reality by all participants that is used to inform the action goals (Chevalier & Buckles, 2013).

PAR has a history of connection with emancipatory movements that seek to foster social change, with one writer noting it is

“about personal and social transformation for liberation. That is the eventual achievement of equitable communities and societies which are characterized by justice, freedom and ecological balance (Johnson, Smith, Willms, 1997).

In this way, PAR is meant to actively confront dynamics of power and oppression (Halseth et al., 2016). Further, this social change is meant to be grassroots, with people on the ground working to change their own realities. This is based on the Freirean premise that everyone is capable of understanding and analyzing their own world through praxis (Freire, 2000). Praxis is the intersection of action and reflection, so that they may mutually influence each other. In a cyclical fashion, reflection on one’s reality helps to create meaningful actions and reflection on those actions deepens the understanding of reality. When action and reflection are continually brought together they create “an historical reality susceptible to transformation” (Freire, p. 58, 2000). In other words, the “best way to understand something is to try and change it” (Chevalier & Buckles, 2013). Transformation of the status quo into something more just and sustainable, through grassroots action and reflection, is at the heart of PAR.

PAR seeks to break away from the positivist research norms of ‘objectivity’ and ‘universality’. In rejection of simplistic understandings of objectivity, PAR has long taken the stance of being overtly political, recognizing that everything is value-based

(Maguire, 1987; Fals Borda & Rahman, 1991; Johnson, Smith & Willms, 1997). All participants in the research bring with them a set of values that cannot be removed, and which will influence the inquiry. Therefore, politics and values are brought to the fore in PAR through the use of reflexive positionality. As Sandra Harding (1987) highlights this means that, “class, race, culture and gender assumptions, beliefs and behaviors... must be placed within the frame of the picture” (p.31). Further, PAR seeks to break away from the idea of ‘universalism’. Instead, it acknowledges the co-existence of multiple ways of knowing (epistemology) and constructions of reality (ontology). Haraway’s (1988) ‘situated knowledges’ highlights that instead of universals, research should seek,

“partial, locatable, critical knowledges sustaining the possibility of webs of connections called solidarity in politics and shared conversations in epistemology” (p. 584)

PAR offers a framework to acknowledge and promote this multiplicity by being grounded in the needs of the participants and working with local grassroots groups in a participatory way (Chevalier & Buckles, 2013). Another way that PAR promotes situated knowledges is upholding the popular and common-sense knowledge of the participants. These are the knowledges that are formed in the everyday experiences of participants and are rooted in the social and cultural context of that locality (Fals Borda & Rahman, 1991; Halseth et al., 2016). These knowledges are upheld by giving them prominence in the research through naming and attributing knowledge to the participants, communities, collaborators and co-researchers (Moore, 2004). By moving away from positivist research norms, PAR seeks to create knowledge that is politicized and context-specific.

PAR also challenges the traditional hierarchical relationship between the ‘researcher’ and ‘researched’. Instead of treating people and society as things that can be

investigated from above by the researcher, all research participants, including the researcher, work together on equal ground to glean new shared understandings. One implication of this partnership approach is that everyone is involved from project design to forming research questions to analysis and knowledge production. Another aspect is that there is shared ownership of the research process by all participants (Halseth et al., 2016). While this does not mean that everyone needs to be involved in the execution of every step of a research project, but there should be a shared understanding of how each of these steps reach the common goal (Zuber-Skerritt & Perry, 2002; Herr & Anderson, 2015; Klocker, 2012).

However, because PAR moves away from traditional research norms, there can be structural and institutional challenges to conducting research, such as gaining ethical approval from university Research Ethics Boards (REB). The regulation of social science research by REBs has its complications. Halse and Honey (2005) makes the point that there is not one way to be ethical and that the ethics review process has become a bureaucratic process that is simply a check box, rather than inciting ethical thought about one's specific research project. In relation to PAR, Khanlou & Peter (2005) make extensive suggestions for changes to the REB reviewing processing for PAR proposals. These include having the review process move away from a list-oriented approach of ethic merits, to one that resembles the PAR process by looking at larger-scale ethical guidelines as well as context-specific ethical considerations. Challenges relating to my ethics application and my attempts to do ethical research are discussed in chapter three.

It is important to highlight Northwest Territories (NWT) specific themes and experiences with participatory research. In the early 1970s, plans for the Mackenzie

Valley pipeline threw participatory decision-making into the spotlight. Due to the Dene peoples bringing forth the unresolved legal status of their treaties, a public inquiry into the impacts of the pipeline was established. The resulting moratorium on the pipeline from the inquiry and the Dene peoples' call for self-determination forced the federal government to begin to settle the land claim agreements that included provisions for participatory resource management (Caine, et al., 2007). Since then, participatory approaches have been enshrined in many Indigenous, territorial and federal governance systems in the North, as well as land claim negotiations, and mining and petroleum development processes. However, participatory methods in the North have had varied levels of success. They have been applauded as being empowering for Indigenous communities and aligning with self-determination, however, there has also been co-optation of participatory methods through its institutionalization (Caine et al., 2007). In light of these varied outcomes in participatory projects, Tondu et al. (2014) created key themes for developing collaborative relationships as a researcher in PAR projects in the North. Recommendation include "dedicating time, being present, communicating, listening, respecting, understanding, building trust, making genuine collaborative efforts, and exchanging knowledge" (p. 420). In my experience, building trust was a central theme to the PAR process and Tondu's other recommendations helped to create that trust. Chapter three dives deeper into this topic.

Finally, the insider/outsider dialectic is relevant to many research projects in northern Canada, including PAR projects, since there are no northern-based universities in Canada. Most northern researchers come from southern universities and may have little connection to the North. The insider/outsider dialectic refers to the relationship

between ‘insiders’ with detailed knowledge of the social, economic, political and cultural dynamics occurring within a locality and ‘outsiders’ who do not have this knowledge, but may have a broader understanding related to the area of study (Caine, et al., 2007). In the context of a PAR project, insiders may be able to better articulate the complexities and nuances of the local context, while ‘outside’ academic partners can set this local information into a broader framework based on literatures from other places and contexts (Halseth et al., 2016). Further, as Caine, et al. (2007) argues, the academic outsider is well positioned to facilitate critical interventions to reclaim the emancipatory roots of participatory methods for northern Indigenous communities. Outsiders have an advantage of being able to be critical of the processes around them, shining new light on local issues that the insider might not have thought of due to their close connection to the issue. However, the outsiders and insiders must collaborate their different knowledges with the goal of affirming rather than negating the insiders’ knowledge and way of life. Therefore, outside critique and broader knowledge, which respects the insiders’ knowledge and goals for research, can nurture further critical reflection by the insiders, increasing the localized knowledge (Caine, et al., 2007). In this way, outsiders and insiders to the North can align their project with PAR’s goals of creating partnerships that change the status quo through informed action.

PAR is a methodology that confronts power in knowledge creation, by working in partnership with local actors to create actions that address a local problem. It also seeks to be a decolonizing practice by breaking away from the idea of ‘universal truths’ and simplistic understandings of ‘objectivity’. Instead, positionality, upholding local knowledge and creating horizontal research partnerships are championed. Participatory

processes have a history of varied success in the North. They help to align with Indigenous self-determination, but at the same time have been prone to co-optation. PAR still has role in the North, with outsiders and insiders respectfully working together to shine new light on local issues. In my research, I sought to embody the principles and theories of PAR through the methods I practiced. While I attempted to use other methods, ethnographic participant observation was the primary method.

#### **2.4.1 Methods**

I begin this section by situating myself and my connection to the research material of food systems in Yellowknife. Prior to arriving in Yellowknife in the summer of 2016, I had never been to the North; I was an outsider with an interest in Northern food security challenges. While I have become more versed in the North and its food systems as well as having spent a significant amount of time the NWT, the North is still not my full-time home, creating a disconnect at times. I was also aware of the exploitative research history in the North and was keen on trying not to repeat those past failings by conducting ethical research through PAR and immersing myself in Yellowknife. My bumpy attempts to conduct ethical research are discussed in chapter three. Further, I am a white, middle-class woman and understand the privilege this provides. In connection, I relate to the comment:

“If one central feature of the food movement has been its whiteness, it is not surprising that those with privilege would view the state as an ally or at least as capable of supporting sustainable food systems” (Cadieux & Slocum, p. 7, 2015).

My perception of the structures and institutions that make up the Yellowknife food system are influenced by my race, class and gender. I am optimistic about the state’s supporting role in food systems but recognize that others with a different intersectionality

than me may not be. Further, many of my experiences in the Yellowknife food system have been agro-centric as the work of the Yellowknife Food Charter Coalition and Ecology North both have a large focus on agriculture. However, the role of hunting, fishing and gathering in Yellowknife's food system was always prevalent. I attempted to involve myself in as many harvesting experiences as I could during my times in the NWT, but I recognize that my experiences are quite minimal in this regard. Finally, as a master's student I was a novice researcher at the start of my field work. Many of my experiences of trying to conduct PAR were part of a 'learning-by-doing' process.

The primary method used in this research is ethnographic participant observation. Participant observation is the practice of observing as well as contributing to the activities within an area of study. Ethnographic refers to an immersive research experience that seeks to make sense of what was being observed (Becker, 1996; Cerwonka, 2007). Yet, the goal of these observations go beyond just making sense of what is being observed. Clement (2007) notes that ethnographies seek to bring about an explanation of "what is happening and what can be done about it" (p.33). Using ethnographic participant observation as part of PAR in my project had the goal of understanding what was happening in Yellowknife's food system, so that the research partners and I could know what to do about it. This was particularly important so that the research's actions, as part of PAR, could be grounded in an understanding of the local food system. However, as Cerwonka (2007) highlights,

"the tempo of ethnographic research (like most knowledge production) is not the steady, linear accumulation of more and more insight. Rather, it is characterized by the rushes and lulls in activity and understanding, and it requires constant revision of insights gained earlier" (p.5).

This is an important point to highlight, particularly for a PAR project, where action and

reflection intertwine, building off each other, to gain deeper understanding of the issue at hand with each iteration. It is also important to highlight that participant observation is commonly used in political ecology research projects, to gain a deeper understanding of the specificities of an issue in a locality (Robbins, 2012).

Participant observation can create a wealth of experiential knowledge. As Baum, Macdougall & Smith (2006) note that

“humans cannot describe and object in isolation from the conscious being experiencing that object; just as an experience cannot be described in isolation from its object. Experiences are not from a sphere of subjective reality separate from an external, objective world. Rather they enable humans to engage with their world and unite subject and object” (p. 856).

Lived experience is the essence of the knowledge; through experience we come to know the world that is both our reality and part of the something broader. While I now realize that I have a plethora of experiential knowledge to draw on from working with the Yellowknife Food Charter Coalition and Ecology North, in many ways I struggled to understand the research implications of those experiences. It took re-engaging with PAR and ethnographic literatures after my two summers in Yellowknife to understand the wealth of knowledge my partners and I created.

I was a participant observer with the Yellowknife Food Charter Coalition and Ecology North in Yellowknife, NWT from May to August in 2016 and 2017 as part of my primary research fieldwork<sup>11</sup>. I worked closely with these two groups, contributing to many of their activities. In 2016 with Ecology North, I helped with their school garden curriculum, by teaching students how to plant and maintain gardens at three Yellowknife

---

<sup>11</sup> I am also in Yellowknife from mid-November 2017 to August 2018. This stint up North is not primarily connected to a specific research project, however I am continuing with the projects I assisted with during my research summers.

elementary schools. I also assisted with Ecology North's weekly composting program at the Yellowknife Farmers Market and travelled to Fort Simpson and Fort Liard to run composting workshops. Through Ecology North, I was also connected with the GNWT ITI North Slave Agriculture Mentor, and helped her run gardening workshops in Ndilo, Yellowknife and Behchoko, as well as a children's garden camp in Yellowknife. Finally, for Ecology North I coordinated their Fall Harvest Fair. In 2017 with Ecology North, I once again assisted with the school gardening programming and coordinated the Fall Harvest Fair. I also coordinated a community engagement event as part of the consultation process for a Food Policy for Canada.

In 2016 for the Yellowknife Food Charter Coalition, I conducted research for a Yellowknife food system snapshot. The snapshot was to be an overview of the state of food in Yellowknife using a food systems approach. The snapshot research process was difficult (as discussed in Chapter three). As an action, I then presented the snapshot research to the Yellowknife City Council as evidence for the need of a municipal local food strategy. In 2017 for the Coalition, I coordinated weekly Community Supported Agriculture (CSA) Supper Clubs. This program partnered with the Northern Farm Training Institute, the Yellowknife Farmers Market, The Center for Northern Families, The Side Door Resource Center and Yellowknife Health and Social Services to hold cooking classes for young families and at-risk youth using CSA boxes. As well, I assisted the Coalition in its campaign for a local food strategy, by researching and writing the policy briefs that are included in this thesis, as well as once again presenting to the City of Yellowknife on the strategy. I was very involved in the food systems work of Ecology North and the Yellowknife Food Charter.

## 2.5 Conclusion

This chapter outlined the theories and methodologies of political ecology, just and sustainable food systems, governance and participatory action research that are used to ground this thesis. My political ecology of food uses food regime analysis and critical Indigenous theories to understand just and sustainable food systems to mean the bringing together of the economy, social justice and environmental sustainability. Importantly, this includes the traditional practices of Indigenous food systems. Governance within food systems looks at the relationships between civil society actors, the economy, and governments in a collaborative way. This theoretical approach is paired with PAR methodology to create research relationships with the Yellowknife Food Charter Coalition and Ecology North with the goal of supporting action-based change for a sustainable food system. In conclusion, these theories and methodologies have the synergy of being overtly political running through each of them. Being political means that values should be explicitly discussed and recognizing that all decisions have implications for the access and control of resources. This approach politicizes this thesis' research questions, from a purely technical exercise to one that recognizes that the Yellowknife food system is fraught with contradictions, inequalities and dispossession that need to be acknowledged and addressed to form policy that will create a just and sustainable food system. Next, I analyze my experiences of attempting to conduct a PAR project that embodied the theories and methodologies described above.

### 3 Chapter: PAR by Fire

In many ways, I struggled to bring about a Participatory Action Research (PAR) project to its fullest and most ideal iteration with my research partners<sup>12</sup> in Yellowknife. In seeking to understand these struggles, I went looking for literatures that might help me make sense of my experiences. In particular, I connected with mentions of “being wary of research” (Halseth et al., p. 6, 2016) as well as “building trust for collaborative efforts” (Tondou et al., p. 422, 2014). As part of my experiences of attempting to do PAR, my research partners had been skeptical of the research process based on the history of repression and exploitation of research in the North. While their skepticism was well founded, it also made collaborative research partnership building difficult. However, many of our successes in the research partnership came from the core tenets of PAR: sharing the power of knowledge production, valuing local knowledge, and emphasizing actions that address a local issue and benefit the community. In this chapter, I contend that the PAR framework provides the space to navigate a lack of trust in research. This argument sits within the broader frame of understanding the role of community-academic partnerships (and the trust therein) in informed action projects.

To make my argument, first I provide a brief introduction to community-academic partnerships and understanding struggle within them, followed by an account of my seminal experiences in attempting to bring about a PAR project with my research

---

<sup>12</sup> In this chapter, I refrain from using names of my research partners or their organizations. I use an asterisk (\*) any time a name or other identifying information has been removed from direct quotations and use the general term “research partners” when writing. While in other parts of this thesis I have used names to directly recognize the knowledge and contributions of my partners, this chapter is a personal reflection of my experiences, so I have chosen to keep my partners anonymous. However, I still recognize that my research partners have contributed greatly to the knowledge produced in this chapter.

partners. Next, I ask myself, *'did I do PAR?'* to reflect on how the core tenets of PAR relate to my struggles of trying to set up a self-reflexive, collective research process as well as the successes of the actions produced to further the goals of my research partners. Finally, I provide recommendations for navigating research wariness through PAR (and that could have helped improve some of my struggles). I explore the role of the academic in the local partners' struggles and echo the call of providing more opportunities for Northerners to pick up the pen. Finally, I discuss building trust through collaborative project design.

I write this chapter somewhat like a letter to an earlier Carla – a master's student, excited to have her first independent research project use a radical, emancipatory methodology like PAR, who was about to jump feet first into a new community. As a form of academic self-reflection, this chapter compares my experiences of getting research direction, as well as acting with my partners in the Yellowknife food system, to the literature of PAR. What would I, as that earlier Carla, have liked to know about the experience I was about to be a part of, based on the knowledge I have now? From this perspective, I provide recommendations for improving moments of struggle and highlight successes within the PAR process. As a result, these recommendations could be useful for master's students or other first-time users of PAR.

### **3.1 Community-Academic Partnerships**

Community-academic partnerships are used in methodologies like PAR to conduct research that has reciprocal benefits for local actors and academics; these partnerships provide useful actions and products that benefit the local context as well as seek to advance academic discourse. Regularly, these partnerships have the goal of

conducting research that helps to understand and do something about an issue that is experienced in a local context. For the local actors, having academics involved help to ensure that the research is grounded in a broader context, there is rigour to the study and that it is ethically implemented. For the academic, partnerships with local actors allow for a grounding of their study, allowing for the theoretical to inform the practical. In these partnerships, local actors are involved in the full process of the research, from proposing the project to knowledge production and each step is part of the partnership building process (Halseth et al., 2016). In the North, community-academic partnerships have become more common. Based on a workshop with academics in these partnerships, Tondu et al. (2014) created a set of themes. In their view, dedicating time is seen as the foundation of all of the other themes and aids in showing a sincere interest in working with the research partners. Being present in the community helps to make the researcher known, builds further relationships and allows the researcher to learn and appreciate the local culture and processes. Communicating includes making the research processes known in clear and accessible language through multiple forms. Listening is a major component and is not just about hearing information but paying thoughtful attention to what is being said. Respecting and understanding is related to learning local history and culture to be able to respectfully operate within local norms. Finally, building trust is essential to creating collaborative efforts in participatory methods and all of the above themes can help to achieve this with the research partners and wider community (Tondu, et al., 2014). From my experience, building trust was the central theme to my partnership and the other recommendations were part of creating that trust.

Building trust in research and academia is particularly relevant to northern

Indigenous communities. Distrust has been a product of colonialism and the continued challenges of northern Indigenous communities for self-determination and meaningful engagement in decisions that affect their own lives. Among others, research and academia has been a tool of past and present patriarchal structures, used to hold power over communities by discrediting their knowledge systems and creating outside ‘experts’ that can make decisions about the North (Sandlos, 2007). Further, there is a well-documented history of the failure of research in the North to consult, seek consent and/or report back to communities on research that involved them (Freeman, 1977; SSHRC, 1983; Caine et al., 2007). As a result, research has been an expropriating process that took samples and data from the environment as well as from peoples’ bodies and knowledge systems, based on research goals that did not always benefit the North or its peoples. In response to these issues, many northern Indigenous communities, governments and education institutions have taken control of how research is conducted in their communities by establishing their own research protocols and guidelines for researchers to follow (Van Bibber & George, 2012; Aurora Research Institute, 2016). While strides have been made to ensure that research and academia play a more positive role in the North, the legacy of past and continued ills still lingers today, putting many Northerners on edge around researchers and needing trust to be built.

### **3.2 PAR by Fire: experiencing wariness in research**

As mentioned above, many of my experiences with PAR and creating the research partnership were ones of struggle. While there were clear successes, much of my contemplation and analysis of my experiences revolved around how I could have improved upon them. Therefore, I follow the work of Maguire (1987, 1993), Seymour

(1997) and Cerwonka (2007), who have used their experiences of struggle to highlight and address theoretical and methodological contradictions still to be worked out within community-academic partnerships, including PAR projects. Below, I recount some of my seminal experiences with attempting to bring about a PAR research project. Much of the account focuses on moments of struggle, however this does not discount the moments of success and ease that also occurred. I also leave out student responsibilities and projects I was involved with at the same time as these experiences, unless they specifically relate to the PAR process. As a brief reminder, I assisted with school gardening curriculum and other gardening initiatives, composting projects, Fall Harvest Fairs, consultations for A National Food Policy for Canada, CSA Supper Clubs and lobbying efforts for a local food strategy for Yellowknife. Finally, I avoid analysis in this section as many of these experiences relate to various points of analysis that are discussed in the sections below.

I became involved with food systems actors in Yellowknife through a research assistant (RA) position with a Social Sciences and Humanities Research Council (SSHRC) Partnership Grant through Wilfrid Laurier University known as FLEdGE – **Food: Locally Embedded, Globally Engaged**. The RA position would take place in Yellowknife, Northwest Territories over two summer semesters in 2016 and 2017. The original structure for the RA position was to have it incorporate into a two-year master's program, with the summer 2016 fieldwork to take place prior to the student's first year of their program, and the summer 2017 would be in between their first year and second year. This structure was set up with PAR in mind; the first summer would be for building connections with the research partners and the wider community by contributing to the partner organization's project work within the research area of interest. As well, in that

first summer the RA and the partners would begin discussions to identify a collaborative research project. Then, over the first year of the student's program, they would remain in contact with their partners and flesh out the research project to be conducted in the summer of 2017. Unfortunately, I did not fit into this structure as I was introduced to the RA position when I was in the winter semester of the first year of my master's program. I was keen on having the RA position be part of my MA thesis and due to pressures to remain within the regular timelines of my MA program, my supervisors and I discussed changing the structure to put more emphasis on the first summer to conduct the collaborative research project.

During these discussions, I was simultaneously finishing up course work as well as preparing my thesis proposal and ethics application, as they were required to start the research process. I was introduced over email to the research partners during this time and food security was discussed as the main research topic; however, communication was minimal. In recognizing the time and distance constraints of getting to know each other and developing a research project over email during that time, I left the research questions in my proposal and ethics application broad<sup>13</sup>. These original questions were:

*What actions does the culturally diverse community of Yellowknife want to take to animate the \* and how should these actions be developed? What barriers and opportunities exist to realizing these actions? What is the role of participatory action research in realizing these actions?*<sup>14</sup>

To narrow these questions, I planned to have the month of June dedicated to building

---

<sup>13</sup> While the practice of leaving the research question broad is advisable, it did cause some tensions in my research project. These questions did not fit the needs of the research partners as they had already articulated actions to meet their goals. Centering the research questions around 'actions' added to the research partners' feelings of having a research project thrust on them.

<sup>14</sup> As can be seen by the research questions stated in the chapters above, my research questions changed quite a bit over time. These changes occurred through communication with my partners, as described below. To see how the questions changed over time, see Appendix C.

relationships in Yellowknife and having discussions with my partners to determine the research issue, question, design and potential actions. In July and August, I would conduct any interviews and focus groups for the research as well as any actions based on the research. With my plan in hand, I set off to Yellowknife.

Upon my first week, I realized I had a lot of questions about my research project.

As I wrote in a research log to my supervisors after that first week:

*I am feeling confused about what I will be doing for the research and the supportive work for \* and \*. How do they connect? Do the supporting activities need to relate to my research questions? Are the supportive activities part of the PAR process? Are the actions coming before the research? Will 'new' actions come from the research? ... I am confused about the line between what can be used for research and what is strictly supportive. Is it okay to change the food systems question (\* was not so sure if that question is the most helpful to the community or \*)? How should I get \* to come together to talk about the research goals, Q's and design (research log, June 1, 2016)?*

I was a bit overwhelmed, but my supervisors helped to calm my nerves through encouragement that many of these questions would become clearer with time. This passage also highlights a reoccurring question over my research experience: *are the actions coming before the research?* In some of the first discussions with my partners, I got the sense that they had already articulated issues relating to food security as well as action items for the organization to address them. I was uneasy about how this context fit with my research questions and the ideal PAR steps of examining a certain issue through self-reflective research, then conducting actions based on the findings of that process, followed by reflection of the research and actions (Kindon, Pain & Kesby, 2007). In particular, my partners wanted to work on their action items and I did not know where a collective learning process fit into these actions or if that would even be useful for them.

Through discussions with my partners we did decide on a project that would fit in

with their needs. I recounted one of these discussions in my notes,

*I met with \* today to help plant [their] garden as well as talk about research. It was fun to practice PAR in the garden... What [they] would like me to do is create a snapshot of the Yellowknife food system. To answers questions such as 'what is Yellowknife's food system?' 'where does our food come from?' 'what are the laws and regulations regarding hunting and fishing?' ... It will be somewhat of a precursor of a Yellowknife agriculture strategy or local food action plan... I feel a bit confused by this and don't really see how this involves original research. I think \* picked up on my hesitation because [they] asked me what I had planned for my research project. I told [them] that I had been thinking of doing a traditional research project with focus groups or interviews. [They] asked me what I wanted to do the interviews about and if I would be gathering info that they already knew. I said the questions would depend on what [the partners] wanted, so they would be new questions, not what they already know. [They] then talked about why this snapshot is important to the community, so we left the conversation that I would read through the Yellowknife Food System Assessment and other agriculture strategies from the North and then revisit the snapshot idea (personal notes, June 8, 2017).*

In the end, we did decide on the snapshot as our research project as I could see the benefit of it for the partner's goals. This entry also made note of some of my partner's wariness about the research process, such as that it would present information that was already known in the community and would not be useful to them. On other occasions, the partner discussed how research projects in the North regularly either presented results that people in the North already knew, or the results did not have any relatability to the Northern context. That conversation in the garden was one of the first practical connections I made about how important methods like PAR were to the North, so that local people, knowledge and experiences would be included and influence the research process. However, in that conversation I had assumed that the partners knew about PAR and had been hopeful that reassuring that the focus was on the partner's goals would help to quell any worries about the project.

The work of the snapshot started by creating a draft table of contents based on

what the partners' priorities. Starting with this table, we identified sources of information that related to these topics in Yellowknife, questions to include in interviews about the Yellowknife food system, and a list of people to interview. As we moved into this process, we experienced further tensions. In particular, we discussed presenting findings from the snapshot research to Yellowknife City Council at the end of the first summer, to align with the goal of the snapshot being a precursor for a municipal Local Food Strategy. We discussed that the timelines were short for this presentation and that I would not have time to analyze the interviews properly. I was also keen to have the snapshot be a part of my MA thesis, so this timeline was further complicated by the need to put the interview questions through an ethics revision request. There was resistance from the partners to do this because they feared it would slow down the interview process and not allow as much flexibility. This led to questions from the partners about who the snapshot was ultimately benefitting – my thesis or their efforts. Once again, I had assumed that the mutual benefit of PAR methodology was understood by the partners, meaning that the research for my thesis and the snapshot were one in the same. These concerns were also aggravated by the fact that I had become increasingly busy with supporting project work for the two partner organizations<sup>15</sup>, making my available time for conducting interviews less than expected.

These concerns came to a head when one of the partners expressed concern that my academic team and I were taking over their organization's work for our benefit and not the community's. I was shocked and taken aback by this conversation- this was the exact opposite of PAR and what I was trying to do. I wondered how we got to this point

---

<sup>15</sup> I felt the need to honour my commitments to the projects I had agreed to help with, not realizing the amount of time involved. I also felt the need to continue to immerse myself in food-related initiatives as I still felt like a newcomer to Yellowknife.

and where things had gone wrong. To show my solidarity with the organization and salvage our partnership, I agreed to the City Council presentation and to do scoping interviews for this work, which would not be used as part of my primary research (personal notes, July 21, 2016). I wanted to do this for the organization to build their trust, which was evidently lacking.

In these informal interviews, I ran into an awkward moment relating to research ethics. When contacting people to talk to, I let them know that I was a researcher, but that our conversations would be informal. During one of these interviews, an interviewee was discussing something when suddenly they said, “please don’t tell anyone this, this is confidential information, maybe I should have gotten you to sign a confidentiality agreement” (personal notes, August 2, 2016). While I reassured them that I would not use this information, I could tell that they were uneasy about this situation. From this experience, I realized the importance of having free, prior and informed consent that highlights how information will be gathered, the level of anonymity of the interviewee and how their information will be used. That awkward situation could have been avoided through these processes and the interviewees would have had control over their information, prior to the start of the interview. To remedy this situation, I later decided to send the City Council presentation that utilized information from the interviews to the interviewees to see if they saw any mistakes with what had been included.

At the end of the summer, my partners and I presented the food system snapshot to City Council (see Appendix B for presentation slides). We also agreed to have a meeting before I left Yellowknife to reflect on our summer. In that frank meeting, the partners expressed their concern that there had been an unequal division of time between

the two partner organizations and between supporting project work and research time. Another comment was that we should have set up the research plan before I came to Yellowknife to maximize time (personal notes, August 30, 2016). In many ways, this conversation helped to air grievances and allowed us to discuss how to improve on the partnership going forward. At that time, I had been concerned that I did not have any empirical research to analyze for my MA thesis because the snapshot interviews had been informal<sup>16</sup>, so we discussed moving forward with research to take place over the fall 2016 and winter 2017 semesters. In an earlier conversation, a partner had discussed the desire to conduct a policy analysis of GNWT and City of Yellowknife policies that affected local food systems (personal notes, July 27, 2016). I said that this was something I was interested in, so we decided to move forward with that as my primary research. I also gave the partners a description of PAR methodology highlighting the principals of a community-driven process that directly benefits the partners and their goals as well as co-learning and collaboration that contributes both to the goals of the partners and an academic body of knowledge (personal notes, August 30, 2016). While this description was well received, it was also met with responses along the vein of methodology being in the academic realm and it was something for me worry about. At the time, I did not know how to create more of a discussion about methodology.

In the fall, the implications of the food system snapshot presentation made to the Yellowknife City Council began to become apparent. City councilors showed their support for the idea of a City of Yellowknife Local Food Strategy and one councilor

---

<sup>16</sup> In hindsight, I realize that I had a plethora of experiential knowledge to draw on. But at that time, without having conducted any formal interviews or focus groups, I felt that I had not done *anything* for my thesis.

became a liaison with a partner organization to assist in discussing food policy in the city. There was also interest from the GNWT department of ITI in supporting the work of the partner organization (personal notes, Oct 14, 2016). These were exciting developments for the partnership and with this enthusiasm, we moved into working on the policy analysis by discussing a research plan with a partner organization's members. This plan included primary and secondary research questions that would be answered with the method of a questionnaire to identify current policy gaps and opportunities in Yellowknife's food system. The questionnaire results would be used to create set of policy briefs to be presented to the City of Yellowknife that would express a civil-society-identified ideal policy scenario. The partner organization's members expressed interest in being a working group for the research process to assist with designing the questionnaire and analyzing the results. In that meeting, they made suggestions on making the questionnaire and its topic of policy relatable to its recipients and suggested that the research question be more aligned with the organization's vision and principals. (personal notes, November 10, 2016). Having a working group for the research felt like I was finally 'walking the talk' of PAR.

I designed a draft questionnaire and consent letter to be reviewed by the working group. It was first reviewed by the coordinator of the partner organization, who had questions about how the research can best be utilized for the community and what was the purpose of the research. They highlighted that the policy analysis was most useful for the community because promoting a local food strategy should be the purpose of the research (personal notes, January 12, 2017). After some revisions based on their comments, the questionnaire and a consent letter were reviewed by the wider working

group. One of the main pieces of feedback was that the group did not connect with the research questions that guided the questionnaire, finding them too narrowly focused. Instead, they were interested in identifying community experiences and viewpoints to frame a local food strategy. We also discussed who to send an updated questionnaire to and the tentative timeline of having the questionnaire sent out in March 2016 (personal notes, February 6, 2016). While this feedback was an important part of participatory process and community ownership of the research, I was beginning to be concerned about my student timelines as it was the spring semester of my second year and we were back to discussing research questions. However, I remained optimistic that there was enough time to complete our research goals.

Around this same time, a research partner and I took up the opportunity to co-author an article together for the *Journal of Northern Public Affairs*'s special issue on northern food security (Johnston & Williams, 2017). I was excited by the prospect of co-authoring an article because it was an academic goal of mine as well as it provided an opportunity to showcase the work and local knowledge of a partner organization and have them be part of the knowledge production process. The article reached those initial goals and it also had some unexpected impacts; it was a practice in partnership building that helped to clarify and align our shared views of the research partnership and how the research's theoretical and methodological underpinnings related to the work of the partner organization (personal notes, March 3, 2017). However, the writing and editing process for the article also took up more time than expected. After completing the article, the research partner and I discussed the need to reorganize our research plan to reflect my student timelines as well as their organizational needs. In this discussion, we decided that

we would focus on the policy briefs for the City of Yellowknife because they were the most pertinent for the actions that organization wanted to pursue. We thought that the questionnaire was still useful to the organization's work, but that it could be administered in the summer and the results could be brought together in a supplemental report. To ensure that the briefs were still rooted in a community perspective, we decided that the topics, outlines and drafts of the individual briefs would be reviewed by the research working group (personal notes, March 28, 2017).

I arrived back in Yellowknife at the start of June 2017. Prior to arriving, research partners and I set out topics for the briefs and I analyzed documents and policies that related to these topics. However, the review process for the briefs was slow with partners working on other commitments. As well, research partners from both organizations were interested in setting out the supporting projects I would work on in the summer. Conceptually, the supporting projects, the work for the policy briefs and finishing writing my thesis all seemed to fit together that summer. In practice over the summer, the supporting projects became very time consuming. One of the supporting projects was to make another presentation to the City of Yellowknife to ask the council to make a commitment to producing a Yellowknife Local Food Strategy. For the presentation, the briefs were not ready to be included, so research partners and I agreed that the briefs would act as a follow-up to the presentation and could be used to help produce the Local Food Strategy (personal notes, July 31, 2017). I prepared the presentation based on the document analysis already conducted for the briefs and it went through a series of revisions through the partner organization's board of directors and members.

In the fall 2017, my academic timelines were extended due to the heavy amount

of project work that took place in the summer and I travelled to Ottawa to finish writing the policy briefs and the final write-up of this thesis. I struggled with this extension, working through feeling of burn-out and wondering if I had done anything at all as an academic in my community-academic partnership. However, during this time the repercussions of the summer's presentation to City Council helped to give a boost. The City of Yellowknife included the development of a local food strategy into its 2018 Citizens Budget Survey and it was one of the only items in the survey that received a majority yes vote (City of Yellowknife, 2017). As a result, the City has included developing a local food strategy into its 2018 budget. To date, it has not been made clear how that budget will be used to create a local food strategy, however, this was a major success for the research partnership. In a follow-up meeting with a research partner, we were able to discuss next steps for the organization in relation to the local food strategy. Along with community engagement events based on the policy briefs, they will be used by the research partners in their conversations with the City about the strategy. Below, these experiences are analyzed to understand how these experiences could have been improved upon, based on the role of trust within PAR projects.

### **3.3 Did I do PAR?**

After both summers in Yellowknife, I came back to Ottawa struggling with the question, 'did I do anything at all'? The original research plans for both summers had changed so drastically, from not using the snapshot work as primary research and shifting from a community-based questionnaire to document-analysis-based policy briefs, that I was not sure if I had done anything of academic value. As part of this, I regularly felt behind the eight-ball when executing the research plan. Project work took up significant

time. Then, receiving unexpected feedback from research partners, such as when they wanted to reroute the research question late in the game, left me feeling like I was regularly playing catch up. After my two summers in Yellowknife, I came back to PAR literature to try to make sense of my experiences. In Maguire's (1987) influential work on PAR, I connected with her admission, "I was initially paralyzed with inadequacy as I compared my novice work to case studies which sounded successful and revolutionary" (p. 6). Recognizing that reflecting on practical challenges can help to clarify theory that allowed me to examine my struggles, and ask myself, 'did I do PAR'?

I acknowledge that my experiences were not a complete rendition of an ideal PAR project, as there was minimal collective learning and self-reflection in the research (Fals Borda & Rahman, 1991; Johnson, Smith & Wilms, 1997; Kindon, Kesby & Pain, 2007), there was an imbalance between participation and research (Kindon, Kesby & Pain, 2007), and power and inclusion within the research partners organizations were not regularly addressed (Maguire, 1987; Fals Borda & Rahman, 1991; Johnson, Smith & Wilms, 1997; Kindon, Kesby & Pain, 2007). However, there were many aspects that were PAR, including actions that benefitted the research partners (Maguire, 1987; Halseth et al., 2016), local knowledge was upheld (Chevalier & Buckles, 2013; Fals Borda & Rahman, 1991), the research partners had ownership of the direction and process of the research (Maguire, 1987; Halseth et al. 2016) and the interconnection of action and reflection did occur (Kindon, Kesby, Pain, 2007).

In terms of collective learning and self-reflection, in some of the first discussions to set up a research project with my partners, I got the sense that they wanted to get moving on the action items that they had previously articulated and were happy to have

capacity to help with them. I felt uneasy about how this fit into the PAR process of examining an issue through self-reflective research, then conducting actions based on the findings of that process, followed by further reflection (Kindon, Pain & Kesby, 2007). Throughout the research, moving the sustainable food agenda forward was a top priority for the research partners. In a way, my research agenda of needing to set up a time-consuming, structured learning process was disrupting the partners' goals. In the end, the snapshot interviews and the knowledge in this thesis did bring out new understandings that are shared among all the research partners. However, it came from a largely solitary process that included input and feedback from the research partners. While, this still constitutes a collective learning process in a minimal way (Strand et al., 2003), having the partners be more active in the learning process would have been more aligned with PAR, and could also have helped build more trust in the research process.

A related struggle was that I became heavily involved in the project work of my research partners' organizations with weak links to my research questions. Being a participant is an important part of PAR, with the literature highlighting the need to observe, but also contribute to our partner's efforts (Herr & Anderson, 2015). Therefore, as my partners presented projects that they needed capacity on, I felt I should be part of those activities. In many ways, I thought I was doing a 'good job' at PAR by being so involved in my partners' projects. I was getting involved in the community, building connections and becoming a recognized face within the food world of Yellowknife. Further, I felt I was showing my partners that benefits could accrue to their projects from an academic's presence. However, as the project work piled up, finding time to connect that work to a more formal research project became difficult. As noted, PAR puts extra

responsibilities on the academic; they are also an organizer, an activist, etc. (Maguire, 1987). This blurring of the definition of an academic through contributions to their partners' work is a strength of PAR, but these extra responsibilities should have clear connections to the research. As Andrée et al. (2017) note, the level and type of engagement that the academic and local partners take on in relation to the partners' work and the research comes through an explicit process of communication and reflexivity.

Addressing power and inclusivity within the knowledge production process is a core tenet of PAR (and political economy/ecology). Within this context, it is important to highlight that my research partners' organization have struggled to have consistent engagement with the Indigenous and minority peoples as well as disadvantaged groups in Yellowknife. It has been recognized that many of the food actors in Yellowknife are white and middle-class. While my research partners do actively seek to benefit all Yellowknifers in their projects and have ad-hoc connections with Indigenous people and organizations as well as groups that support disadvantaged people, addressing power and inclusivity within the partners' organizations was not a primary part of the research. However, seeking to change the power dynamics in governance between local government and civil society was an important part of this research. The research partners are looking for civil society to become more than just stakeholders in food governance through a more collaborative governance structure with local government.

Despite these 'less-than' aspects of the research, there were many aspects that did fulfill PAR. First, there were evidence-based actions conducted that benefitted the research partners and the broader community. PAR seeks to produce actions that help solve a problem for the people involved as well as increase community self-determination

(Kindon, Pain, Kesby, 2007). Through directly contributing to, conducting research for and producing policy briefs for my partners' efforts to engage with local government, we created actions that brought the potential for a local food strategy for Yellowknife. These processes contributed to the food policy conversation in Yellowknife by providing concrete examples of what food policy looks like from elsewhere and providing rigour to the framing of Yellowknife within a food systems perspective. As well, we deepened the relationships of the partners' organizations with the city government, allowing for there to be greater collaboration with civil society. While there is still lots of work to be done to address the issue of food insecurity in Yellowknife, the research partnership did bring about actions that reached the partners goals.

Further, the research partners had power and ownership of the direction and process of the research. In PAR, power between the academic and the local partners is ideally shared horizontally, blurring the lines between the researcher and the researched (Baum, MacDougall & Smith, 2006). One of the ways that this is done is by sharing decision-making in the knowledge production process between all of those involved. This was practiced throughout this research, such as the food system snapshot process not being used as primary research; the discussion around the questionnaire helping to refocus the primary research question to one that the partners connected with more; and developing the structure and content of the policy briefs. While this local ownership of the research process made meeting my student timelines difficult, it ensured that the knowledge produced was useful and beneficial to the local actors.

Another important aspect of PAR that was fulfilled was that local knowledge was actively and deliberately upheld in numerous ways within the research process (Fals

Borda & Rahman, 1991). When presenting to city council, it was made clear that the information in the presentations was based on conversations with local food actors in Yellowknife. It was the experiences of local people that brought us to ask for a local food strategy. After these presentations and on other occasions during the research, members of the media approached me as an academic to do interviews about the local food system. On each occasion, I referred the media members to talk to my research partners because they were the experts of the Yellowknife food system. As well, a research partner and I co-wrote an article for the *Journal of Northern Public Affairs*, incorporating their local knowledge into a knowledge production process (Johnston & Williams, 2016).

Finally, intertwining of action and reflection took place in this research (Friere, 2000). On multiple occasions, my partner and I ‘debriefed’ on the work that we had done together. In these conversations we would discuss how the actions we took impacted the partners’ goals as well as what could be done in the future to continue reaching those goals (personal notes, 2016-2017). While these conversations could have been developed into a more deliberate process of reflecting on how our experiences related to theory and literature, they did help us deepen our understanding of the nuances of the issues we were working on, such as working with local government, developing programming that better serves disadvantaged groups in the city, etc.

To conclude, examining the question of ‘did I do PAR?’ is not meant to weigh both sides, like a balance scale or check-list, to come to an answer of yes or no. It is to relate practical experiences with PAR tenets, so that practice can inform theory and vice versa. In the next section, I provide recommendations on the role of the researcher in building trust in the community-academic partnerships that are utilized in PAR (and that

could have improved on my experiences as well).

### 3.4 Recommendations: Building Trust in Community-Academic Partnerships

Community-academic partnerships are an important aspect of new paradigm research methodologies like PAR. A crucial aspect of these partnerships is creating a trusting collaboration between the academic and the local actors. As seen from the recounting of my experiences above, a lack of trust can make the research process difficult. Below, I discuss building trust in research through making recommendations about the role of the academic in local struggles as well as through collaborative, flexible planning and clear expectations. These recommendations are summarized in Table 1 and then discussed in more detail afterwards. Many of these recommendations have been noted in PAR and community-based research literature in other contexts. I re-emphasize them in the context of needing to be explicitly shared and understood by both the academic and the local actors and because my struggles in practice brought them to the fore.

**Table 1: Recommendations for Building Trust in Community-Academic Partnerships**

<b>Theme</b>	<b>Recommendation</b>
The role of the academic in community-academic partnerships	1. Provide rigorous capacity for local actors' projects
	2. Provide endorsement and support to local actors' projects
	3. Provide opportunities for local actors to 'pick up the pen'
Collaborative, flexible planning & clear expectations	4. Work relationship-building time into research plan
	5. Discuss the methodology of PAR with local partners
	6. Review research expectations on a regular basis
	7. Give local partners something to 'pick apart' when time is short
	8. Practice and communicate emotional distance as a form of relationship building

In terms of the role of the academic, a question emerges: Why would my research

partners need/want to connect with me and the FLEdGE research network, if there was skepticism about academia? Literature on this topic highlights that some of the benefits for the local actors of partnering with academics include ensuring that the project is grounded in a broader context, there is rigour to the study and that it is ethically implemented (Halseth et al., 2016). I agree with these important benefits of a community-academic partnership, but also see other connections which deserve to be named.

### **3.4.1 Provide rigorous capacity to local actors' projects**

First, gaining capacity was a major benefit for my research partners. One of the partner organizations is a volunteer-run group and the other is a project-based NGO. Having a researcher that was situated within the community for three to four months that was able to contribute to their projects (and did not need to be added to their payroll) was a major boost to their capacity. More than just free labour, extra capacity is an important benefit that community-academic partnerships can provide, especially for those that are involved in the work of governance. In this era of neoliberal downloading, policy work has been taken up by many non-government actors. One of the criticisms of this approach is that governance is being put in the hands of those that do not have the same time, capacity and resources as governments (Kettl 2000, O'toole 1997). Community-academic partnerships can help these organizations by providing rigorous capacity to this governance work. As well, the local actors also gain longer term capacity through the connection of their local work to the broader literature and themes that the academic can provide (Tondu et al., 2014). Further, providing capacity also helps to build trust in the partnership as the local partners can see direct benefits to their projects and being connected to their project work can help integrate the research process into the goals of

the partners' work.

### **3.4.2 Provide endorsement and support to local actors' projects**

Another way that my partners benefited from creating a community academic partnership was the legitimizing effect of working with academics. While this is an important benefit, this legitimacy is regularly a product of the traditional expert status of an academic, which can perpetuate the hierarchical order of researcher and researched (Kindon, Pain & Kesby, 2007). Therefore, the academic should be mindful that their traditional expert status is used to uphold the local actors. For example, the researcher can provide backing to the local actors when seeking resources or in times of resistance. Writing letters of support for grant proposals was one of the ways that the FLEdGE network supported the local actors, helping them gain resources for their work. When first presenting the idea of a local food strategy, there was interest, but little commitment expressed from the City of Yellowknife. However, after the aftermath of the first presentation to City council brought a lot of attention to my local partners work and this sparked further discussion with the City on the idea. Importantly, these further discussions were conducted by the local partners, simply using the academic's presence as a launching block to support their goals and agenda.

### **3.4.3 Provide opportunities for local actors to 'pick up the pen'**

In connection, the role of the academic in a partnership can also be to facilitate opportunities for local actors to 'pick up the pen' and tell their own story. Co-authoring an article with a community partner is one example of this. Including local actors in academic knowledge production processes is a way to uphold their knowledge as well as create a horizontal relationship in the community-academic partnership. Local actors

have the potential to benefit a great deal from creating community-academic partnerships, which is why they may be interested in creating a partnership, despite being skeptical about academia. However, community-academic partnerships do not inherently create beneficial outcomes, it is dynamics and relationship within the partnership that do. At the heart of creating a strong community-academic partnership is building trust between the local actors and academic.

#### **3.4.4 Work relationship-building time into research plan**

Another theme for building trust in research is conducting collaborative, flexible planning and ensuring there are clear, shared expectations between the academic and the local actors. To begin, many writers have expressed that the PAR process can be lengthy and time-consuming (Maguire, 1987; Fals Borda & Rahman, 1991; Kindon, Pain & Kesby, 2007; Klocker, 2012; Chevalier & Buckles, 2013; Tondu et al., 2014 Herr & Anderson, 2015). Importantly, the relationship-building part, including developing trust between the academic and local actors, is an aspect that should not be rushed (Klocker, 2012). Therefore, I recommend that having a previous relationship with one's proposed research partners is preferable, but not a prerequisite. If there is not a previous relationship, relationship-building time needs to be included into the research design. The amount of time allocated should reflect the scope of the research, the local customs and practices and the academic's previous knowledge of the local context. In the context of this research, giving myself one month to build relationships as well as design a research plan was too hasty, contributing to the local partners' wariness and feelings of having a research project thrust on to them. This was damaging to the trust between myself and my local partners and it took time and effort to rebuild that trust. Dedicating time is an

important part of community-academic partnerships (Tondu et al., 2014) and putting time into building the relationship at the outset can help facilitate time-savings in later parts of the research (Klocker, 2012).

#### **3.4.5 Discuss the methodology of PAR with local partners**

An important aspect of planning a PAR project is ensuring that the local partners understand what PAR is as well as the university processes that govern research, such as research ethics approval. PAR does not automatically mean positive research that your community partners are going to love. Further, Halseth et al. (2016) point out that the academic should help the community partners understand the university policies and institutions that govern research and how these structures can be shaped to incorporate the community. In my research, I had assumed that my local partners were aware of PAR and that they knew that I was trying to create a mutually beneficial research project. Further, ethics approval was seen as this formal research process that was a hinderance to the partners goals. As one can see from the account of my experiences above, these factors culminated in my academic team and I being called out by a partner to be taking over their organization's work for our benefit and not the community's. This situation could have been avoided with clear discussion about the research ethics process and what using PAR meant as well as ensuring that the partners were on board with using PAR. Part of this overview may include explaining to the partners that talking about methodology is important and not just something to be left to the academic to decide on. Plain language that avoids jargon is important in these conversations.

#### **3.4.6 Discuss research expectations continually**

Further, there should also be clear expectations in terms of research design and

process, including the project work that the academic will assist with, between the academic and the local partners (and academic supervisors, in the case of graduate PAR projects). As well, expectations should be revisited throughout the research project, through regular check-ins that includes the parties involved. This should not be a cumbersome process to add to already busy workloads, so discussing with the academic team and the local partners how this could be done efficiently is an important part of this process as well as tweaking this process along the way, if needed. However, it is important to note that within a PAR project there should be flexibility within the research design and process. As Chevalier & Buckles (2013) note

“real life calls for logic and rigour, but also for creativity and flexibility, the kind that allows for people to move in and out of plans in response to new circumstance and information” (p. 77-78).

Having clear expectations does not mean bringing back researcher controlled, inflexible research designs, it means having a clear scope of a research project that creates mutual benefit for both the academic and the local partners.

### **3.4.7 Give them something to ‘pick apart’ when time is short**

When planning the research project and managing expectations, the partners should recognize that having local actors involved in every step of the research does not mean that everything must come from the community. In particular, the academic can act as a facilitator that assists the local actors in the research process. While everyone is capable of understanding and analyzing their own world (Friere, 2000), these capabilities, especially when connected with the seemingly opaque university-academic process, are not always immediately present with local actors. The academic can assist the local actors to workshop through the university knowledge production process (Chevalier & Buckles,

2013). Workshopping is a powerful tool to deepen the understanding of local issues for all involved, however it can also be a time-consuming activity for already busy people. Therefore, an alternative is the academic preparing materials for the local actors ‘to pick apart’. This could be a draft research question, a framing of the local issue, policy recommendations, etc. The local actors can then provide comments anywhere from ‘tear the whole thing up’ to making smaller adjustments to reflect their knowledge and understanding. In my experience, preparing materials to pick apart was a way to gain a deeper shared understanding of the theoretical framing of the research between a local actor and myself, such as when co-authoring an article together. Importantly, however the knowledge production process is structured between the academic and the local actors, there should be community ownership of the research.

### **3.4.8 Practice and communicate emotional distance as a form of relationship building**

Lastly, I turn to a recommendation more directed at the academic, but it is also important for the local actors to be aware of. Practicing emotional distance from one’s research work is important, especially when one is doing immersive research in a community other than one’s own. This does not mean being objective or avoiding creating meaningful relationships with research partners, it means creating space outside of the research. This could be making a friend that has nothing to do with the research or making time for a regular activity that removes one’s thought process from the research. In connection to creating trust within research, it is important for the academic to communicate with the local actors (and supervisors in the context of student researchers) when they are feeling overwhelmed by the research process. Also, the sooner, the better.

This helps to build trust by creating dialogue about the emotional difficulties research can create (Maguire, 1987 & 1993; Cerwonka, 2007).

Building trust in community-academic partnerships relates to the broader role of the researcher in local issues as well as on the micro level of planning, project design and setting clear expectations. The recommendations above can all work together to create an atmosphere of trust in a PAR project that can provide mutual benefit for all involved. To explain, I borrow a quote from the theory of building collaborative governance structures: “repeated situations of cooperation may create and reinforce a reputation of trustworthiness and reciprocity among participants” (Addy et al., 2014). When there are multiple and continued instances of trust building, they are reinforcing.

### **3.5 Conclusion**

This chapter utilized my struggles of attempting to bring about a PAR project with my research partners to argue that the PAR framework provides the space to navigate a lack of trust in research within the frame of the role of community-academic partnerships in informed action projects. As part of my experiences, my research partners had been skeptical of the research process based on the history of repression and exploitation of research in the North. However, many of our successes in the research partnership came from the core tenets of PAR: sharing the power of knowledge production, valuing local knowledge, and emphasizing actions that address a local issue and benefit the community. To build this argument, an introduction to community-academic partnerships highlighted the role of the researcher in localized issues. Following, I presented an account of my seminal experiences in attempting to bring about a PAR project. I then asked myself, ‘did I do PAR?’ to discuss how my practical

experiences related to theory of PAR. Finally, I provided recommendations for navigating research wariness through PAR through building trust, by exploring the role of the academic in community-academic partnerships and collaborative project design. Further, I make the contribution that expectations and assumptions of the PAR process need to be discussed in advance (and revisited throughout) the research process. This chapter was a form of academic self-reflection that was rooted in my experiences of getting direction from my research partners as well as talking and acting with people in the Yellowknife food system. Then I came back to the literature of PAR and thought about how my experiences related. The next chapter also followed this reflective approach, by analyzing my experiences in the Yellowknife food system and relating them back to the theories of the political ecology of food as well as sustainable food systems governance.

## **4 Chapter: Setting the Stage for Food Systems Policy in Yellowknife**

This chapter is a precursor to the policy briefs for a Yellowknife Local Food Strategy in the following chapter. As such, this chapter politicizes the Yellowknife food system in order to break away from policy prescriptions that do little to change current food system dynamics. This chapter argues for food policy in Yellowknife (and beyond) that embraces complexity and the political nature of food systems through a collaborative food systems approach, which supports Indigenous self-determination. To make this argument, first I historicize Yellowknife's food system to gain insight into its current food system. In line with food regime analysis (Friedmann & McMichael, 1989), this historical account shows that food systems both shape and are shaped by the wider political, economic and, cultural forces of the local region and globally. Next, I examine a common food policy approach, which has also been used in Yellowknife (Lutra Associates Ltd, 2010), of focusing solely on income security and the cost of food as a way to analyze food systems. This approach is shown to be narrow and technical in nature as well as not doing enough to make food systems more just and sustainable. Instead of this narrow approach, this chapter encourages a food policy that uses a food systems approach and supports Indigenous self-determination. The insights and arguments within this chapter have come from through my experiences of getting direction, discussing and creating actions with my research partners and other actors in the Yellowknife food system and then coming back to the academic literature and thinking about how those experiences relate. In this way, my PAR process has contributed to politicizing food systems governance.

Before diving in, below is a brief reminder of Yellowknife's food system and its

issues. Yellowknife currently has a food system that includes hunting, fishing, gathering, agriculture and imported foods. The hunting, fishing and gathering food system of the Yellowknives Dene First Nation (YKDFN) has thrived in the region for time immemorial and continues to play a major part of the Yellowknife food system for Indigenous and non-Indigenous peoples. As such, the institutions, practices, knowledge and cultural aspects of hunting, fishing and gathering need to be brought into food systems thinking. Importantly, this is not a simple addition; the continuing legacy of colonialism means that these aspects of the food system need to be thought about and addressed in food policy through a political process. Agricultural and imported foods were brought to the NWT and the Yellowknife region through colonization and resource extraction. At the same time, agriculture and gardening are seeing increased enthusiasm in Yellowknife, including within the YKDFN and other Indigenous peoples in the city. While imported food currently dominate the Yellowknife food system, there is a movement in the city, championed by the Yellowknife Food Charter Coalition, the Yellowknife Farmers Market, Ecology North and others to have locally-produced agricultural, hunted, gathered and fished foods play a larger part in it.

There are several signs that that all is not well with NWT food systems. First, the NWT has the second highest incidence of food insecurity in Canada at 24.1% of households (Tarasuk, Mitchell, & Dachner, 2016). At the same time, there is a 10% higher than the Canadian average rate of obesity (GNWT, 2011b). Further, there is a rapid ‘nutrition transition’ with decreasing consumption of traditional land-based foods being replaced by low nutritional value store-bought foods (Sharma, et al., 2009; FAO, 2013). While these statistics are not measured on a community basis in the NWT,

Yellowknife fits within these trends. The signs of food insecurity in Yellowknife are present with high and continually increasing use of emergency food services (Lutra Associates Ltd., 2010). Obesity is a common concern and the nutrition transition is also present with the percentage of Indigenous households in Yellowknife where 75% or more of the meat or fish eaten was obtained through hunting or fishing has declined from 8.9% in 1999 to 4.0% in 2014 (NWT Bureau of Statistics, 2014c). Yellowknife has region-specific concerns as well. The city is largely dependent on imported foods, with few local food producers in the region. As well, the Bathurst caribou herd, a main food source for the Yellowknives Dene First Nation, continues to decline to threateningly low levels due to increasing resource extraction in its range (Parlee, Sandlos & Natcher, 2018).

#### **4.1 Historicizing Yellowknife's Food System**

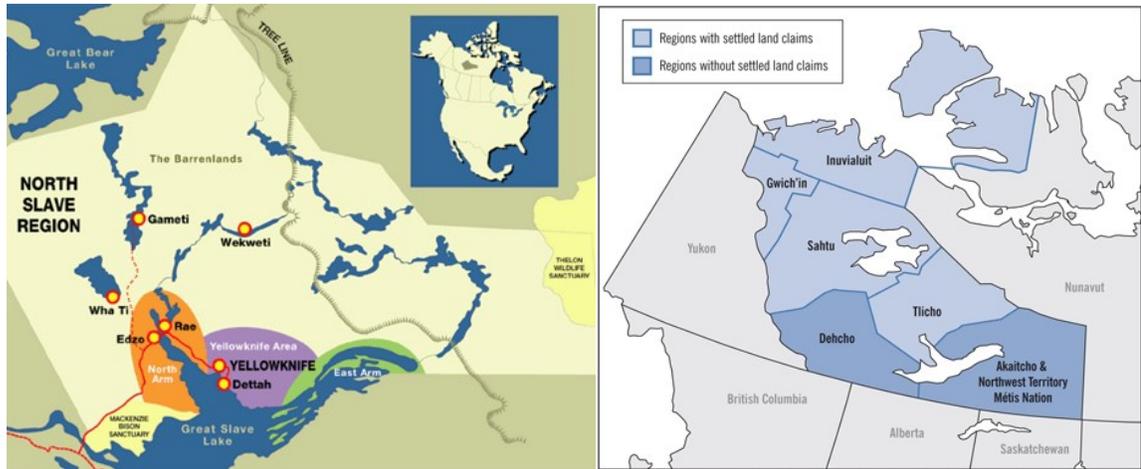
In looking to politicize Yellowknife's food system, I take a historical approach, using the lens of the political ecology of food. These theories highlight that food systems and their transitions are shaped by as well as help to shape political, economic, social and ecological forces locally and more broadly (Friedmann & McMichael, 1989). As Mintz (1985) highlights,

“when unfamiliar substances are taken up by new users, they enter into pre-existing social and psychological contexts and acquire- or are given- contextual meaning by those who use them. How that happens is by no means obvious” (Mintz, p. 6, 1985).

Food systems are complex and understanding their transitions is multi-faceted. Therefore, this historical account seeks to highlight the different aspects of the Yellowknife food system and should be seen as an overlapping history, rather than a linear path. Further, as Emilie Cameron (2011) has argued, the North is often wrongly portrayed in the binaries of north versus south, mining versus communities, colonial versus indigenous, industrial

activity versus traditional economies. The North, including its food systems, is more nuanced than this. My account seeks to highlight these complexities.

**Figure 3: Maps of the Yellowknife Region and the Akaitcho Territory**



The Yellowknife region is within the Akaitcho territory, as seen in Figure 3, and is the home of the Yellowknives Dene people<sup>17</sup>. The Dene are a land-based people that have always relied on hunting, gathering and fishing in their local territories as the main sources of food. Caribou, other game and fish are the main staples in the diet as well as gathering berries and other edibles from the local environment. Trade and sharing between nations is a further source of food (T'seleie, 2016). This food system is deeply embedded with culture and connection to the local ecology. As well, it has been governed through complex and resilient practices and rules for time immemorial. The Dene's cultural connection to their food system is most prominently displayed in their creation story, which sees them as descendants of the caribou<sup>18</sup> (Beaulieu, p. 60, 2012). The ecological connection can be highlighted through the practices and rules for governing Dene hunting and gathering. Using common-pool resource theory, multiple studies in the

---

<sup>17</sup> their name comes from their use of native copper in making tools.

<sup>18</sup> Out of respect for the story and due to my lack of cultural relationship to it, I will not re-tell it.

NWT show that these practices and rules are the result of systematic observation and interpretation of ecological conditions and are used to adapt hunting and gathering practices based on the availability of a food (Parlee et al., 2005; 2006; 2007; 2018; McMillan & Parlee, 2013). Culture, ecology, knowledge and governance are all interconnected in Dene traditional knowledge, which is rooted in their land-based way of life and forms the basis of their epistemological and ontological understandings of the world (Sandlos & Keeling, 2016). Importantly, this should not be read as a romanticism, but as the ability of the Dene to govern their food system based in their traditional knowledge, practices and institutions.

Hunting, gathering and fishing continues to maintain the Dene way of life. At the same time, colonialism has changed these systems in many ways over time. Europeans and the Dene, including the Yellowknives, began regularly interacting with each other through the fur trade and prospecting in the nineteenth and early twentieth century. By the 1840s, nine Hudson's Bay Company (HBC) trading posts had been established in the Mackenzie River valley (The Dene Nation, 2016). Fort Rae, about one hundred kilometers northwest of what is now Yellowknife was the primary trading post for the area, until a small outpost opened in 1920 in Dettah. Further, prospectors were in the Yellowknife area as early 1890s (O'Reilly, 2015). Settlements encouraged traders and missionary churches to stay in the North and some built farms and gardens.

By 1911, there were farms at the HBC posts of Fort Smith, Fort Resolution and Fort Providence as well as Fort Good Hope in 1928, and each became sub-stations of the Dominion Experimental Farm system. Yellowknife had a small experimental plot in the 1930s and 40s (Gardiner, 1939; Motherwell, 1924; Leahey, 1954). Based on federal

archival research, Sandlos (2007) notes the mentality of this time as,

“The first generation of conservation bureaucrats in Canada eagerly embraced and promoted colonization schemes in the northern territories, encouraging initiatives such as domestication and rational management of wildlife populations on vast ranches so that the North might be transformed from a homeland for hunters and trappers to a region bustling with settlement and industry” (p.13).

The experimental farms were part of the expansionist agenda of the Canadian government, looking to the North for potential agriculture settlements. They were some of the first instances of entrenching a different food system in the northern landscape.

While the enthusiasm for the experimental farms waned during the Depression and World War Two years (Sandlos, 2007), the farms had a lasting impression in the communities they were a part of. Many, including Indigenous growers, look back to these farms as inspiration for northern agriculture today. At the same time, these farms are connected with the legacy of colonialism as they were privileged by patriarchal power structures that wanted to expand the ‘modernized’ economy into the North through farming and ranching. Further, gardening and farming was included in the residential schools that Dene children were forced to attend. This has left the Dene with a complex relationship to agriculture.

A direct interference in the Dene food system came with the first federal Act for the preservation of game in 1894 (The Dene Nation, 2016). This was the first time an outside governing structure was placed on the Dene’s hunting and gathering practices. These Acts took a paternalistic approach that saw the Dene and the other Indigenous peoples of the NWT as incapable of conserving wildlife (Sandlos, 2007). In their ethnocentric ignorance, these Acts and conservation laws largely ignored that the Dene had a thriving way of life based in a hunting food system for time immemorial.

Contestation of these Acts and the assertion of sovereignty over their food system by the Dene, including the Yellowknives, has been continuous and strong right into current times (Sandlos, 2007; Sarkadi, 2015; Gleeson, 2016). While devolution has allowed for co-management of caribou and other large game herds between Aboriginal governments and the GNWT, the Dene still do not have full self-determination over their food systems.

Resource extraction development exploded in the NWT in the post-world war two era. There was prospecting, mineral claims staked, and oil drilled in the NWT from the late nineteenth century throughout the interwar period (The Dene Nation, 2016). In the Yellowknife region, gold mining began in 1933 and had its largest boom in the postwar period. The rapid changes brought by mining in the Yellowknife area are exemplified by its ballooning population increase. In the 1930s there were a few hundred people in Yellowknife, but between then and the early 2000s eleven gold mines were established in the region and the city's population ballooned to its current population of almost 20,000 (O'Reilly, 2015). These new residents were from other communities in the NWT, Canada and beyond. Further, these mines quickly became the center of 'formal' economic activity in the NWT and in 1967 Yellowknife was named the capital of the territory. Resource extraction brought social, economic, political and environmental changes to the Yellowknife food system.

Gardens and agriculture intensified in Yellowknife in the early mining years with the experimental plot (Government of Canada, p.86, 1950) and other gardens and farms, but localized agriculture was largely short lived. One example is a dairy farm that "the family operated with 22 cows from 1951 to 1957... They let the cattle graze among oat fields in the summer and then brought them into an insulated barn for the winter"

(Edwards, 2010). This farm had the same fate as many other agricultural initiatives in the Yellowknife region; they were undersold by imported powdered milk (Edwards, 2010). The post-war years were the era of the 'modernization' and the food system was both shaped and helped to shape this agenda. Government strongly supported the resource extraction industry to bring about a modern North and they showed this support through subsidies for railways, highways, airports and hydroelectric developments around key mining areas (Sandlos, 2015). As well, industrial food products manufactured in the south were getting their own subsidies, both hidden and explicit, that made them seem economically efficient and could undercut the food grown in the local environment. In the case of powdered milk, dairy subsidies in the 1950's were explicitly used to support the Canadian dairy industry (Friedmann, 1992). More hidden, the roads and other transportation infrastructure developments worked to make shipping these foods easier. With the boom of resource extraction came deepening ties to imported and industrially-manufactured foods in the Yellowknife food system.

For the Yellowknives Dene and the hunting and gathering food system, resource extraction developments brought on rapid social, political, economic and cultural changes. Some of these changes were the explicitly supported by the federal government as assimilation tactics. Records of the time referenced mining as a gateway to move Indigenous people away from the fur trade economy and in to industrial wage labour (Sandlos, 2015). In the Yellowknife region in the 1950s, federal Indian Affairs convinced the Yellowknives Dene to move from their scattered camps to centralized settlements around the trading post at Dettah and on the end of Latham Island, which became Ndilo. While only a few jobs were made available to the Yellowknives at the mines, many were

brought into the wage economy with the move to permanent settlements (O'Reilly, 2015). These socio-economic shifts generally left less time for being immersed in a land-based way of life, but it did not wholly displace it, with wages used to support time on the land (Sandlos, 2015). Hunting, fishing and gathering was also taken up by the newcomers to the Yellowknife region, albeit within a different cultural context than the Yellowknives.

At the same time, there were many obvious negative consequences of gold mining for the Yellowknives and their harvesting-based food system. First, despite being in the Yellowknives' traditional territory, they received no revenues from the mines. This experience was part of the cry to start negotiations for the still-unsettled land claim within the Akaitcho Territory (O'Reilly, 2015). Further, the pollution of the local ecology from the mines in the Yellowknife region is infamous. All of the mines contributed to water and airborne pollution, but the leaking chambers at Giant Mine, which house 237,000 tonnes of arsenic trioxide, had the largest impact. The Yellowknives,

“have described the area of the mine site as a previously very productive valley full of blueberries and fish, an important gathering area that the mining operation completely destroyed. The Yellowknives Dene also suffered disproportionate risks from arsenic due to extensive contamination of snow and water used for drinking” (O'Reilly, p. 344, 2015).

Giant Mine made the land and water around Yellowknife unusable for hunting and gathering from. Continuing today, there are advisories not to swim in, drink and fish from, and/or gather around many of the lakes and lands in the Yellowknife region (GNWT Health and Social Services, 2017). Further, resource extraction has had a significant impact on the Bathurst caribou herd territory, a main food source for the Yellowknives. Backed by strong scientific and traditional knowledge, Parlee, Sandlos &

Natcher (2018) argue that resource extraction is the greatest stress on the Bathurst herd, which has been declining to critically low levels since mining opened in its range in the 1990s. Yet, this has had little influence on decisions about resource extraction, with GNWT approval for many new mining projects, and decisions to open new areas of caribou habitat for mineral exploration. Resource extraction has significantly impacted the hunting, fishing and gathering food system for the Yellowknives.

This complex, interconnected history of social, political, economic and environmental change is the foundation on which the current Yellowknife food system rests, including its many challenges. Different types of foods and harvesting practices have meshed together into Yellowknife's current food system including hunting, fishing, gathering, agriculture and imported foods. Importantly, the food system was both influenced well as an active part within these rapid changes. In terms of political changes, paternalistic governance of wildlife was placed on the Indigenous people in the NWT, including the Yellowknives. These acts and regulations were ignorant of the ecologically adaptable governance practices of the Dene's main food sources (Sandlos, 2007; Parlee, Sandlos, Natcher, 2018). Further, Yellowknife became the capital of the colonial administration structures of the NWT, placing these new power sources within the territory of the Yellowknives. This should not be read as wholly negative as it gives closer access to the bureaucratic administration. However, Yellowknife is a regular location of contestation over conflicting governance structures, including those of the food system (Sarkadi, 2015; Gleeson, 2016). Environmentally, land was disrupted in the Yellowknife region with the advent of mining, putting further stress on the hunting, fishing and gathering food system. Mining also affected agriculture, due to contamination

of local soils.

The socio-economic changes within the Yellowknife region over the period 1930s to today have been profound, with federal support to build a 'modern' economy through resource extraction (Sandlos, 2007 & 2015). Part of the modernization process involved encouraging the Indigenous peoples of the NWT to leave the hunting and trapping economy and assimilate into wage labour. These changes partially impacted the Yellowknives hunting, fishing and gathering practices, with less time to be immersed in a land-based way of life. Concurrently, imported foods were becoming more important in the changes in lifestyle for the Yellowknives as well as the large influx of new residents to Yellowknife. Grocery stores with imported foods were part of the new modern life, as well as supported through the government subsidies for industrial food developments in the rest of Canada. Agriculture was taken up by few prior to and during the early years of the post-world war two period, but was pushed out due to this deepening connection to imported foods. Human health was also impacted through these socio-economic changes. It has been shown that traditional food patterns are associated with better diet quality and adequacy in the Dene peoples (Sheehy, et al., 2014). Further, the store-bought foods that are taking the place of traditional foods are associated with increased total energy intake from carbohydrates, particularly sucrose, fat and saturated fat (Receveur, Boulay, & Kuhnlein, 1997).

To conclude this account, these rapid changes have parallels to other food systems transitions that have influenced the theories of the political ecology of food. In particular, the Yellowknives Dene have been filling the void in their food system with imported foods at a time when the social, political, economic and ecological structures that

supported their land-based diets are changing. Further, new residents to Yellowknife have also taken up these foods, deepening these structures. At the same time, industrial imported foods have been directly and indirectly supported through modernizing efforts during this upheaval. This mirrors other transitions to the globalized industrial food system (Friedmann & McMichael, 1989; Mintz, 1985; Winson, 2013), which has been shown to deepen the championing of economic rationalities and move away from connections to a specific ecology or people. This means that people and ecology can be relatively forgotten about in food systems, other than their roles as consumer and land to grow on, respectively (Lind & Barnham, 2004; Cronon, 1991; Mintz, 1985; Winson, 2013).

#### **4.2 A Food Policy Approach: Food Systems Thinking and Self-Determination**

This section recommends the use of a food policy approach that embraces food systems thinking and promotes Indigenous self-determination. This approach embraces the complex, interconnected role of food in our social, political, economic and environmental systems, such as that described above. Prior to examining this approach, I critique the analysis of food system issues as a product of income insecurity and the cost of food, which is commonly used in the North and elsewhere. For example, Nutrition North is a federal program that focuses on the cost of food<sup>19</sup> (Government of Canada, 2017). In Yellowknife, income security and the cost of food was a large part of the analysis in the *Yellowknife, Ndilo and Dettah Food System Assessment and Community Food Action Plan* (Lutra Associates Ltd., 2010). My argument should not be read as

---

<sup>19</sup> It is important to note that Nutrition North does not apply to Yellowknife, so it is not discussed in detail here. It is applicable to other NWT communities and the critique below does have parallels to this program.

discounting the *Assessment*, but as an opportunity to broaden the way that policy addresses food systems.

Income security and the cost of food are important parts of a food system; however, they are not the only part. This brings to attention the insight of “blindness” within food systems as well as the policies related to them. As noted,

“Drawing system boundaries, in a sense, sets up the field of concern. It means that those processes within the boundaries are subject to active consideration and analysis, and those outside are designated ‘context’. However, human perception can remain incomplete and uneven in its acuity and interest ... this results in bracketing out – not seeing or not fully seeing – particular social actors and groups within the system” (Hinrichs, 2010).

Blindness can also be understood as a narrowing of scope. It is important to note that blindness can occur by focusing on a certain area of the food system, as well as when looking system-wide, but missing/ignoring actors within it (Hinrichs, 2010). Focusing solely on income security and the cost of food is addressing economic access within of the food system but relegating other parts of the system to context. This removes these other parts from the analysis and makes them seem irrelevant to the system and policy decisions, even though they remain influenced by the decisions made as well as have influence on the system.

Examining only economic aspects, such as income security and the cost of food, as the primary focus of the food system and policy prescriptions can be used to support the neoliberal agenda of championing market-economy rationalities. While, this approach is not linked to neoliberalism, it does stay within the paradigm of market-based relations. As noted, neoliberalism’s deepening of market logic makes it difficult to imagine other social-economic-environmental relations other than those in the capitalist market (Guthman, 2008); this is an important oversight in Yellowknife’s food system. Common-

pool resource management and the sharing economy are important to all parts of Yellowknife's food system, especially the practices of the Yellowknives Dene and other Indigenous peoples in the city. These aspects of the food system do not wholly fit within market-economy rationalities. In today's socio-economic context, income security does affect the ability to be on the land to hunt, fish and gather, while at the same time the management and sharing of these foods is not based in the market. An analysis of the food system or policy prescriptions that only focuses on market-based relations are going to be 'blind' to the other social-economic-environmental relations that are at play.

For example, a sole focus on income security and the cost of food can contribute to propping-up market-based economic development interests that are detrimental to other parts of the food system. An analysis of the food system within the paradigm of market-based economic rationalities can thus work to justify only market-based solutions. As the primary contributor to the NWT's GDP (NWT Bureau of Statistics, 2017), resource extraction is a main source of market-based economic development in the territory. This creates a privileging scenario where resource extraction, as a main industry, is seen as necessary for improving the market economy, but it also creates disturbances as well as degradation and loss of habitat for wildlife that are part of the food system. This is particularly the case for the Bathurst caribou herd, which has seen its range continually being taken up for mining exploration and development as well its population plummet (Parlee, Sandlos & Natcher, 2018). Focusing solely within the paradigm of the market-based economy when analyzing the food system and creating policy does little to challenge the current approach that privileges the market-based economy over the subsistence and sharing economy. Further, it is argued that the GNWT

and the City of Yellowknife have shown a propensity to be subservient to mining and resource extraction interests, rarely putting limits on their operations despite negative consequences (O'Reilly, 2015). As well, Parlee, Sandlos & Natcher (2018) have highlighted that the “open access” approach to resource extraction combined with wildlife management that puts onus on Indigenous harvesting,

“mirrors historic periods... during which time caribou management was explicitly about advancing private interests in northern lands and resources at the expense of Indigenous cultures and livelihoods” (p. 1).

The choice between supporting resource extraction at the expense of hunting, trapping and gathering parts of the food system, is likely to end in the favour of resource extraction interests.

While the economic aspects of a food system are important parts, they are also not the only parts. Focusing solely in these areas create blinders that leave other aspects out of the analysis and policy-making process, despite the fact they continue to affect the food system and are also affected by the changes in institutions and access to resources of policy decisions. This can create negative consequences within the food system that have political repercussions. Therefore, I call, in conjunction with the Yellowknife Food Charter Coalition and Ecology North, for a different approach to food system governance in Yellowknife that brings the whole food system into focus as well as is cognizant of and addresses its political nature. This approach entails collaborative food systems thinking and supporting Indigenous self-determination.

Food system thinking brings the integrated nature of food systems into decision-making processes. Specifically, “food systems thinking reflects the awareness of how actions by one group in the system affects other groups, as well as the environment, the

economy, the fabric of society and the health of the population” (MacRae & Donahue, 2013). Food systems thinking allows for the complexity of all aspects of the food system to be brought into view, so that they may be thought of and addressed together. Food systems thinking can help to bring out the political nature of food systems by highlighting how policies and actions within one area can affect the institutions and access to resources of another. In this way, food systems thinking can help to acknowledge the historical changes to Yellowknife’s food system described above, so that power imbalances, complex relationships, and misleading stereotypes rooted in this history can be addressed. Food systems thinking has been adopted by many municipal governments in Canada (MacRae & Donahue, 2013), which can provide examples of food systems policies as well as lessons learned. Yellowknife’s food system includes the actors, actions and outcomes relating to hunting, fishing, gathering, agriculture/gardening and imported foods.

‘Collaboration’ is a good descriptor of the way that food systems thinking is practiced within governance structures. In general, collaborative governance seeks to shift away from hierarchical and siloed decision-making to bring together government and non-government actors in a horizontal or system-like fashion to take part in the process of making decisions about the rules and practices that shape our lives.

Collaborative governance is regularly referenced in relation to issues, such as food insecurity, that are complex and not easily solved with a single policy or department, but require multiple sectors, programs and initiatives to work together to make an impact (Blomgren Bingham, Nabatchi & O’Leary, 2005; Candel, 2014). When food systems thinking is brought into collaborative governance it helps to identify the complexity of

actors involved in a food system (MacRae & Donahue, 2013). Collaboration also helps to politicize food systems governance. Changes to institutions as well as access and control of resources are examined and decided upon by those that are affected by them.

In connection, collaborative food systems governance at the municipal level still needs to support Indigenous self-determination in their food systems. Indigenous self-determination is typically framed in terms of nation-to-nation issues, which can make it seem unrelated to municipal policy. However, Indigenous self-determination should be upheld at all levels of policy, including at the municipal. While how to do requires further thinking by food system advocates, local governments, First Nations, and Indigenous people (in general) alike, theories of co-governance and innovative municipal food policy offers clues. Indigenous food systems are not regularly addressed within food policy in Canada, with the important exceptions of the *Thunder Bay and Area Food Strategy* (City of Thunder Bay, n.d.) as well as some municipal governments within British Columbia<sup>20</sup>. In Yellowknife (as well as other Northern communities and more broadly) ignoring Indigenous food practices would be leaving a significant part of the food system out of the policy process, and would work to perpetuate the colonial legacy of undermining Indigenous food systems. Therefore, Indigenous food system and their right to food systems that meet their needs should be included in food systems governance. Importantly, the traditional knowledge of the YKDFN needs to be incorporated within the policy process. Further, this knowledge needs to be recognized as a source of historical memories relating to the rapid social, economic and environmental changes within the region, including the political and cultural implications of these changes

---

<sup>20</sup> Policy examples from these food policies are presented in following chapter.

(Sandlos & Keeling, 2016). As well, the non-commercial food system should be kept within the purview of the policy-making process, including the provision of resources to support it (Parlee et al., 2005; 2006; 2007; 2018; McMillan & Parlee, 2013). This should be done in collaboration with the City of Yellowknife, YKDFN and local food systems actors and advocates. It also should not be limited just to the traditional practices of hunting, fishing and gathering, but other parts of the food system as well.

Agriculture/gardening and imported foods should also be thought about through a non-commercial lens and the YKDFN should be able to decide how they address these parts of the food system. Finally, food policy in Yellowknife should be aligned with the rules and practices of the YKDFN for hunting, fishing and gathering (and other parts of the food system) and non-Indigenous people should be educated and encouraged to follow them out of respect for these food practices. While the City of Yellowknife has little jurisdiction relating to these practices, they can play a role in educating the public.

There are critiques of a food systems approach that should be taken into account when implementing collaborative food systems governance. First, ‘blindness’ can still apply when using food systems thinking. Hinrichs (2010), notes that the lens that is used when taking a food systems approach can result in actors being missed. In her example, the lens of ‘food justice’ tended to miss/avoid actors that did not fit within this lens. This is not to say that lenses such as food security, Indigenous self-determination should not be used when food systems thinking. However, these lenses should be made explicit when collaborating with different actors and in decision-making processes. As well, coming back to the food system wheel and looking for gaps in collaboration partners can help reduce blindness.

A second critique of a food systems approach is that undertaking complexity can be daunting (Chevalier & Buckles, 2013; Hinrichs, 2010). Once one starts seeing connections within the food system, it can seem never ending. However, it is important to note that working in collaboration can make managing complexity easier. When actors from different parts of the food system collaborate, interconnections can become more clear (Koc et al., 2008; Carlson & Chappell, 2015). Further, managing complexity in food systems is where ‘boundaries’ are important (Hinrichs, 2010). Different from blinders, boundaries are conscious and explicit limits on food systems thinking. They can also be thought about as explicit areas of focus, while staying mindful of the other parts of the food system, including the effects of decisions made. Within the collaborative food system governance process, this approach could include focusing on struggling parts of the food system or areas that have policy vacuums.

Instead of taking a food policy approach that creates blinders and focuses solely on the economic aspects of food, this section recommends embracing food systems thinking and promoting Indigenous self-determination. This approach can help to politicize food system governance, so that it can delve into the complex, interconnected role of food in our social, political, economic and environmental systems. An onus on the economic aspects of the food systems can create negative consequences. Collaborative food systems thinking that supports Indigenous self-determination can help to remove blinders and embrace complexity for more just and sustainable food policy in Yellowknife.

### **4.3 Conclusion**

This chapter is a precursor to the policy briefs for a Yellowknife Local Food

Strategy in the following chapter. As such, this chapter first politicizes the Yellowknife food system by examining its history to highlight how food systems both influence and are influenced by the wider political, economic, social, cultural and environmental forces of the local region and beyond. Then, I examined a common food policy approach, which has also been used in Yellowknife (Lutra Associates Ltd, 2010), of focusing on income security and the cost of food. This approach creates blinders within the food system, which can contribute to negative consequences and privileging scenarios as well as not doing enough to make food systems more just and sustainable. Finally, collaborative food systems governance is examined as an approach that embraces complexity and the political nature of food system as well as supports Indigenous self-determination.

The next chapter turns to a set of policy briefs with the intended audience of the City of Yellowknife for the creation of a Yellowknife Local Food Strategy. Based on the guidance of my research partners as well as reflection on existing food policies in Canada and literature on just and sustainable food systems, these briefs explain and show the significance of using collaborative food systems governance that supports Indigenous self-determination. Further, they highlight current barriers and opportunities to just and sustainable food systems within existing policies and strategies at the city level. Lastly, they provide examples of best practices from other food policies of what could be included in a Yellowknife Local Food Strategy that seeks to support just and sustainable food systems.

## **5 Chapter: Briefs**

These briefs were produced collaboratively with the Yellowknife Food Charter Coalition to outline the case for a Yellowknife Local Food Strategy to be presented to the City of Yellowknife. Importantly, the structure and topics discussed within the briefs were decided upon by the Coalition. I, as the researcher conducted the primary research to flesh out the topics and write the briefs. The briefs were then reviewed and commented on by the research partners. These briefs are an important part of the PAR process, as they are a tangible product for the research partners to help them fulfill their goals. They also help to increase the long-term capacity for the partners as this collection of research on food policy may not have been possible with the community-academic partnership. Therefore, these briefs should not be read as a traditional thesis chapter, but as policy briefs with the primary audience as the City of Yellowknife. Concurrently, they should be understood as integral to the PAR approach of this thesis.

### **5.1 A Yellowknife Local Food Strategy Using Food Systems Thinking**

The Yellowknife Food Charter Coalition has proposed that the City of Yellowknife put into action a Yellowknife Local Food Strategy that uses “food systems thinking”. This brief provides information on what food system thinking is, an overview of Yellowknife’s food system, and examples of food systems thinking already happening in Yellowknife. The conclusion of this brief outlines how the Yellowknife Food Charter provides an strong foundation for a local food strategy with food system thinking.

#### **5.1.1 What is Food Security?**

Food security is regularly defined as “all people, at all times, having physical, social and economic access to sufficient, safe and nutritious food to meet their dietary

needs and food preferences for an active and healthy life” (FAO World Food Summit, 1996). Food *insecurity* is the opposite. It is an outcome of inadequate or uncertain access to an acceptable amount and quality of healthy food (Canadian Council of Academies, 2014). Food security has four key pillars: *availability*, *accessibility*, *quality* and *use* of appropriate foods. The *stability* of food resources over time is also a key factor. The root causes of food insecurity relate to when these four pillars are able to be fulfilled. How these pillars are affected is different in every community, with economic, social, cultural and environmental impacts all playing a role (Wesche et al., 2016).

### **5.1.2 What is a Food System?**

A food system is all the activities, outcomes and actors in a food cycle. Activities in a food system include: land and natural resource management, production, harvesting, processing, packaging, distribution, marketing, buying, selling, sharing, consumption, celebration, and disposal of food and food-related items. Outcomes in a food system include: the environmental, social, economic, health, political and cultural consequences of the food cycle. Actors in a food system include: all those involved in food cycle activities, including those that make decisions about them, as well as advocates for food-related activities and outcomes.

### **Figure 4: Food System Wheel**



### 5.1.2.1 What is Food Systems Thinking?

Food system thinking brings the integrated nature of food systems into decision-making processes. Specifically, “food systems thinking reflects the awareness of how actions by one group in the system affects other groups, as well as the environment, the economy, the fabric of society and the health of the population” (MacRae & Donahue, 2013). Food systems thinking has been adopted by the United Nations Environmental Programme to guide its actions and decisions on food systems (UNEP, 2016).

Decisions about food tend to be disjointed and do not consider the role of food in shaping healthy, sustainable environments and strong, just communities. Food systems thinking encourages aligning and engaging diverse actors to collaborate and make connections between food system actors and/or activities that do not normally interact. The goal of this collaboration is to create integrated solutions that produce positive outcomes in the food system.

Food Systems thinking can help manage complex problems, such as food

insecurity, but can also facilitate simple and effective solutions through collaborative efforts (UNEP, 2016). For examples of collaboration creating synergies between food system actors in Yellowknife to solve complex food system issues see section 5.15.

### **5.1.3 Beyond Agriculture**

Food systems thinking broadens the discussion of food system issues beyond agricultural to enter into more comprehensive examinations of a food system. Using an agriculture-centric lens can erase the other activities, outcome and actors within a food system and can lead to focusing on production-side solutions to issues that need a whole system approach (IPES-Food, 2016). Using food systems thinking would broaden a Yellowknife Local Food strategy in the following ways:

- A food systems approach includes the coordination and collaboration of actors throughout the food chain, including government decision-makers, to create integrated solutions.
- A food systems approach reflects an awareness of the environmental, social, economic, political and cultural consequences of activities within the food system.
- A food systems approach recognizes that Yellowknife's food system has 5 pillars: fishing, hunting, gathering, agriculture and imported foods. Each of these pillars deserve concerted attention in decisions-making for Yellowknife's food system.

### **5.1.4 Yellowknife's Food System**

Yellowknife's food system, unlike southern food systems that have agriculture at their core, has 5 pillars: fishing, hunting, harvesting, agriculture and imported foods.

While there is a heavy reliance on imported foods in Yellowknife, fishing, hunting and harvesting continue to be important parts of the food system for Yellowknife's

Indigenous and non-Indigenous populations and agriculture is a nascent sector with increasing interest. Currently, many of the activities in Yellowknife's food system,

especially growing, processing, packaging, distribution and marketing, largely occur

through the imported food system and there is limited infrastructure or resources for it to

occur on a local scale (Lutra Associates Ltd., 2010).

There are several signs that that all is not well with NWT food systems, including in Yellowknife. First, the NWT has the second highest incidence of food insecurity in Canada at 24.1% of households (Tarasuk, Mitchell, & Dachner, 2016). At the same time, there is a 10% higher than the Canadian average rate of obesity (GNWT, 2011b).

Further, there is a rapid ‘nutrition transition’ with decreasing consumption of traditional land-based foods being replaced by low nutritional value store-bought foods (Sharma, et al., 2009; FAO, 2013). While these statistics are not measured on a community basis in the NWT, Yellowknife fits within these trends. The signs of food insecurity in Yellowknife are present with high and continually increasing use of emergency food services (Lutra Associates Ltd., 2010). Obesity is a common concern and the nutrition transition is also present with the percentage of Indigenous households in Yellowknife where 75% or more of the meat or fish eaten was obtained through hunting or fishing has declined from 8.9% in 1999 to 4.0% in 2014 (NWT Bureau of Statistics, 2014c).

Yellowknife has region-specific concerns as well.

However, many of the actors and organizations that are performing food system activities and advocate for food-related outcomes in Yellowknife are finding dynamic and innovative solutions to food system issues, and growing a resilient, Yellowknife-based food system.

## **5.1.5 Examples of Food Systems Thinking in Yellowknife**

### **5.1.5.1 The Yellowknife Farmers Market**

The Yellowknife Farmers Market (YKFM) creates a space where all food system activities occur as well as the recognition of how those activities and the actors at the

market affect food system outcomes. Yellowknife Farmers Market Vision and Mission are as follows:

- Vision: The YKFM inspires and nurtures a healthy community by building a local, sustainable and Northern food economy in a vibrant, diverse and inclusive market place.
- Mission: The YKFM plays a central role in creating a just and sustainable food system and in fostering an economically, ecologically, culturally and socially sustainable community (YKFM, n.d.).

Examples of food system thinking put into practice at the YKFM include the Supper Clubs and composting initiatives.

In partnership with the Center for Northern Families and the SideDoor Resource Center, the YKFM runs Supper Clubs using local, nutritious foods from the Northern Farm Training Institute, the YKFM Harvesters Table and other vendors. Youth and young families benefit from weekly cooking classes, including advice from a local dietician on healthy, balanced diets for the whole family. These clubs use food systems thinking by connecting local food producers, community organizations, and consumers as well as having the goal of improving social, economic, health, and cultural food system outcomes.

The composting initiative at the YKFM ensures that the food system cycle is maintained. All vendors at the YKFM are mandated to only use compostable materials for anything that is consumed at the market. At the same time, volunteers are utilized to educate patrons on proper waste sorting and the benefits of composting. Further, waste diversion incentives are also in place to reduce the total amount of waste produced at the market. Composting food and food-related items bring the food system full circle back to land and resource management, as well as having positive environmental outcomes.

### **5.1.5.2 Food Rescue**

Food Rescue makes connections between many food of Yellowknife's food system actors by diverting food waste. Food that is destined for the landfill is collected from donors, such as grocery stores and food distributors, and is re-processed and/or packaged to be distributed to emergency food service organizations in Yellowknife. Food is expensive to dispose, therefore its diversion creates positive economic as well as environmental outcomes for donors. There are also positive social and health outcomes for the organizations receiving the food. Food Rescue brings together multiple actors and organizations to create an integrated solution to the food system issues of food waste and the need for emergency food services.

### **5.1.6 A Yellowknife Local Food Strategy Using Food Systems Thinking**

The Yellowknife Food Charter was officially endorsed by the City of the Yellowknife in July 2015 and provides a unified vision of a just and sustainable food system for Yellowknife that could provide the basis of a Yellowknife Local Food Strategy. The Yellowknife Food Charter Vision states:

“A just and sustainable food system in Yellowknife is rooted in a healthy community, where everyone has access to adequate and affordable nutritious food; more food is grown and harvested locally; and food production policies and infrastructure are in place to support an economically viable, diverse, and ecologically sustainable local food system” (YKFM, 2016)

The Yellowknife Food Charter was created to respond to the need for more cross-sector dialogue around food security in the city of Yellowknife. The Charter provides a document to help guide a diverse set of actors within the Yellowknife food system to align their work with others and find synergy for collective action based on shared vision and principles for a just and sustainable food system.

Through food systems thinking, the Charter is built on the understanding that by improving social justice in the food system, ensuring environmental sustainability and strengthening the economy, we can improve food security and contribute positively to the overall quality of life for the people in Yellowknife. It is also understood that the best way to reach these synergies is through participation and collaboration among as many food system participants as possible (Johnston & Williams, 2016).

## **5.2 Environmental, Economic, and Health Impacts of Local Food in Just and Sustainable Food Systems**

Many cities and municipalities are becoming involved in food systems work and promoting local food systems to address issues relating to food, such as food insecurity and diet-related disease. They are also looking to mitigate the negative impacts of globalized, industrial food systems. Many studies have shown these food systems to contribute to:

- Degradation and contamination of land, water and ecosystems
- High greenhouse gas emissions
- Biodiversity loss
- Hunger and micro-nutrient deficiencies
- Obesity and diet-related diseases
- Livelihood stresses for food producers and harvesters (IPES-Food, 2016).

Many of the foods that are imported in Yellowknife come from the global, industrial food system. There are benefits to imported foods in Yellowknife. The city would not be able to feed itself without the foods that are imported into Yellowknife. However, the system of globalized food trade and industrial processing of foods also has many negative externalities that can be partially mitigated through more local food production.

It is important to note that local food systems, as they are understood in terms of shorter physical distances from production to consumption to waste management, are not

inherently more ecologically sustainable, socially just, democratic, healthy or address issues of food security than foods systems on a broader scale (Hinrichs, 2003). However, when ‘local’ is understood in a more comprehensive manner, to include production and harvesting practices that work with the local ecology and governance systems that collaborate with local partners as well as shorter supply chains, there can be dramatic benefits (IPES-Food, 2016). Therefore, through the support and involvement of local decision-makers, local food systems can realize their many benefits. This brief provides an overview of the economic, health, social and environmental benefits of local food systems, including urban food production and harvesting.

### **5.2.1 Economic Impacts**

It is generally agreed that there are clear benefits of local food systems to a community’s economic development, particularly when the food system focuses on import substitution (Pinchot, 2014). Further, the multiplier effects of local food systems can create direct, indirect and induced impacts, which have been found to be intensified in other regional centers of northern areas (Harry Cummings and Associates Inc., 2009). It is important to note that import substitution and the multiplier effect do not negate the arguments of comparative advantage, nor the growing and harvesting conditions of the Yellowknife climate. However, of those foods that can be produced and harvested locally, there are clear economic opportunities.

Import substitution is particularly relevant to the Yellowknife scenario, with the vast majority of foods available in the market being imported foods. To give an indication of the amount of food imported into Yellowknife, from July 1, 2015 to June 30, 2016 the Yellowknife Co-op imported 5.15 million pounds of grocery items (personal

communication, 2016). There is substantial room for import substitution in the Yellowknife market and doing so presents opportunities for growth and new jobs in the region.

There have been many studies that show the potential impacts of local food import substitution. In a review of these studies, Pinochet (2013) summarizes import substitution as,

“the most direct avenue through which local food system expansion can affect regional economies... Import substitution is associated with increased output, higher labour incomes, and more jobs, even with the confine of seasonal supply” (Pinochet, 2013).

In a recent study from Ontario, *Dollar and Sense: Opportunities to Strengthen Southern Ontario's Food System*, it was found that the effect of replacing 10% of the top fruit and vegetable imports with Ontario grown produce would be approximately a \$250 million GDP increase and create 3,400 new full-time-equivalent jobs (Econometric Research Limited, Harry Cummings and Associates Inc. & MacRae, 2015). While the southern Ontario food growing context is substantially different than that of Yellowknife, the above numbers highlight the significant impact even small changes in local food import substitution can have on a regional economy.

Another economic impact of local food systems is the multiplier effect. The multiplier effect, presented in a single number, estimates the impact of change in one variable in the economy, on another variable in the economy. For example, how will a change in employment and sales in the food system effect the rest of the economy. Multipliers regularly look at how direct impacts in a sector, create indirect and induced impacts. For example, the relationship between direct jobs produced in food production and jobs in food-related businesses (indirect) and general consumer goods and services

(induced) caused by the direct jobs (Harry Cummings and Associates Inc., 2009).

Its effects can be explained with a hypothetical scenario. There are two bunches of kale: one in the grocery store from California and one sold to the Fat Fox from a farm on the Ingraham trail. Both bunches of kale are purchased for one dollar. The dollar for the California kale is used by the grocery store to pay the distributor, who pays the importer and so on. When importing, most of that dollar leaves the local economy, known as leakage. The dollar from the Ingraham trail kale is used by the Fat Fox to pay the local farmer, who pays their farm employees, who pays for a movie ticket at the theatre in Yellowknife, who pays their employees and so on. In this scenario, more of that dollar re-circulates within the local economy with less leakage to imports (Jennings, 2012).

In a series of economic impact studies of local farms and food processors in northern Ontario districts, sales expenditure and workforce multipliers were calculated.

**Table 2: Northern Ontario Farm and Food Processor Multiplier Effects by District**

<i>District</i>	<i>Sales Expenditure Multiplier</i>	<i>Workforce Multiplier</i>
All northwestern Ontario districts (regional average)	No data	1.4 (Food Security Research Network, Faculty of Natural Resources Management Lakehead University, 2013)
Thunder Bay	1.3 (Harry Cummings and Associates, 2009)	1.7 to 2.1 (Harry Cummings and Associates, 2009)
Temiskaming	2.8-3.3 (Harry Cummings and Associates, 2009)	2.0 to 2.2 (Harry Cummings and Associates, 2009)
Kenora	1.3 (Harry Cummings and Associates, 2009)	1.3 to 2.1 (Harry Cummings and Associates, 2009)

From these studies, it was found that the proximity of urban centers plays a role in both sales and workforce multipliers (Food Security Research Network, Faculty of Natural Resources Management Lakehead University, 2013). Temiskaming district has multiple urban centers surrounding the district, Thunder Bay has the largest urban center and

Kenora has the least. With Yellowknife's similarities to northern Ontario's larger regional centers, these multipliers highlight significant potential impacts of growth in food system sectors.

### **5.2.2 Social Impacts**

The social impacts of local food systems are commonly cited as improving social capital and community development as well as deepening cultural connections and locally-adapted knowledge. In terms of social capital, or the networks of relationships that enable society to function more effectively, local food systems bring together farmers, harvesters, processors, consumers, local businesses and organizations, which build connections within the local community. Many studies have shown that part of the reasoning for participating in local food systems are supporting the local community, and social connection and interaction (Christy et al., 2013). In particular, Stroink and Nelson (2009) found that engaging in “activities such as hunting and fishing, and valuing local foods were associated with positive, healthy qualities such as self-reported health, life satisfaction, and social capital” (Stroink & Nelson, 2009). In the North and for the Dene, local food has always been and continues to be a significant part of social networks, through the sharing of harvests. In particular, the importance placed on sharing with elders and those in need in the community, highlights these connections (McMillan & Parlee, 2013).

Local food systems can also increase the capacity to retain and build locally-adapted knowledge, especially when organic and agroecological methods are used in food growing and harvesting puts an emphasis on traditional knowledge. As the International Panel of Experts on Sustainable Food Systems put it, “local foods come

with locally-adapted knowledge that is otherwise lost” (IPES-Food, 2016). Local foods that work with the local ecology deepen the understanding of and connection to the land and as a result are important part of strengthening culture.

### **5.2.3 Health Impacts**

In the North, the beneficial health impacts of eating locally harvested foods has been well studied, as well as the negative impacts of the increasing reliance on imported, low nutritional value foods. Recently, more northern diets have been rapidly transitioning from animals, fish and plants harvested from the local environment to store-bought foods. This has resulted in an increase in caloric intake, particularly from sugar and saturated fats (Zotor et al., 2012; Receveur, Boulay & Kuhnlein, 1997; Sharma et al., 2009). Further, another study has shown that harvested foods are associated with better health quality, particularly in terms of caloric and nutrient intake (Sheehy et al., 2014).

A further health benefit of local food is the physical excursion associated with growing and harvesting food can contribute to a healthy and active lifestyle. As well, food production can also contribute to psychological and emotional well-being through the connection to culture and the land (Boulet et al., 2014).

### **5.2.4 Environmental Impacts**

The most prominent environmental benefit of local food is that it decreases the distance of travel from production to consumption, also known as food miles. Reducing food miles represents a decrease in greenhouse gas emissions from the transportation of grocery items. Further, engaging in local food systems improves our capacity to observe, understand and manage local environments. This is achieved through the connection to ecosystems and land management of food production and harvesting, as well as the social

connections made with those working with the land.

However, it is important to note that many conventional and modern food production methods require fossil fuel and other energy requirements for their input as well as in the production, processing and preparation of food. For example, the synthesis of nitrogen fertilizers, a common input in conventional food production, consumes approximately 5% of the global annual natural gas demand (UNEP, 2016). Further, conventional agriculture is associated with other negative environmental impacts such as soil nutrient depletion, water diversion, water contamination, and loss of biodiversity (Boulet et al., 2014). Therefore, for local food to make a larger impact on environmental sustainability it must be paired with production and harvesting practices that work with local ecosystems and reduce energy inputs, such as organic and agroecological methods for food production and traditional practices for harvesting.

#### **5.2.4.1 What is Organic?**

Organic is a type of food production that seeks to “protect the environment, minimize soil degradation and erosion, decrease pollution, optimize biological productivity and promote a sound state of health” (Canadian Organic Growers, 2011). In Canada, certified organic agriculture prohibits “the use of toxic and persistent pesticides; synthetic fertilizers; the routine use of drugs, antibiotics or synthetic hormones; animal cloning; genetic engineering (“GMOs”); sewage sludge (“biosolids”); and irradiation. Organic standards also forbid the use of artificial food colours, flavours, sweeteners, preservatives and many other processing aids and ingredients in processed foods” (Canadian Food Inspection Agency, 2018).

#### **5.2.4.2 What is Agroecology?**

Agroecology is “the science of applying ecological concepts and principles to the design and management of sustainable food systems. It encompasses various approaches to maximise biodiversity and stimulate interactions between different plants and species, as part of holistic strategies to build long term fertility, healthy agro-ecosystems” (IPES-Food, 2016).

### **5.3 How Can a City Influence Just and Sustainable Food Systems? Current Planning Context: Barriers and Opportunities**

City governments are an ideal space to influence more just and sustainable food systems in their region with their close connection to their populations, planning and policy tools, resources, and connections to other levels of government. Further, cities regularly bear the brunt of food system issues, such as hunger and food insecurity, diet-related diseases, and environmental impacts. It is no wonder that more than 64 cities and municipalities in Canada have chosen to engage in food systems work (MacRae & Donahue, 2013).

Recently, the United Nations outlined its ‘New Urban Agenda’, highlighting the need for cities to take a lead in sustainable food systems by improving food security and nutrition, urban food systems planning, working across urban-rural divides and coordinating policies among food system-related sectors within the city and at other levels of government (United Nations, 2016). Further, city governments have the role of “reshap[ing] the conditions of the market to account for the public benefits that should flow from an urban food production system” (MacRae et al., 2012).

The Yellowknife Food Charter recognizes that food insecurity, along with diet-

related diseases, climate change, loss of food growing, harvesting and processing knowledge, waste reduction and boosting the local economy are food system issues in Yellowknife that need to be addressed through mutual planning throughout the community (Yellowknife Farmers Market, 2016). More just and sustainable food systems in Yellowknife are possible through action at the city level. Also, sustainable food systems in Yellowknife have broad reaching implications, with the city's ability to influence other communities in the territory.

It is important to understand the current planning context prior to looking at ways forward. This brief highlights the core barriers and opportunities in City of Yellowknife strategies, policies and by-laws relating to urban food systems. Recommended by-laws and policies relating to these barriers and opportunities are included below.

### **5.3.1 Current Planning Context: Barriers and Opportunities**

#### **5.3.1.1 Barrier: There are no Strategies or policies regarding food systems**

Currently, food security or other food system related issues are not included in any City of Yellowknife policies or strategies. Food is also not included in any of the mandates for the City's departments or divisions (City of Yellowknife, 2017).

Food is often overlooked in urban planning or it is considered the responsibility of other jurisdictions or for the private sector. However, city governments are already indirectly or directly involved in food systems through common areas of municipal responsibility:

- Land use planning
- Economic development
- Public health
- Environment and climate change policies
- Tourism, event planning and community celebration
- Poverty alleviation

- Waste management
- Infrastructure management
- Institutional procurement policies
- Water management
- Transportation planning
- Development approvals (MacRae & Donahue, 2013).

While there are no specific requirements in the GNWT *Community Planning and Development Act* for communities to manage or regulate food systems, it does state,

“3. (1) The purpose of a community plan is to provide a policy framework to guide the physical development of a municipality, having regard to sustainability, the environment, and the economic, social and cultural development of the community” (Community Planning and Development Act).

Food is intimately connected to all of these areas of physical and community development. From large cities such as Vancouver, Edmonton and Toronto to the northern city of Thunder Bay to regional cities such as Terrace, BC, cities have recognized the important role of sustainable food systems in their community’s quality of life, economic development and environmental sustainability. They have included objectives and policies within their community plans and/or created specific food strategies for their communities (MacRae & Donahue, 2013).

### **5.3.1.2 Barrier: current land zoning and other by-laws have minimal references to food systems**

In the City of Yellowknife Zoning By-law No. 4404 there is currently no definitions that relate to urban food production, such as agriculture or harvesting, or food processing (City of Yellowknife, 2017).

Urban agriculture and harvesting already occurs extensively in Yellowknife, including backyard hens, beekeeping, harvesting wild plants, fishing, trapping, gardening, composting and home greenhouses. While there are few by-laws that

discourage these practices<sup>21</sup>, it is important to protect the permission of these practices within City by-laws.

The largest gap in zoning and other by-laws are those that allow for commercial agriculture or harvesting within the city. Business Industrial and other mixed-use zones could allow for commercial food production through the definition of ‘commercial use’, stated as,

“the use of land, buildings or structures for the purpose of buying and selling commodities or supplying of services” (City of Yellowknife, 2017).

As well, the commercial sale of foods produced in residential zones could be allowed through the definition of ‘home-based business’, stated as,

“the secondary use of a principal dwelling, its accessory buildings and site, or combination thereof, by at least one permanent resident of the dwelling, to conduct a business activity or occupation which does not change the residential character of the buildings and site” (City of Yellowknife, 2017).

Other zones do not include permitted uses that relate to food production. Finally, the definition of ‘community garden’ explicitly does not allow for commercial production.

As the definition states,

“means a parcel of public land used by a non-profit society to produce edible and ornamental plants for the personal use of society members, for donation of produce to other non-profit organizations, and/or for sale by society members whereby the resulting revenues are used solely to develop and improve their community garden” (City of Yellowknife, 2017).

Currently, community gardens are some of the only lands available for agriculture in the city. While community gardens are located on public lands, an argument can be made

---

<sup>21</sup> The Snare and Trap by-law No. 3904 does not allow the setting of traps and snares within 1 km of the urban setting due to public safety concerns.

that because urban food production can fulfil numerous municipal objectives, private gains will achieve public purposes and therefore commercial sale from community gardens could be permitted.

It is suggested that food production, including agriculture and gathering, be allowed in all appropriate zones within Yellowknife, including the commercial sale of food products.

#### **5.3.1.3 Opportunity: The City of Yellowknife already engages in food system activities**

The City of Yellowknife is currently directly involved in food system activities including supporting and providing resources for the Yellowknife Farmers Market (YKFM), as well as the centralized composting program. The YKFM plays an important role in the local food system by creating a market place for local food producers and processors. The City directly supports the YKFM through grants and funding as well as through the market's location in the public space of Somba'ke plaza. The City's centralized composting program brings the food system full circle by turning food waste and other organic materials into the nutritious compost that is needed for soil management in sustainable food production.

Other direct actions include the City of Yellowknife endorsement of the Yellowknife Food Charter in July 2015. The City can build off the successes and relationships of all these direct activities to take further actions towards more just and sustainable food systems.

#### **5.3.1.4 Opportunity: urban food policies work to achieve multiple City objectives**

Food systems are intimately related to the health and quality of life of urban

citizens, culture and heritage, a city’s environmental impact and employment opportunities, all of which are important to a City government’s mandate and objectives. Urban food policies can also help to achieve City of Yellowknife objectives found within its plans and strategies.

**Figure 5: Food Systems Wheel and City Objectives**



*Economic Diversification*

Economic diversification is mentioned in many City of Yellowknife plans and strategies, including the *Council’s Goals and Objectives 2016-2018* (City of Yellowknife, 2016), the *2014-2019 Economic Development Strategy* (City of Yellowknife, 2013) and the *General Plan* (FoTenn Consultants & McSweeney and Associates, 2011) as well as in citizen feedback (Ipsos Reid & City of Yellowknife, 2011). In particular, the *Economic Development Strategy* states,

“The public sector and mining activities in the NWT provide Yellowknife with a strong business base. However, mining and resource development can be uncertain, and Yellowknife should seek ways to diversify the economy” (City of Yellowknife, 2013).

A commercial urban food system is a sector that could be incentivized to diversify the Yellowknife economy. In a study of other northern communities with mining and

resource extraction as the dominant economic sector, it was found that food production is also an important and reliable part of the economy that levels out the cyclical booms and busts of mining and resource extraction (Food Security Research Network & Lakehead University Faculty of Natural Resources Management, 2013).

The *Economic Development Strategy* also sets the mandate of establishing Yellowknife as an innovative city and providing supports to emerging business (City of Yellowknife, 2013). Urban food systems have been an area of innovation for many cities across Canada and abroad with examples of urban farms, community kitchens, distribution hubs, food production on roof tops, and incorporating farming and gardening in multi-use plans of public, private and institutional lands.

Urban food systems are also an area of emerging business in Yellowknife with the growth of the Yellowknife farmers market, local businesses seeking more local food products and the goals of the *GNWT Agriculture Strategy* (GNWT, 2017) to grow the agriculture sector in the territory. The City Yellowknife could use the available tools highlighted in their *Business Incentive Strategy* (City of Yellowknife, 2015) to promote food system businesses, such as tax abatements and development guidelines and incentives.

### *Smart Growth*

Smart Growth balances the trade-offs between land-use mix, density, urban design, transportation, the natural environment and the economy with the goal of improving quality of life and urban sustainability (City of Yellowknife, 2010). Urban food production can aid in this balance by improving quality life through increasing food access, providing access to natural areas within the city that also fulfill ecological

functions, and contributes to a healthy and active lifestyle. Urban food production can also be an ecologically sustainable economic activity through organic land, water and resource management.

Further, food production can also fit within compact density plans when roofs are utilized, through use of existing green spaces, and including food production spaces into new development plans. Food production can be included in mixed-use areas, be minimal impact activities in park and natural protection areas and be part of the remediation and re-use of brownfields (using above ground methods where soil quality is of concern).

Finally, when providing feedback on the Smart Growth plan, Yellowknifers also called for more food producing spaces including community gardens throughout the city and the want for a community greenhouse (City of Yellowknife, 2010).

#### **5.4 How Can a City Influence Just and Sustainable Food Systems? Best Practices of Urban Food Policies**

City government involvement in food systems is a growing practice with many examples in Canada and abroad. Through a city's available policy tools and other resources they are able to plan for and support sustainable food systems that have many economic, social, environmental, health and social benefits. With many cities already involved in food systems work, this brief provides an overview of best practices of urban food policies.

The best practices in this brief provide a foundation for examining urban food policies and initiatives that could be included in a Yellowknife Local Food Strategy. These best practices were synthesized from other urban food system reports and research, such as *Municipal Food Policy Entrepreneurs* (MacRae & Donahue, 2013), *What Makes*

*Urban Food Policy Happen* (IPES-Food, 2017), *Best Practices in Urban Agriculture* (Kamloops Food Policy Council, ActNowBC & True Consulting Group, 2007) and *Scaling Up Urban Agriculture in Toronto* (Nasr, MacRae, Kuhns, 2010) as well as local food strategies and plans in Canadian cities. They were chosen for their:

- effectiveness and innovation in enhancing food security through increased urban and local food systems that are just and sustainable.
- application in other communities

#### **5.4.1 Best Practices of Urban Food Policies**

The best practices of urban food policies have been organized into the following categories:

- Governance
- Policy Supports and Soft Infrastructure
- Economic Development
- Supporting Indigenous Food Systems and All Harvesting Practices
- Improving Food Security through Systemic Change
- Promoting Healthy, Just and Sustainable Food Systems
- Food Chain Infrastructure
- Knowledge Infrastructure

##### **5.4.1.1 Governance**

Other cities regularly develop urban food policies in response to food system issues, such as food insecurity and diet-related disease. Based on the recognition that these are complex problems without straight forward answers, cities have implemented integrated urban food policies to bring together multiple sectors and actors to align their initiatives towards a common goal (IPES-Food, 2017). Integrated urban food policies refer to policies seeking to address multiple food systems challenges, and typically require multiple government departments and policy areas to be bridged and novel governance bodies to be established (IPES-Food, 2017). Other integrated urban food policies have utilized a food systems approach to assist in aligning multiple actors through their

interconnections (MacRae & Donahue, 2013).

**Table 3: Governance Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>• Implement an integrated urban food policy/strategy, utilizing a food systems approach.</li> </ul>	<ul style="list-style-type: none"> <li>• Brant Food Systems Coalition (Center for a Livable Future, n.d.)</li> <li>• Calgary Eats! (Calgary Food Committee &amp; Serecon Management Consulting Inc., 2012)</li> <li>• Greater Sudbury Food Strategy (Greater Sudbury Food Policy Council, 2017)</li> <li>• Regina Community Food Systems Action Plan (City of Regina, 2015)</li> <li>• Fresh: Edmonton’s food and urban agriculture strategy (City of Edmonton, 2011)</li> <li>• Kawartha Lakes Food Coalition (City of Kawartha Lakes, 2017).</li> <li>• Thunder Bay Food Strategy (City of Thunder Bay, n.d.)</li> </ul>
<ul style="list-style-type: none"> <li>• Work with existing food policy councils/coalitions to plan, implement and/or advise food policy/strategy               <ul style="list-style-type: none"> <li>○ Council/coalition should include local actors from all sectors of the food system, including city decision-makers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Brant Food Systems Coalition</li> <li>• Chatham-Kent Food Policy (City of Chatham-Kent, 2016)</li> <li>• Edmonton Food Council</li> <li>• Halton Food Council (Center for a Livable Future, n.d.)</li> <li>• Kamloops Food Policy Council (Center for a Livable Future, n.d.)</li> <li>• Kawartha Lakes Food Coalition</li> <li>• Middlesex-London Food Policy Council (Center for a Livable Future, n.d.)</li> <li>• Orillia Food Council (Center for a Livable Future, n.d.)</li> <li>• Thunder Bay and Area Food Strategy</li> <li>• Toronto Food Policy Council (Center for a Livable Future, n.d.)</li> <li>• Vancouver Food Policy Council (Center for a Livable Future, n.d.)</li> </ul>
<ul style="list-style-type: none"> <li>• Provide appropriate support and resources to food policy council/coalition, such as</li> </ul>	<ul style="list-style-type: none"> <li>• Chatham-Kent Food Policy</li> <li>• Fresh: Edmonton’s food and urban agriculture strategy</li> </ul>

<ul style="list-style-type: none"> <li>○ Establish one city staff position to support food policy council/coalition</li> <li>○ Provide an operating budget and administrative support</li> </ul>	<ul style="list-style-type: none"> <li>● Halifax Food Policy Alliance (Center for a Livable Future, n.d.)</li> <li>● Kawartha Lakes Food Coalition</li> <li>● Toronto food policy council</li> </ul>
--	--

#### 5.4.1.2 Policy Supports and Soft Infrastructure

**Table 4: Policy Supports and Soft Infrastructure Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>● Create a local food strategy/plan or include local food objectives and policies within City’s Official/ General Plan</li> </ul>	<ul style="list-style-type: none"> <li>● Common Best Practice</li> </ul>
<ul style="list-style-type: none"> <li>● To contextualize the policy framework, a local food strategy should: <ul style="list-style-type: none"> <li>○ Explain the economic, social, cultural and environmental benefits of a just and sustainable local food system for the city.</li> <li>○ Recognize urban food production, harvesting and processing as infrastructure contributing to food security as well as clean air, water and sustainable land management</li> <li>○ Recognize Indigenous food systems and traditional practices</li> <li>○ Promote local food culture based on traditional knowledge and environmental stewardship</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● City of Terrace Official Community Plan (City of Terrace, n.d.)</li> <li>● Thunder Bay Food Strategy</li> <li>● Fresh: Edmonton’s Food and Urban Agriculture Strategy</li> </ul>
<ul style="list-style-type: none"> <li>● Ensure policies are responsive to different scales of food system activities <ul style="list-style-type: none"> <li>○ Small and home-based businesses</li> <li>○ Neighbourhood-scale infrastructure (community kitchens and processing units, community greenhouse)</li> <li>○ Large-scale venture</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>● Zoning By-law: Define and permit food production and harvesting in all zones, including the commercial sale of products.</li> </ul>	<ul style="list-style-type: none"> <li>● Dawson Creek Official Community Plan (City of Dawson Creek, n.d.)</li> </ul>
<ul style="list-style-type: none"> <li>● Incorporate roof top garden standards into bylaws and building codes, including guidelines specifically for food production (ie. soil depth, roof and water access).</li> </ul>	<ul style="list-style-type: none"> <li>● Fresh: Edmonton’s Food and Urban Agriculture Strategy</li> <li>● Vancouver Food Strategy (City of Vancouver, 2013)</li> <li>● City of Vancouver Building Bylaw No. 10908 (City of Vancouver, n.d.)</li> <li>● Toronto Green Roof Bylaw</li> </ul>

<ul style="list-style-type: none"><li>• Require or encourage a certain percentage of all landscaping in private developments, parks, right-of-ways and other city properties to include edible plants.<ul style="list-style-type: none"><li>○ Ensure edible plants are harvested and distributed within the community</li></ul></li></ul>	Common Best Practice
<ul style="list-style-type: none"><li>• Permit backyard chickens, bees and other livestock within residential and other appropriate zones.<ul style="list-style-type: none"><li>○ Provide guidelines of how to care for chickens and bees in the urban setting</li><li>○ Vancouver (City of Vancouver, 2010; City of Vancouver, 2015) and Edmonton (City of Edmonton, n.d.) provide excellent examples.</li></ul></li></ul>	<ul style="list-style-type: none"><li>• City of Terrace Animal Control Bylaw No. 1255-1991 (City of Terrace, n.d.)</li><li>• City of Edmonton Animal Licensing and Control Bylaw 17196 (City of Edmonton, n.d.)</li><li>• City of Vancouver Animal Control Bylaw No. 9150 (City of Vancouver, n.d.)</li><li>• Towards a New Approach to Beekeeping Policy in Urban Ontario (Berquist et al., 2012)</li></ul>
<ul style="list-style-type: none"><li>• Development Standards and Guidelines<ul style="list-style-type: none"><li>○ Include land for food production and harvesting in environmental impact review for new developments</li><li>○ Set priorities and create incentives (density bonuses and tax credits) for including food in development designs, such as gardens, greenhouses, and rooftop gardens<ul style="list-style-type: none"><li>▪ E.g. Encourage neighbourhood development projects with green space larger than 0.5 ha to integrate food production into the design.</li></ul></li><li>○ Create incentives for green infrastructure that reflects savings to the City (e.g. rooftop gardens absorb storm water and provide energy savings to buildings).</li><li>○ Require that communal gardening space be part of multifamily developments</li></ul></li></ul>	<ul style="list-style-type: none"><li>• City of Prince George Official Community Plan (City of Prince George, n.d.)</li></ul>
<ul style="list-style-type: none"><li>• Include food production and harvesting in compact Smart Growth land use plans by:<ul style="list-style-type: none"><li>○ Support food production and harvesting as a priority use</li></ul></li></ul>	<ul style="list-style-type: none"><li>• City of Prince George Official Community Plan</li><li>• Thunder Bay Food Strategy</li><li>• Fresh: Edmonton's Food and</li></ul>

<ul style="list-style-type: none"> <li>○ Including food production in multi-use site developments: <ul style="list-style-type: none"> <li>▪ Support use of roofs, walls and balconies of buildings for food production</li> <li>▪ Support use of institutional and public lands for food production, such as under power lines, in parks, school grounds and airport approach areas</li> <li>▪ Include gardening space in growth priority areas.</li> </ul> </li> <li>○ Support food production and processing facilities in business industrial areas</li> <li>○ Survey vacant lots and brownfield sites that have potential for food production (temporary or permanent), including above ground techniques (raised beds, greenhouses) in areas of questionable soil quality</li> <li>○ Allow limited small-scale food production in open and natural preservation spaces.</li> <li>○ Ensure common harvesting and gathering are included in natural preservation spaces</li> <li>● Establish a municipal food production land bank that shows available land</li> </ul>	<p>Urban Agriculture Strategy</p> <ul style="list-style-type: none"> <li>● City of Terrace Official Community Plan</li> </ul>
--	---

### 5.4.1.3 Economic Development

**Table 5: Economic Development Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>● Create business incentives for food system activities based on available City tools, such as tax abatements, grants or development fee reduction</li> </ul>	<ul style="list-style-type: none"> <li>● City of Terrace Official Community Plan</li> <li>● Dawson Creek Official Community Plan</li> <li>● Fresh: Edmonton’s Food and Urban Agriculture Strategy</li> </ul>
<ul style="list-style-type: none"> <li>● Include food in programs and planning of economic and social development groups within the City</li> </ul>	<ul style="list-style-type: none"> <li>● Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>● Conduct leakage study relating to food system activities to highlight available areas for growing local food system businesses and import substitution</li> </ul>	<ul style="list-style-type: none"> <li>● Could Toronto provide 10% of its fresh vegetable requirements from within its own boundaries? (MacRae et al., 2012)</li> </ul>

- Dollar and Sense (Econometric Research Limited, Harry Cummings and Associates & MacRae, 2015).

#### 5.4.1.4 Supporting Indigenous Food Systems and All Harvesting Practices

**Table 6: Supporting Indigenous Food Systems and All Harvesting Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>• Work in collaboration with local Indigenous peoples, groups and organizations throughout all processes</li> <li>• Work in collaboration with local harvesters and harvesting businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> <li>• Middlesex-London Community Food Assessment (Middlesex-London Food Policy Council, 2016)</li> </ul>
<ul style="list-style-type: none"> <li>• Create an inventory of City lands used for harvesting and include as a natural preservation area</li> </ul>	<ul style="list-style-type: none"> <li>• City of Terrace Official Community Plan</li> <li>• Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>• Identify areas of concern and barriers relating to harvesting practices on City lands and establish ways to address these concerns, including working with senior governments</li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>• Create public education materials about the kinds of harvested food available, their health benefits, and how to access and harvest them sustainably and safely.</li> <li>• Support intergenerational and cross-cultural knowledge sharing on safe and sustainable harvesting techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>• Identify new and support existing harvesting tourism opportunities that use safe and sustainable techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> </ul>

#### 5.4.1.5 Improving Food Security through Systemic Change

**Table 7: Improving Food Security through Systemic Change Best Practices**

<i>Best Practices</i>	<i>Example</i>
<ul style="list-style-type: none"> <li>• Provide public education and promote understanding among policy-makers about the social determinants of health and the root causes of food insecurity. <ul style="list-style-type: none"> <li>○ Promote Food Charter and Food Strategy to</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> <li>• City of Terrace Official Community Plan</li> </ul>

public including schools, restaurants, media and others

- Work with senior governments to address root causes of food insecurity
- Common Best Practice

#### 5.4.1.6 Promoting Healthy, Just and Sustainable Food Systems

Many of the best practices throughout this brief help to improve and promote healthy, just and sustainable food systems. The following best practices provide specific policies relating to this topic.

**Table 8: Promoting Healthy, Just and Sustainable Food Systems Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>• Use organic and agro-ecological practices for edible landscaping in parks, right-of-ways and other city properties</li> <li>• Promote and incentivise the use of organic and agro-ecological practices in private developments, community gardens, roof top gardens, and other urban agriculture</li> </ul>	Common best practice
<ul style="list-style-type: none"> <li>• Promote healthy and active lifestyles through food production and harvesting as well as eating healthy, seasonal foods               <ul style="list-style-type: none"> <li>○ Develop public education materials about growing and harvesting local foods</li> <li>○ Develop public education materials about eating seasonally (e.g. seasonal availability chart, ways to store and eat local food in winter).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> </ul>

#### 5.4.1.7 Food Chain Infrastructure

**Table 9: Food Chain Infrastructure Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"> <li>• Encourage the creation of new as well as adapt and better utilize existing facilities that support local food systems (e.g. health and safety certified community kitchens, processing facilities, distribution areas).</li> </ul>	<ul style="list-style-type: none"> <li>• Thunder Bay Food Strategy</li> </ul>
<ul style="list-style-type: none"> <li>• Encourage sharing of gardening tools and other resources for food production and harvesting.               <ul style="list-style-type: none"> <li>○ Provide space in City facilities, if</li> </ul> </li> </ul>	Common best practice

---

appropriate

---

#### 5.4.1.8 Institutional Procurement

**Table 10: Institutional Procurement Best Practices**

<i>Best Practices</i>	<i>Examples</i>
<ul style="list-style-type: none"><li>• Aim to include a percentage of locally grown and harvested foods at municipal events and programs</li><li>• Mandate or encourage city-owned venues to serve a percentage of locally grown and harvested foods<ul style="list-style-type: none"><li>○ Local example: Bids for lease of Wild Cat Café could give priority to those that include locally grown and harvested foods</li></ul></li></ul>	Common best practice
<ul style="list-style-type: none"><li>• Foster local capacity to supply public sector institutions<ul style="list-style-type: none"><li>○ Educate local producers on how to comply with local legislation, acts and laws.</li></ul></li></ul>	• Thunder Bay Food Strategy
<ul style="list-style-type: none"><li>• Create food and packaging waste reduction plan for city events, programs and venues.</li></ul>	Common best practice

#### 5.4.1.9 Knowledge Infrastructure

**Table 11: Knowledge Infrastructure Best Practices**

<i>Best practices</i>	<i>Examples</i>
<ul style="list-style-type: none"><li>• Include food system related resources on City website<ul style="list-style-type: none"><li>○ Links to community gardens</li><li>○ Health and safety information</li><li>○ Information for new and existing businesses</li><li>○ Link to Food Charter and Strategy</li><li>○ Food related public education pieces</li></ul></li></ul>	Common best practice
<ul style="list-style-type: none"><li>• Investigate possibilities for pilot projects and examples of innovative food system activities on municipal buildings and property such as roof top gardens, edible landscaping, etc.</li></ul>	• Dawson Creek Official Community Plan
<ul style="list-style-type: none"><li>• Encourage knowledge transfer and training for urban food production and harvesting</li></ul>	<ul style="list-style-type: none"><li>• Just Food Start-up Farm Ottawa (Just Food, 2017)</li><li>• Northern Farm Training Institute (NFTI, 2017)</li></ul>

## **6 Chapter: Conclusion**

Using PAR to support civil society action for a just and sustainable food system in Yellowknife was at the heart of the collaborative research with the Yellowknife Food Charter Coalition and Ecology North for this thesis. Chapter two introduced the theoretical and methodological underpinnings of the research, including political ecology, just and sustainable food systems governance and participatory action research (PAR). These theories were the frame for the political approach to food systems governance that was taken in this thesis. The theories of political ecology of food and food systems highlight the cultural, ecological, social and economic outcomes of actions in the food system, demanding an understanding of broader factors that shape decision-making in public policy. PAR brought this political approach into the practice of food system governance, by creating horizontal partnerships with local research partners for producing informed actions. PAR was also used to link the theoretical understandings in this thesis with the practical experiences of local food system actors in Yellowknife.

Chapter three argues that the PAR framework creates space for building trust in community academic partnerships when there is wariness or skepticism in academia from the local actors. This chapter is based on my experiences of attempting to bring about a PAR project with my research partners. This is particularly relevant to northern Indigenous communities that have experienced exploitative and repressive research practices in the past. This chapter provides recommendations for building trust through the role of the academic in community-academic partnerships as well as collaborative research design that sets out and maintains clear expectations. These recommendations come from a process of academic self-reflection of my experiences of getting research

direction as well as talking and creating actions with my partners and others in the Yellowknife food system. This chapter should be useful for other first-time PAR users, as the recommendations put emphasis on aspects of the research process that need to be explicitly shared and understood by both the academic and the local actors.

Chapter four sets the stage for the policy briefs in chapter five by politicizing the understanding of the Yellowknife food system through a historicized account of the hunting, fishing, gathering, gardening/ agriculture and imported food aspects of the food system. Importantly, the addition of hunting fishing and gathering expands the typical definition of ‘food systems’ and highlights the continuing legacy of colonialism in undermining Indigenous food systems. Further, this addition also has implications for collaborative governance because hunting, fishing and gathering, gardening/agriculture and imported foods are not regularly governed together and there are entrenched silos relating to these areas of the food system. The historicized view of Yellowknife’s food systems helps to critique the current approach of analyzing the system solely from the vantage of income security and the cost of food. Instead, the chapter argues for using a food systems approach that supports Indigenous self-determination to guide food systems governance in Yellowknife.

The policy briefs in chapter five are written with the audience of the City of Yellowknife in mind, to make the case for using a collaborative food systems approach that supports Indigenous food practices. The first two briefs outline what using a food systems approach for a local food strategy would look like as well as the benefits of addressing food systems at the municipal scale. The third brief looks at current policies and strategies of the City of Yellowknife that relate to land-use, economic development

and the traditional food system, to analyze how they may be promoting or hindering a localized food system. Lastly, examples from other food strategies in Canada that could be applied to the Yellowknife context are presented.

In terms of contributions to literature, this thesis works with others (Council of Canadian Academies, 2014; Spring 2018) to expand the typical definition of 'food system' to include hunting, fishing and gathering. This thesis emphasizes that this is a political addition as it highlights Indigenous food practices meshing together in a locality with non-Indigenous people. This challenges food systems literature and practice to address colonial legacies and the ignorance to Indigenous food practices within food systems. This is an important contribution in connection to Northern food systems, but also for all analyzes of food systems.

Further, in terms of the literature of collaborative governance and PAR, this thesis can be read as a case study of using PAR to be more political in governance processes, including in policy decision-making. As Emerson, Nabatchi & Balogh (2011) collaborative governance is about engaging across boundaries and sectors in government and/or public, private and civic spheres. Collaborative governance is regularly referenced in relation to issues that are complex and not easily solved with a single policy or department, but require multiple sectors, programs and initiatives to work together to make an impact (Blomgren Bingham, Nabatchi & O'Leary, 2005; Candel, 2014). However, collaborative governance does not equate consensus, therefore tradeoffs still need to occur (Carlson & Chappell, 2015). Through using PAR in this research, many of the insights throughout this thesis have come from my experiences of getting direction from, talking and creating actions with people in the Yellowknife food system and then

coming back to literature and reflecting on how these experiences relate. This creates an iterative and horizontal knowledge creation process, where local actors have been integral to the food systems governance agenda.

## **6.1 Looking to the Future**

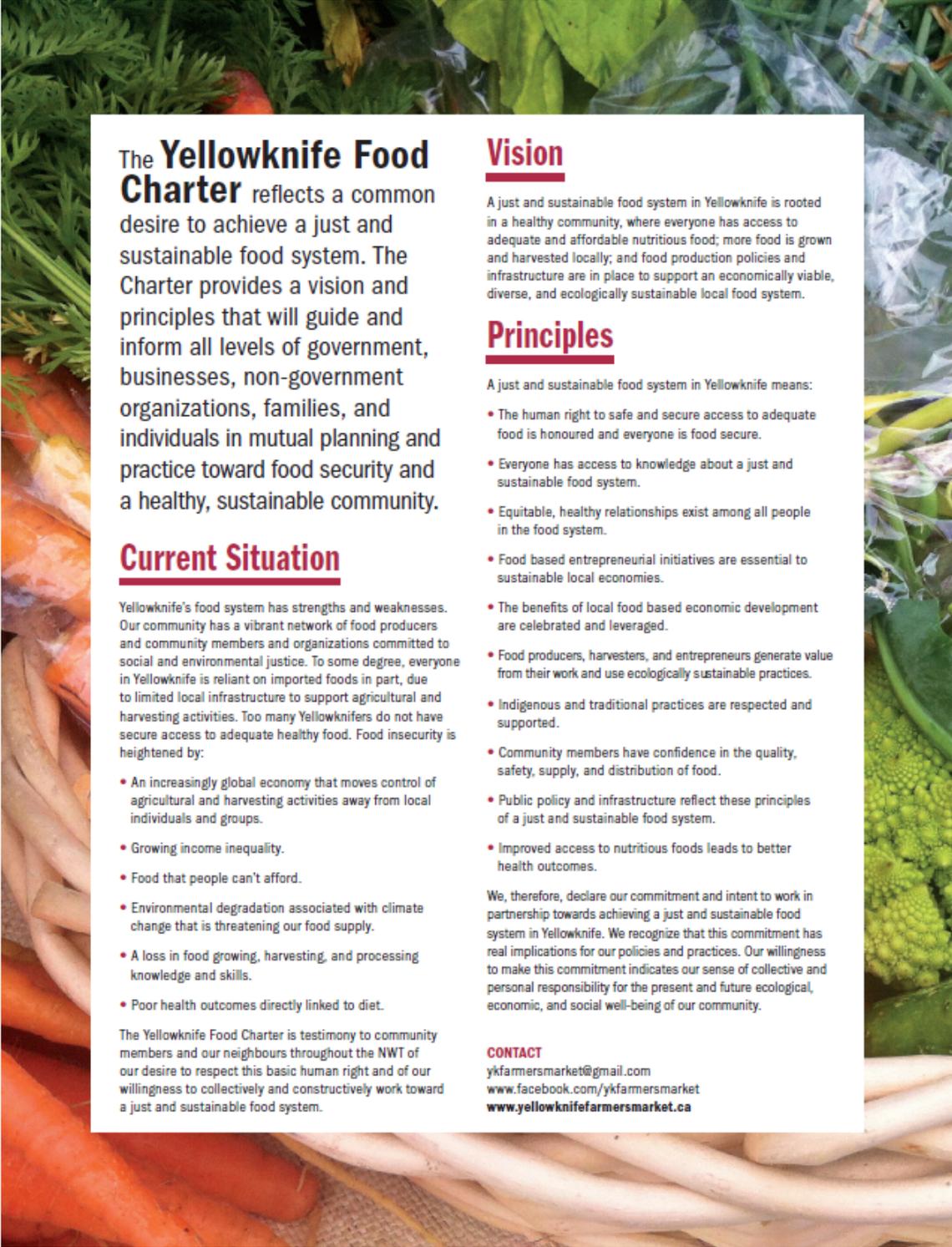
To conclude this thesis, I look to the future of the food system in Yellowknife and the participation of the determined local actors to make it more just and sustainable. Civil society action can have tremendous influence on a local food system, and I hope that the Yellowknife Food Charter Coalition and Ecology North continue to be a part of the governance discussions to push the boundaries of the Yellowknife food system. They do face barriers in terms of funding and capacity for advocacy work, but continued partnerships with academia could help to lighten this load. As well, Yellowknife has great potential to influence the food system governance decisions that occur throughout the NWT.

Ecology North has recently been championing the work of creating the NWT Food Network. This network is envisioned to be an organization that is grounded in collaboration between local food producers, harvester and fishers to work with government and other food system actors to promote sustainable food systems throughout the NWT. A long-term goal is the creation of a hub and spoke food hub model that connects communities together to promote the sharing and selling of foods. I have been lucky to work with Ecology North on this network forward and I look forward to creating community-academic partnerships that help move it reach its goals.

## Appendices

### Appendix A Yellowknife Food Charter





The **Yellowknife Food Charter** reflects a common desire to achieve a just and sustainable food system. The Charter provides a vision and principles that will guide and inform all levels of government, businesses, non-government organizations, families, and individuals in mutual planning and practice toward food security and a healthy, sustainable community.

## **Current Situation**

Yellowknife's food system has strengths and weaknesses. Our community has a vibrant network of food producers and community members and organizations committed to social and environmental justice. To some degree, everyone in Yellowknife is reliant on imported foods in part, due to limited local infrastructure to support agricultural and harvesting activities. Too many Yellowknifers do not have secure access to adequate healthy food. Food insecurity is heightened by:

- An increasingly global economy that moves control of agricultural and harvesting activities away from local individuals and groups.
- Growing income inequality.
- Food that people can't afford.
- Environmental degradation associated with climate change that is threatening our food supply.
- A loss in food growing, harvesting, and processing knowledge and skills.
- Poor health outcomes directly linked to diet.

The Yellowknife Food Charter is testimony to community members and our neighbours throughout the NWT of our desire to respect this basic human right and of our willingness to collectively and constructively work toward a just and sustainable food system.

## **Vision**

A just and sustainable food system in Yellowknife is rooted in a healthy community, where everyone has access to adequate and affordable nutritious food; more food is grown and harvested locally; and food production policies and infrastructure are in place to support an economically viable, diverse, and ecologically sustainable local food system.

## **Principles**

A just and sustainable food system in Yellowknife means:

- The human right to safe and secure access to adequate food is honoured and everyone is food secure.
- Everyone has access to knowledge about a just and sustainable food system.
- Equitable, healthy relationships exist among all people in the food system.
- Food based entrepreneurial initiatives are essential to sustainable local economies.
- The benefits of local food based economic development are celebrated and leveraged.
- Food producers, harvesters, and entrepreneurs generate value from their work and use ecologically sustainable practices.
- Indigenous and traditional practices are respected and supported.
- Community members have confidence in the quality, safety, supply, and distribution of food.
- Public policy and infrastructure reflect these principles of a just and sustainable food system.
- Improved access to nutritious foods leads to better health outcomes.

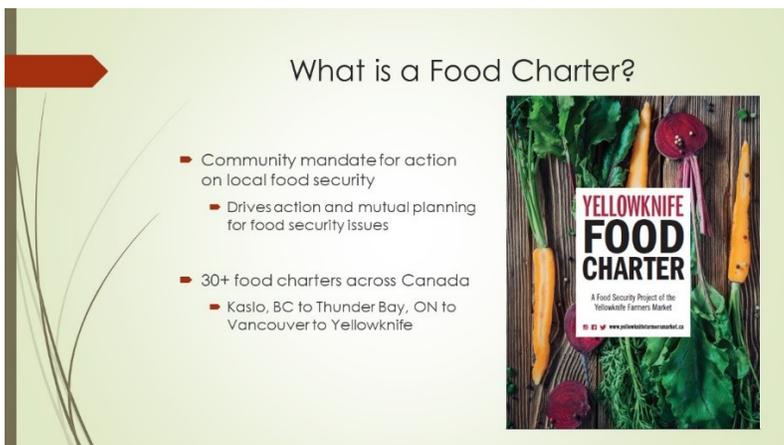
We, therefore, declare our commitment and intent to work in partnership towards achieving a just and sustainable food system in Yellowknife. We recognize that this commitment has real implications for our policies and practices. Our willingness to make this commitment indicates our sense of collective and personal responsibility for the present and future ecological, economic, and social well-being of our community.

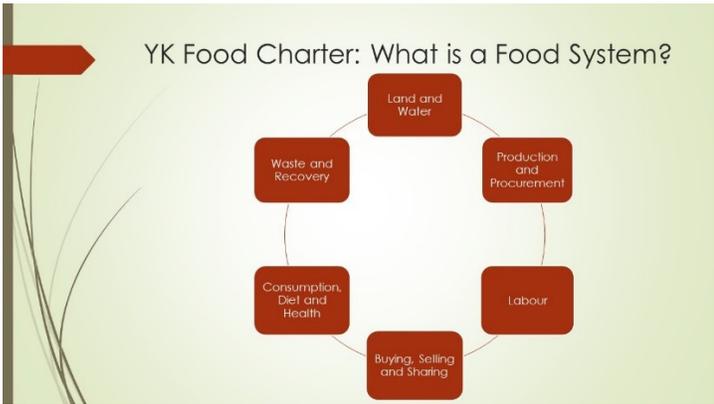
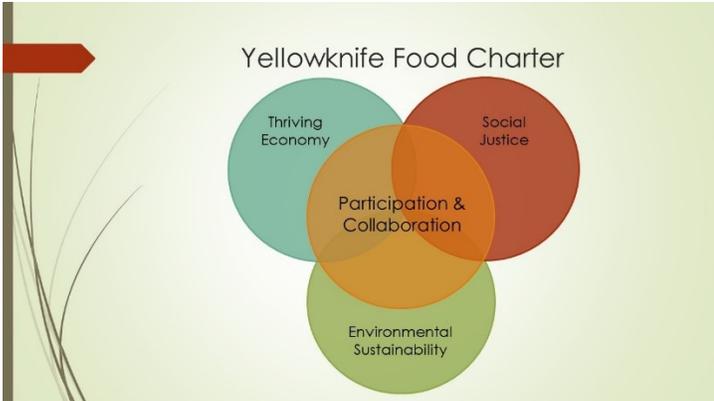
### **CONTACT**

ykfarmersmarket@gmail.com  
www.facebook.com/ykfarmersmarket  
[www.yellowknifefarmersmarket.ca](http://www.yellowknifefarmersmarket.ca)

## Appendix B

### B.1 Presentation to City Council 2016





- ## Land and Water
- Common concern: Access to land within the City
    - No land zoned for agricultural production
    - Difficulty accessing funding without land
  
  - Common concern: Need for land-use analysis
    - What lands would be suitable for agricultural production in Yellowknife?
    - Promoting soil fertility through Yellowknife Centralized Compost
  
  - **Solution: Work with all stakeholders to identify suitable land within City jurisdiction**

- ## Food Procurement and Production
- Common concern: Heavy reliance on imports
    - 5.15 million lbs imported to Yellowknife Co-op (past year)
  
  - Common concern: We want more local commercial production
    - 250+ community gardeners<sup>1</sup>
    - 2 produce vendors + 1 NWT Fish vendor at Farmers Market
    - local producers selling to local restaurants
    - 4 people fishing out of Yellowknife and selling in domestic market
  
  - **Solution: collaborating with local producers to find for more regionally and city produced food**
- <sup>1</sup> Yellowknife Community Garden Collective

## Labour

- Common concern: Demand for on the land and local food systems jobs

Industry Category	# of people	%
All Industries	22,535	100%
Agriculture, forestry, fishing and hunting	75	0.3
Retail: Food and beverage stores	772	3.5
Food services and drinking places	619	2.8
Truck transportation	192	0.9
Waste management and remediation services	41	0.2
<b>Total</b>	<b>1,669</b>	<b>7.7%</b>
	Canadian average	12.5%

(2014 NWT Bureau of Statistics)

- Solutions: Food employment training: Start-up farm on City lands**

## Buying, Selling, Sharing

- Common concern: demand for more local foods from individuals, businesses and institutions

- Farmers' Market economic impact: \$1 million (2014), \$800,000 (2015)<sup>1</sup>
- Restaurant Buying Power: The Fat Fox
- Institutional Buying Power: Avens Manor

- Solutions: City food service contracts educated on Food Charter**

- Common concern: no formal access for traditional foods

- Example: Avens Manor
- 37% hunted or fished, 20% gathered berries (2013)<sup>2</sup>

- Solutions: Collaborate to identify culturally-appropriate access to traditional foods**

<sup>1</sup> Yellowknife Farmers Market; <sup>2</sup> NWT Bureau of Statistics

## Consumption, Diet and Health

- Common concern: the NWT is stuffed and starved

- 24.1% of households are food insecure (2014)<sup>1</sup>
  - Second highest rate in Canada
- 63% of adults are overweight or obese (2009)<sup>2</sup>
  - Canadian average: 51%
- 73.4% of adults are not getting the daily recommended amount of fruits and vegetables (2009)<sup>3</sup>

- Solutions: Increase access and education of culturally-appropriate, fresh and nutritionally-dense food choices**

<sup>1</sup> U of T PROOF; <sup>2</sup> NWT Health Status Report; <sup>3</sup> Ibid

## Waste and Recovery

- Common concern: Yellowknife has an expensive landfill

- \$2.9 million approved expenditures for Solid Waste Management (2016)<sup>1</sup>

- Common achievement: Organic waste diversion

- Expected 5.9% diversion: Centralized Composting Program (2016)<sup>2</sup>
- 170,000kgs of food redistributed: Food Rescue (2014)<sup>3</sup>
- 577.5 kg organic waste diverted: Farmers' Market Waste Reduction Plan (2016- to date)<sup>4</sup>
  - 72% of total waste

- Solutions: Continue to improve composting program efficiency, continue to educate on waste diversion**

<sup>1</sup> 2016 City Budget; <sup>2</sup> 2016 City Budget; <sup>3</sup> Food Rescue <sup>4</sup> Farmers' Market

Food Charter Coalition Building



- Yellowknife wants a Coalition!
  - Partnerships
  - Synergies: Breaking down silos
- Invitation of City Council Member to Food Charter Coalition

Thank You!

## **B.2 Letter to City Council 2017**

RE: City of Yellowknife: Support Local Food Systems

Dear Mayor & City Council,

On behalf of the Yellowknife Food Charter Coalition, we applaud and support the Council's objective of developing an agriculture strategy as part of the Council's 2016-2018 goals and objectives. We also extend our sincere thanks to Council liaison, Julian Morse, for his support and assistance to the Coalition as well as to the City as a whole for endorsing the Yellowknife Food Charter.

We encourage the accomplishment of the agriculture strategy, yet we believe more can be done and we urge the Council to create a Local Food Strategy that uses a food systems approach.

A food system is all the activities, actors and outcomes in a food chain- including land, soil, water and animal management, growing, harvesting, processing, packaging, distribution, transporting, marketing, education, eating, celebration, and disposal back to the land. A food systems approach reflects the awareness of how actions by one group in the system affects other groups. Taking a food systems approach would broaden the strategy in three ways:

1. A food systems approach includes the coordination and collaboration of actors throughout the food chain, including government decision-makers, to create integrated solutions.
2. A food systems approach reflects an awareness of the environmental, social, economic, political and cultural consequences of activities within the food system.
3. A food systems approach recognizes that Yellowknife's food system has 5 pillars: fishing, hunting, gathering, agriculture and imported foods. These pillars need to be in balance.

A food systems approach is in line with the city-wide vision of a just and sustainable food system found in the Yellowknife Food Charter. The Charter provides an excellent foundation for a local food strategy. A strategy with a food systems approach will encourage food-related enterprise in all areas of the food system, develop long-term policies for food security, and encourage food production on City lands. This strategy would also continue to evolve the new partnerships to increase food production that the Yellowknife Farmers Market has begun with its Local Produce Strategy implemented in 2017.

We note that a Local Food Strategy with a food systems approach is consistent with the economic diversification, sustainable growth and environmental sustainability goals of the City Council's Goals and Objectives 2016-2019, City of Yellowknife 2014-2019 Economic Development Strategy, 2011 General Plan, Smart Growth Development Plan,

and Shaping Yellowknife's Future: City of Yellowknife's Community Based Strategic Plan 2010.

As part of accomplishing a Local Food Strategy, we ask that you make a commitment, and allocate budgetary resources beginning in 2018, to the following initiatives:

1. Identify within the 2018 City Budget 15-25K to complete a local food strategy in collaboration with the Food Charter Coalition partners that would embody the above goals. As well as leverage philanthropic support and territorial and federal funds;
2. Expand availability of City land for food growing;
3. Examine hiring dedicated staff and/or forming an advisory committee, to spur development and execution of a local food strategy.
4. Continue to shift focus from ornamental to edible plants in City parks, green spaces and gardens. As well, ensure that these edible plants are harvested and consumed in the community.
5. Increase grant funding for food-related social justice initiatives. For example, expanding programs for cooking skills, nutritional education and food sharing.
6. Provide City assistance with coordination of food-growing resources, including:
  - a. materials pooling (leaves, mulch, soil, cardboard, wood, irrigation materials) for the building of new gardens;
  - b. support neighborhood-level and city-wide food coordination;
  - c. continue in reduced water charges for irrigation of food plants in community gardens.

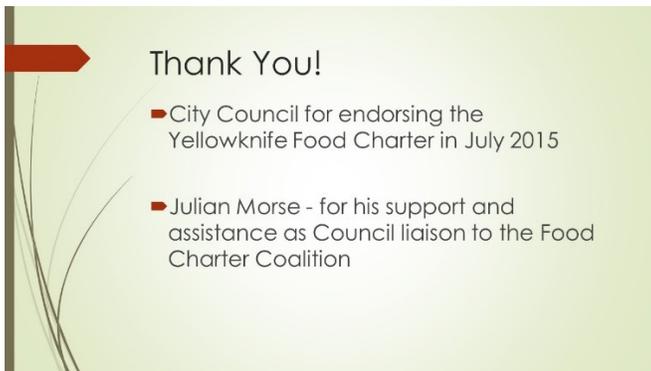
We sincerely thank you for your time and attention to this important & exciting movement to improve the well-being of Yellowknifers and make positive impacts to our entire Territory through the improvement of our local food system.

We also look forward to furthering this discussion during our presentation to City Council on August 14.

Sincerely,

Yellowknife Food Charter Coalition

## B.3 Presentation to City Council 2017





## What is Food Systems Thinking?



- Aligns and engages diverse actors
- Promotes collaboration
- Makes connections that are not normally made
- Creates integrated solutions

## Examples of Food Systems Thinking?



- YK Farmers Market
  - Composting
  - Harvesters Table
  - Supper Clubs
- Food Rescue
  - waste and recovery
  - Economic, social, and environmental outcomes

## How Can a Municipality Affect Food systems?

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>■ Land use planning</li> <li>■ Economic development</li> <li>■ Public health</li> <li>■ Environmental policies</li> <li>■ Tourism</li> <li>■ Poverty alleviation</li> <li>■ Waste management</li> <li>■ Infrastructure investment</li> <li>■ Procurement policies</li> </ul> | <ul style="list-style-type: none"> <li>■ Event planning and community celebration</li> <li>■ Open space management</li> <li>■ Water management</li> <li>■ Crime prevention</li> <li>■ Transport planning</li> <li>■ Development approvals</li> </ul> |
|---|--|

## Meeting the City's Goals & Objectives



## Food Strategy Example: Thunder Bay



- Hybrid of civil society organization and government
- Municipal financing
- Formal municipal endorsements, structural links, and accountability to a government body

## Food Strategy Example: Edmonton



- Housed within existing municipal government units
- External groups advise and interact with municipal officials
- Financed by the municipality

## Request for Commitment

1. Identify 15-25K in the 2018 City budget to complete a local food strategy
  - Coalition to leverage this with territorial and federal funds as well as foundations interested in food systems



## Request for Commitment

2. Provide City lands for food production
  - with mechanism for secure tenure
  - with zoning by-law for food production land
  - Examine providing tax exempt status or reduced food production land property tax rate



## Request for Commitment

3. Examine hiring a dedicated staff person and/or forming an advisory committee, to spur development and execution of a local food strategy.
  - Staff/ committee to work with the Yellowknife Food Charter Coalition and take a multi-sector, food systems approach



## Request for Commitment

4. Continue to transition from ornamental to edible plants in City parks, green spaces and gardens
  - Ensure these edible plants are harvested and consumed in the community



## Request for Commitment

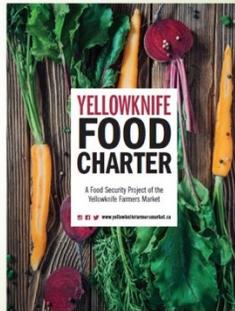
5. Encourage grant funding for food-related social justice initiatives as well as food-based projects with economic spin-offs

## Request for Commitment

6. Provide City assistance with coordination of food-growing resources, including:
  - materials pooling (leaves, mulch, soil, cardboard, wood, irrigation materials) for the building of new gardens

## Thank You for Your Time!

*"A just and sustainable food system in Yellowknife is rooted in a healthy community, where everyone has access to adequate and affordable nutritious food; more food is grown and harvested locally; and food production policies and infrastructure are in place to support an economically viable, diverse, and ecologically sustainable local food system"*



## **Appendix C List of Changing Research Questions**

### **C.1 Ethics Application**

What actions does the culturally diverse community of Yellowknife want to take to animate the vision and principles in the Yellowknife Food Charter and how should these actions be developed? What barriers and opportunities exist to realizing these actions? What is the role of participatory action research in realizing these actions?

### **C.2 Next Iteration**

- To what extent does the Yellowknife Food Charter aid in creating a just and sustainable food system for Yellowknife?
  - What is Yellowknife's food system? What is a just and sustainable food system for Yellowknife?
  - (How) does the Food Charter increase local decision-making and control in the food system? What barriers and opportunities exist to increasing local decision-making and control?
  - (How) does the Food Charter address cultural, social, political and economic differences in the food system?
- What is the role of participatory action research in realizing the actions for the food charter?
- What actions does the Food Charter Coalition want to take to animate the vision and principles in the Yellowknife Food Charter and how should these actions be developed?
- What barriers and opportunities exist to realizing these actions?

### **C.3 Next Iteration**

- How can decision-makers from the City of Yellowknife and the GNWT collaboratively engage with the Food Charter Coalition to improve the policy arena for a just and sustainable food system for Yellowknife?
- To what extent do land-use, economic development and traditional economy policies from the City of Yellowknife and the Government of Northwest Territories support the development of a just and sustainable food system for Yellowknife?
  - How can these policies encourage access to land for urban agriculture and small business incentivization?
  - How can these policies expand Indigenous access to culturally appropriate foods?
- What food policies are present in the North, Canada and North America that would be relevant to the Yellowknife context?
- What is the role of participatory action research in realizing actions for the food charter?

#### **C.4 Next Iteration**

- How can civil society groups, local businesses, community members and decision-makers from the City of Yellowknife and the GNWT collaboratively engage around the vision and principles of the Yellowknife Food Charter to improve the policy arena for a just and sustainable food system for Yellowknife?
- To what extent do land-use, economic development and traditional economy policies from the City of Yellowknife and the Government of Northwest Territories support the development of a just and sustainable food system for Yellowknife?
  - How can these policies encourage access to land for urban agriculture and small business incentivization?
  - How can these policies expand Indigenous access to culturally appropriate foods?
- What food policies are present in the North, Canada and North America that would be relevant to the Yellowknife context?
- What is the role of participatory action research in realizing actions for the food charter?

#### **C.5 Final Iteration**

1. To what extent do land-use, economic development and traditional economy policies from the City of Yellowknife support the development of a just and sustainable food system for Yellowknife?
  - a. How can these policies encourage small business incentivization in the food system?
  - b. How can these policies expand Indigenous access to culturally appropriate foods?
2. What food policies are present in the North, Canada and North America that would be relevant to the Yellowknife context?
3. What is the role of participatory action research in realizing actions for the food charter?

## Bibliography or References

- Addy, N. A., Poirier, A., Blouin, C., Drager, N., & Dube, L. (2014). Whole-of-society approach for public health policymaking: a case study of polycentric governance from Quebec, Canada. *Annals of the New York Academy of Sciences*, 216-229.
- Alfred, T., & Corntassel, J. (2005). Being Indigenous: Resurgences against Contemporary Colonialism. *Government and Opposition*, 597-614.
- Andree, P., Kepkiewicz, L., Levkoe, C., Brynne, A., & Kneen, C. (2017). Learning, Food and Sustainability in Community-Campus Engagement: Teaching and Research Partnerships that Strengthen the Food Sovereignty Movement. In J. Sumner (Ed.), *Learning, Food and Sustainability in a Changing World* (pp. 133-153). Palgrave-McMillan.
- Angell, A., & Parkins, J. (2011). Resource development and aboriginal culture in the Canadian north. *Polar Record*, 67-79.
- Aurora Research Institute. (2016). *Northern Research for Northern Priorities*. Retrieved from Aurora Research Institute: <http://nwtresearch.com/resources/knowledge-agenda/northern-research-northern-priorities>
- Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiol Community Health*, 854-857.
- Beaulieu, D. (2012). Dene traditional knowledge about caribou cycles in the Northwest Territories. *Rangifer*, 59-67.
- Becker, Howard. (1996). The Epistemology of Qualitative Research. In *Essays on Ethnography and Human Development*. Richard Jessor, Anne Colby, and Richard Schweder, eds. Chicago: University of Chicago Press. Pp. 53-71.
- Berquist, M., Bird, A., Dean, M. G., Law, R. B., Lee, S., & Panesar, H. (2012). *Towards a New Approach to Beekeeping Policy in Urban Ontario*. Sustain Ontario.
- Blay-Palmer, A. (2010). Imagining Sustainable Food Systems. In A. Blay-Palmer (Ed.), *Imagining Sustainable Food Systems: Theory and Practice*. New York: Ashgate Publishing.
- Blay-Palmer, A., & Koc, M. (2010). Imagining Sustainable Food Systems: The Path to Regenerative Food Systems. In A. Blay-Palmer (Ed.), *Imagining Sustainable Food Systems: Theory and Practice*. New York: Ashgate Publishing.
- Blomgren Bingham, L., Nabatchi, T., & O'Leary, R. (2005). The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government. *Public Administration Review*, 547-558.
- Boulet, A., Boan, J., Burkhardt, R., & Palmer, L. (2014). *Beyond the Fields: The Value of Forest and Freshwater Foods in Northern Ontario*. Ontario Nature.
- Cadieux, K. V., & Slocum, R. (2015). What does it mean to do food justice? College of Liberal Arts All Faculty Scholarship, Paper 3.

- Caine, K., Salomons, M. J., & Simmons, D. (2007). Partnerships for Social Change in the Canadian North: Revisiting the Insider–Outsider Dialectic. *Development and Change*, 447-471.
- Calgary Food Committee & Serecon Management Consulting Inc. (2012). *Calgary Eats!* Calgary: The City of Calgary.
- Cameron, E. (2011). Copper Stories: Imaginative Geographies and Material Orderings of the Central Canadian Arctic, in Andrew Baldwin, Laura Cameron, and Audrey Kobayashi (Eds.) *Rethinking the Great White North: Race, Nature, and Whiteness in Canada*. Vancouver: UBC Press, 169– 90.
- Canadian Food Inspection Agency. (2018). *Organic Products*. Retrieved from Government of Canada: <http://www.inspection.gc.ca/food/organic-products/eng/1300139461200/1300140373901>
- Canadian Organic Growers (2011). *What is Organic?* Retrieved from: [http://www.cog.ca/about\\_organics/what\\_is\\_organics/](http://www.cog.ca/about_organics/what_is_organics/)
- Candel, J. J. (2014). Food security governance: a systematic literature review. *Food Security*, 585-601.
- Carlson, J., & Chappell, M. J. (2015). Deepening Food Democracy. Institute of Agriculture and Trade Policy.
- Center for a Livable Future. (n.d.). *Brant Food Systems Coalition*. Retrieved from Food Policy Networks: <http://www.foodpolicynetworks.org/directory/online/index.html?council=238>.
- Cerwonka, Allaine. (2007). Nervous Conditions: The Stakes in Interdisciplinary Research. In *Improvising Theory: Process and Temporality in Ethnographic Fieldwork*. Allaine Cerwonka and Liisa Malkki, eds. Chicago: The University of Chicago Press. Pp. 1-40.
- Chakrabarty, D. (2000). *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton: Princeton University Press.
- Chevalier, B., & Buckles, D. (2013). *Participatory action research: theory and methods for engaged inquiry*. New York: Routledge.
- Christy, E., Landman, K., Nowatschin, E., & Blay-Palmer, A. (2013). *Local Food Systems in North America: A Review of Literature*. Ontario Ministry of Agriculture and Food.
- City of Chatham-Kent. (2016). *Chatham-Kent Food Policy Council Strategic Plan 2016-2018*.
- City of Dawson Creek, by-law No. 4042, Dawson Creek Official Community Plan, s. 9. <http://www.dawsoncreek.ca/wordpress/wp-content/uploads/bylaws/4042-Official-Community-Plan-Bylaw-Consolidated-Version1.pdf>.
- City of Edmonton, by-law No. 17196, Animal Licensing and Control Bylaw.

- City of Edmonton. (n.d.). *Urban Beekeeping Guidelines*.  
[https://www.edmonton.ca/documents/Urban\\_Beekeeping\\_Guidelines\\_FINAL\\_May\\_11\\_2015.pdf](https://www.edmonton.ca/documents/Urban_Beekeeping_Guidelines_FINAL_May_11_2015.pdf).
- City of Edmonton. (2011). *fresh: Edmonton's Food and Urban Agriculture Strategy*.  
[https://www.edmonton.ca/city\\_government/initiatives\\_innovation/food-and-urban-agriculture.aspx](https://www.edmonton.ca/city_government/initiatives_innovation/food-and-urban-agriculture.aspx).
- City of Kawartha Lakes. (2017). *Kawartha Lakes Food Council*. Retrieved from  
<https://www.kawarthalakes.ca/en/business-growth/kawartha-lakes-food-coalition.aspx>
- City of Prince George, bylaw No. 8383, Official Community Plan, 8.2.19- 8.2.25  
<https://princegeorge.ca/Business%20and%20Development/Pages/Planning%20and%20Development/OfficialCommunityPlan.aspx>.
- City of Regina. (2015). *Community Food Systems Action Plan*.
- City of Terrace, by-law No. 1255-1991, Animal Control Bylaw.
- City of Terrace, by-law No. 1983, The City of Terrace Official Community Plan, A. 3. Abundant Re-localized Food Systems.  
[http://www.terrace.ca/sites/default/files/docs/business-development/terrace\\_2011\\_ocp\\_-\\_schedule\\_a\\_bylaw\\_no.1983\\_-\\_2011\\_-\\_amend\\_may\\_6.pdf](http://www.terrace.ca/sites/default/files/docs/business-development/terrace_2011_ocp_-_schedule_a_bylaw_no.1983_-_2011_-_amend_may_6.pdf).
- City of Thunder Bay. (n.d.). *Thunder Bay and Area Food Strategy: Connecting Food and Community*. <http://tbfoodstrategy.com/>.
- City of Toronto, Municipal Code Ch. 492, Green Roofs.
- City of Vancouver, by-law No. 9150, Animal Control Bylaw.
- City of Vancouver, by-law No. 10908, Building By-law, B. 3.1.14.4. Green Roof Assemblies
- City of Vancouver. (2010). *Guidelines for Keeping Backyard Hens*.  
<http://council.vancouver.ca/20100408/documents/penv3.pdf>.
- City of Vancouver. (2013). *What feeds us: Vancouver Food Strategy*.  
<http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF>.
- City of Vancouver. (2015). *Urban Honey Beekeeping*.  
<http://bylaws.vancouver.ca/bulletin/U001.pdf>.
- City of Yellowknife. (2010). *Smart Growth Development Plan Final Recommendations Report*. Yellowknife.
- City of Yellowknife. (December 2013). *City of Yellowknife 2014-2019 Economic Development Strategy*.
- City of Yellowknife. (2015). *Summary Action Report: Yellowknife Business Incentive Strategy and Business Incubation Strategy Framework*. Yellowknife.

- City of Yellowknife. (2016). *Councils Goals and Objectives 2016-2018*. Yellowknife.
- City of Yellowknife. (2017). *Budget Survey Results*. Retrieved from City of Yellowknife: <https://www.yellowknife.ca/en/city-government/budget-survey-results.asp>
- City of Yellowknife. (2017). *Departments*. URL <https://www.yellowknife.ca/en/city-government/departments.asp>
- City of Yellowknife, revised by-law No.4404, Consolidation of Zoning By-Law (June 26, 2017).
- Clement, Wallace. (2007). Chapter 2: Methodological Considerations: Thinking about Researching Works. In *Work in Tumultuous Times: Canadian Perspectives*. Vivian Shalla and Wallace Clement, eds. Montreal: McGill-Queen's University Press. Pp. 30-51.
- Community Planning and Development Act 2011 (N.W.T.) c.22.
- Council of Canadian Academies. (2014). *Aboriginal Food Security in Northern Canada: An Assessment of the State of Knowledge*. Ottawa, ON: The Expert Panel on the State of Knowledge of Food Security in Northern Canada, Council of Canadian Academies.
- Cronon, W. (1991). *Nature's Metropolis: Chicago and the Great West*. New York: W. W. Norton & Company Inc.
- Cummings, H., Kora, G., & Murray, D. (1998). *Farmers' Markets in Ontario and their Economic Impact*. School of Rural Planning and Development, University of Guelph; Farmers' Market Ontario.
- Declaration of Nyéléni. (2007). *Declaration of the Forum for Food Sovereignty, Nyéléni 2007*. Nyéléni Village, Sélingué, Mali.
- Desmarais, A. A., & Wittman, H. (2014). Farmers, foodies and First Nations: getting to food sovereignty in Canada. *Journal of Peasant Studies*, 1153-1173.
- Douglas, V., Hing, H. M., Wesche, S., Dickson, C., Kassi, N., Netro, L., & Williams, M. (2014). Reconciling Traditional Knowledge, Food Security, and Climate Change: Experience From Old Crow, YT, Canada. *Progress in Community Health Partnerships: Research, Education, and Action*, 21-27.
- Ecology North. (2017). *About Us*. Retrieved from Ecology North: <http://ecologynorth.ca/about-us/>
- Econometric Research Limited, Harry Cummings & Associates, Rod MacRae. (2015). *Dollar and Sense: Opportunities to Strengthen Southern Ontario's Food System*. Green Belt, The J.W. McConnell Family Foundation, Metcalf Foundation.
- Edwards, T. (2010, July 16). Family Recalls their Dairy Farm Days. *Northern News Services*.
- Emerson, K., Nabatchi, T., & Balogh, S. (2011). An Integrative Framework for Collaborative Governance. *Journal of Public Administration Research*, 1-29.

- Escobar, A. (2011). *Encountering Development: The Making and Unmaking of the Third World*. Princeton: Princeton University Press.
- Fals Borda, O., & Rahman, A. (1991). *Action and knowledge: breaking the monopoly with participatory action research*. London: Apex Press.
- FAO. (1996). *Food Security*. World Food Summit: Food and Agriculture Organization.
- FAO. (2003). *Trade Reforms and Food Security*. Rome: FAO.
- FAO. (2013). *Indigenous Peoples' food systems & well-being: Interventions and Policies for Healthy Communities*. Food and Agriculture Organization of the United Nations: Centre for Indigenous Peoples' Nutrition and Environment. Rome: Kuhnlein, H. V., Erasmus, B., Spigelski, D., Burlingame, B.
- Ferguson, J., & Gupta, A. (2002). Spatializing States: Towards an ethnography of neoliberal governmentality. *American Ethnologist*, 981-1002.
- Fisheries Act 1985 (Canada) c. F-14.
- Food Security Research Network, Faculty of Natural Resources Management Lakehead University. (2013). *The Workforce Multiplier Effect of Local Farms and Food Processors in Northwestern Ontario*. Thunder Bay: North Superior Workforce Planning Board, Northwest Training and Adjustment Board.
- FoTenn Consultants, McSweeney & Associates. (2011). *City of Yellowknife General Plan Background Report*. Yellowknife.
- Freeman, M. R. (1977). Science and Ethics in the North. *Arctic*, 30(2): 71–5.
- Freshwater Fish Marketing Act 1988 (N.W.T.) c. F-11.
- Freire, P. (2000). *Pedagogy of the Oppressed* (30th anniversary edition ed.). New York: Continuum.
- Friedmann, H. (1992). Distance and Durability: Shaky Foundations of the World Food Economy. *Third World Quarterly*, 371-383.
- Friedmann, H. and McMichael, P. (1989). Agriculture and the state system: the rise and fall of national agricultures, 1870 to the present. *Sociologia Ruralis*, 29(2), 93–117.
- Gardiner, J. G. (1939). *Fifty Years of Progress on Dominion Experimental Farms: 1886-1936*. Ottawa: J.O. Patenaude I.S.O.
- Gibson-Graham, J. K. (2006). *A postcapitalist Politics*. Minneapolis: University of Minnesota Press.
- Gilpin, R. (1987). *The Political Economy of International Relations*. Princeton: Princeton University Press.
- Gleeson, R. (2016, March). N.W.T. leaders question charge against Tlicho elder for selling fish without licence. *CBC News*.

- GNWT. (2011a). *Caribou Forever- Our Heritage, Our Responsibility*. Yellowknife: Government of Northwest Territories Environment and Natural Resources.
- GNWT. (2011b). *Northwest Territories Health Status Report*. Yellowknife: Government of Northwest Territories: Health and Social Services.
- GNWT. (2016). *Community Harvesters Assistance Program*. Retrieved from Government of Northwest Territories Environment and Natural Resources: <http://www.enr.gov.nt.ca/programs/community-harvesters-assistance-program>
- GNWT. (2017). *Northwest Territories Agriculture Strategy: The Business of Food: A Food Production Plan 2017-2022*. Yellowknife: Government of Northwest Territories.
- GNWT Health and Social Services. (2017, August 1). *Arsenic in Lake Water Around Yellowknife*. Retrieved from Government of Northwest Territories: <http://www.hss.gov.nt.ca/en/newsroom/arsenic-lake-water-around-yellowknife>
- Government of Canada. (1950). *Report of the Department of Resources and Development*. Ottawa: Government of Canada: Department of Resources and Development.
- Government of Canada. (2017). *How Nutrition North Canada works*. Retrieved from Government of Canada: <http://www.nutritionnorthcanada.gc.ca/eng/1415538638170/1415538670874>.
- Government of Yukon. (2016). *Local Food Strategy for Yukon: Encouraging the Production and Consumption of Yukon Grown Food 2016-2021*. Whitehorse.
- Greater Sudbury Food Policy Council. (2017). *Greater Sudbury Food Strategy*. City of Sudbury.
- Guthman, J. (2008). Bringing good food to others: investigating the subjects of alternative food practice. *Cultural Geographies*, 431-447.
- Halse, C., & Honey, A. (2005). Unraveling Ethics: Illuminating the Moral Dilemmas of Research Ethics. *Signs*, 2141-2162.
- Halseth, G., Markey, S., Ryser, L. & Manson, D. (2016). *Doing Community-Based Research: Perspectives from the Field*. Montreal & Kingston: McGill-Queen's University Press
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminism Studies*, 575-599.
- Harding, S. (1987). The Method Question. *Hypatia*, 19-35.
- Hardam, M., & Larkham, P. (2013). The rise of the 'food charter': a mechanism to increase urban agriculture. *Land Use Policy*, 400-402.
- Harry Cummings and Associates Inc. (2009). *Kenora District Agricultural Economic Impact Study*. FedNor, OMAFRA, Northwestern Ontario Development Network,

Kenora District Federation of Agriculture, Food Security Research Network,  
Ontario Federation of Agriculture

- Harry Cummings and Associates Inc. (2009). *Temiskaming District Agricultural Economic Sector Profile*. FedNor, OMAFRA, Northwestern Ontario Development Network, Food Security Research Network, Ontario Federation of Agriculture.
- Harry Cummings and Associates Inc. (2009). *Thunder Bay District Agricultural Economic Impact Study*. OMAFRA, Northwestern Ontario Development Network, Thunder Bay Federation of Agriculture, Food Security Research Network, Ontario Federation of Agriculture, The municipality of Oliver Paipooonge; Thunder Bay Co-op and Farm Supplies.
- Harvey, D. (2005). *A Brief History of Neoliberalism*. New York: Oxford University Press.
- Herr, K., & Anderson, G. L. (2015). *The Action Research Dissertation: A Guide for Students and Faculty* (2 ed.). Los Angeles: Sage Publications.
- Heynan, N., McCarthy, J., Prudham, S., & Robbins, P. (Eds.). (2007). *Neoliberal environments: false promises and unnatural consequences*. Routledge.
- Hinrichs, C. (2003). The practice and politics of food system localization. *Journal of Rural Studies*, 33-45.
- Hinrichs, C. (2010). Conceptualizing and Creating Sustainable Food Systems: How Interdisciplinarity can Help. In *Imagining Sustainable Food Systems: Theory and Practice*. New York: Ashgate Publishing.
- Holt-Gimenez, E. (2011). Food Security, Food Justice, or Food Sovereignty? Crises, Food Movements, and Regime Change. In A. Alkon, & J. Agyeman (Eds.), *Cultivating Food Justice: Race Class and Sustainability* (pp. 309-330). MIT Press.
- IPES-Food (2016). *From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems*. International Panel of Experts on Sustainable Food systems.
- IPES-Food. (2017). What makes urban food policy happen? International Panel of Experts on Sustainable Food Systems.
- Ipsos Reid, City of Yellowknife. (2014). *City of Yellowknife 2014 Citizen Survey*. Yellowknife
- Jennings, A. (2012, July 4). *The Multiplier Effect of Buying Local Food*. Retrieved from Sustain Ontario: the alliance for healthy food and farming.  
[https://sustainontario.com/2012/07/04/11208/news/multiplier-effect#\\_edn2](https://sustainontario.com/2012/07/04/11208/news/multiplier-effect#_edn2)
- Jessop, B. (1998). The rise of governance and the risks of failure: the case of economic development. *International social science journal*, 50(155), 29-45.

- Johnson, N., Smith, S., & Willms, D. (1997). *Nurtured by knowledge: learning to do participatory action-research*. New York: The Apex Press.
- Johnston, C., Williams, T. (2016). The Yellowknife Food Charter: Driving Collaborative Action for Increased Food Security and a Just and Sustainable Food System in Yellowknife, NWT. *Northern Public Affairs*, 5(1).
- Just Food. (2017). *Start-up Farm Program*. <http://justfood.ca/start-up-farm-program/>
- Kamal, A. G., & Thompson, S. (2013). Recipe for Decolonization and Resurgence: Story of O-pipon-Na-Piwin Cree Nation's Indigenous Food Sovereignty Movement. *The Journal of Peasant Studies*, Conference Paper #46.
- Kamloops Food Policy Council; ActNowBC; True Consulting Group. (2007). *Best Practices in Urban Agriculture*. Kamloops, BC.
- Kettl, D. F. (2000). The Transformation of Governance: Globalization, Devolution and the Role of Government. *Public Administration Review*, 488-497.
- Khanlou, N., & Peter, E. (2005). Participatory action research: considerations for ethical review. *Social Science & Medicine*, 2333–2340.
- Kindon, S., Pain, R., & Kesby, M. (2007). Participatory Action Research: origins, approaches and methods. In *Participatory Action Research Approaches and Methods: Connecting People, Participation and Place* (pp. 9-18). New York: Routledge.
- Klocker, N. (2012). Doing Participatory Action Research and Doing a PhD: Words of Encouragement for Prospective Students. *Journal of Geography in Higher Education*, 149-163.
- Koc M., MacRae, R., Desjardins, E., and Roberts, W. 2008. Getting civil about food: the interactions between civil society and the state to advance sustainable food systems in Canada. *Journal of Hunger and Environmental Nutrition* 3 (2/3), 122-144.
- Kooiman, J. (2003). *Governing as governance*. Sage.
- Leahey, A. (1954). Soil and agricultural problems in subarctic and arctic Canada. *Arctic*, 7(3/4), 249-254.
- Lind, D., & Barham, E. (2004). The Social life of the Tortilla: Food, cultural politics and contested commodification. *Agriculture and Human Values*, 47-60.
- Lutra Associates Ltd. (2010). *Yellowknife, Ndilo and Dettah Food System Assessment and Community Food Action Plan*. Northwest Territories and Nunavut Public Health Association.
- MacRae, R., & Donahue, K. (2013). *Municipal food policy entrepreneurs: a preliminary analysis of how Canadian cities and regional districts are involved in food system*

- change*. Toronto Food Policy Council; Vancouver Food Policy Council; Canadian Agri-food Policy Institute.
- MacRae, R., Nasr, J., Kuhns, J., Baker, L., Christianson, R., Danyluk, M., . . . Wekerle, G. (2012). Could Toronto provide 10% of its fresh vegetable requirements from within its own boundaries? Part II, Policy supports and program design. *Journal of Agriculture, Food Systems and Community Development*, 147-169.
- Maguire, P. (1987). *Doing participatory research: a feminist approach*. Amherst: Center for International Education, School of Education, University of Massachusetts.
- Maguire, P. (1993). Challenges, Contradictions and Celebrations: Attempting Participatory Action Research as a Doctoral Student. In P. Park, M. Brydon-Miller, B. Hall, T. Jackson (Eds.), *Voices of Change: Participatory Research in the United States and Canada* (pp. 145-156). Toronto: The Ontario Institute for Studies in Education.
- McKeon, N. (2017). Transforming Global Governance in the Post-2015 era: Towards an Equitable and Sustainable World. *Globalizations*, 487-503.
- McMillan, R., & Parlee, B. (2013). Dene Hunting Organization in Fort Good Hope, Northwest Territories: “Ways We Help Each Other and Share What We Can”. *Arctic*, 435-447
- Middlesex-London Food Policy Council. (2016). *Middlesex-London Community Food Assessment*. Retrieved from <https://www.mlfpcc.ca/community-food-assesement>.
- Minnery, J. (2007). Stars and their supporting cast: State, market and community as actors in urban governance. *Urban Policy and Research*, 25(3), 325-345.
- Mintz, S. (1985). *Sweetness and power: the place of sugar in modern history*. New York: Viking.
- Mintz, S. (1994). Eating and Being: What Food Means. In B. Harriss-White, & R. Hoffenberg (Eds.), *Food: Multidisciplinary Perspectives* (pp. 103-115). Oxford: Basil Blackwell Ltd.
- Moore, J. (2004). Living in the Basement of the Ivory Tower: a graduate student’s perspective of participatory action research within academic institutions. *Educational Action Research*, 145-162.
- Motherwell, W.R. (1924). *The Organization Achievements and Present Work of the Experimental Farms*. Ottawa: Government Printing Bureau.
- Nadasdy, P. (2003). Reevalutaing the Co-managment Success. *Arctic*, 367-380.
- Nasr, J., MacRae, R., & Kuhns, J. (2010). *Scaling up urban agriculture in Toronto: building the infrastructure*. Toronto: Metcalf Foundation
- NFTI. (2014). *About us*. Retrieved from Northern Farm Training Institute: <http://www.nftinwt.com/>

- NFTI. (2017). *Northern Farm Training Institute: Education*.  
<http://nftinwt.com/education/>
- Nicol, H. C. (2013). Nunavut, Sovereignty and the Future for Artic Peoples' Involvement in Regional Self-determination. *The Northern Review*, 127-142.
- Nunavut Food Security Coalition. (2014). *Strategy and Action Plan*. Iqaluit: Nunavut Tunngavik; Nunavut Roundtable for Poverty Reduction; Government of Nunavut. Retrieved from <http://www.nunavutfoodsecurity.ca/soverview>
- NWT Bureau of Statistics. (2014a). *Aboriginal Persons Who Hunted & Fished During 2013, by Community*.
- NWT Bureau of Statistics. (2014b). *Persons Who Gathered Berries During 2013, by Community*.
- NWT Bureau of Statistics. (2014c). *Households Where 75% or More (Most or All) of the Meat or Fish Eaten in the Household was Obtained through Hunting or Fishing, by Community Northwest Territories, 1999 – 2014*.
- NWT Safety Act 1988 (N.W.T.) c. S-1.
- Ollman, B. (1993). *Dialectical Investigations*. London: Routledge.
- O'Reilly, K. (2015). Liability, Legacy, and Perpetual Care: Government Ownership and Management of the Giant Mine, 1999-2015. In J. Sandlos, & A. Keeling (Eds.), *Mining and communities in Northern Canada: history, politics, and memory* (pp. 341-367). Calgary: University of Calgary Press.
- O'Toole, L. J. (1997). Treating Networks Seriously: Practical and Research-Based Agendas in Public Administration. *Public Administration Review*, 45-52.
- Parlee, B., & Berkes, F. (2006). Indigenous Knowledge of Ecological Variability and Commons Management: A Case Study on Berry Harvesting from Northern Canada. *Human Ecology*, 515-528.
- Parlee, B., Berkes, F., & Council, T. G. (2005). Health of the Land, Health of the People: A Case Study on Gwich'in Berry Harvesting in Northern Canada. *EcoHealth*, 127-137.
- Parlee, B., & McMillan, R. (2013). Dene Hunting Organization in Fort Good Hope, Northwest Territories: "Ways We Help Each Other and Share What We Can". *Arctic*, 435-447.
- Parlee, B., O'Neil, J., & Nation, L. K. (2007). "The Dene Way of Life": Perspectives on Health From Canada's North. *Journal of Canadian Studies*, 112-133.
- Parlee, B., Sandlos, J., Natcher, D. (2018). Undermining Subsistence: Barren-ground caribou in a "tragedy of open access". *Science Advances*, 1-14.

- Personal communication. (August 2016). Yellowknife Co-op.
- Pinchot, A. (2014). *The Economics of Local Food Systems: A literature review of the production, distribution, and consumption of local food*. University of Minnesota Extension Center for Community Vitality.
- Power, E. (2008). Conceptualizing Food Security For Aboriginal People in Canada. *Canadian Journal of Public Health, 95-97*.
- Price, D. T., Alfaro, R. I., Brown, K. J., Flannigan, M. D., Fleming, R., Hogg, E. H., . . . Venier, L. (2013). Anticipating the consequences of climate change for Canada's boreal forest ecosystems. *Environmental Reviews, 322-365*.
- Public Health Act 2007 (N.W.T.) c.17.
- Quijano, A. (1999). Coloniality and Modernity/Rationality. In G. Therborn (Ed.), *Globalizations and Modernities* (pp. 41-51). Stockholm: FRN.
- Receveur, O., Boulay, M., & Kuhnlein, H. V. (1997). Decreasing Traditional Food Use Affects Diet Quality for Adult Dene/Metis in 16 Communities of the Canadian Northwest Territories. *The Journal of Nutrition, 2179-2186*.
- Renting, H., Schermer, M., & Rossi, A. (2012). Building Food Democracy: Exploring Civic Food Networks and Newly Emerging Forms of Food Citizenship. *International Journal of Sociology of Agriculture and Food, 289-307*.
- Robbins, P. (2012). *Political Economy: A Critical Introduction*. West Sussex: Wiley-Blackwell.
- Rojas, C. (2007). International Political Economy/Development Otherwise. *Globalizations, 573-587*.
- Said, E. (1987). *Orientalism*. New York: Vintage Books.
- Sandlos, J. (2007). *Hunters at the Margin: Native people and wildlife conservation in the Northwest Territories*. Vancouver: UBC Press.
- Sandlos, J. (2015). "A Mix of the Good and the Bad": Community Memory and the Pine Point Mine. In J. Sandlos, & A. Keeling (Eds.), *Mining and communities in Northern Canada : history, politics, and memory* (pp. 341-367). Calgary: University of Calgary Press.
- Sandlos, J. & Keeling, A. (2016). Aboriginal communities, traditional knowledge, and the environmental legacies of extractive development in Canada. *The Extractive Industries and Society, 278-287*.
- Sarkadi, L. (2015). Fred Sangris: ENR Mismanaging Caribou. *Edge North*.
- Serecon. (2014). *A Comprehensive Strategy for Sustainable Agricultural Development*. Edmonton: The Town of Hay River.
- Seymour, P. (1997) Doctors, Dias, Nurse Midwives: Women's Health Service Utilization in Northern India. In Johnson, N., Smith, S., & Willms, D (eds.) *Nurtured by*

*knowledge: learning to do participatory action-research*. New York: The Apex Press.

- Sharma, S., De Roose, E., Cao, X., Pokiak, A., Gittelsohn, J., & Corriveau, A. (2009). Dietary Intake in a Population Undergoing a Rapid Transition in Diet and Lifestyle. *Canadian Journal of Public Health*, 442-448.
- Sheehy, T., Kohlahdooz, F., Schaefer, S. E., Douglas, D. N., Corriveau, A., & Sharma, S. (2014). Traditional food patterns are associated with better diet quality and improved dietary adequacy in Aboriginal peoples in the Northwest Territories, Canada. *Journal of Human Nutrition and Dietetics*, 262-271.
- Simpson, L. (2008). *Lighting the Eighth Fire*. Winnipeg: Arbeiter Ring Publishing.
- Spring, A. (2018). *Capitals, climate change and food security: Building sustainable food systems in northern Canadian Indigenous communities* (Unpublished doctoral dissertation). Wilfrid Laurier University, Canada.
- SSHRC. (1983). *Community-based Research: Report of the SSHRC Task Force on Native Issues*. Ottawa: Social Sciences and Humanities Research Council of Canada.
- Strand, K. (2003). *Community-Based Research and Higher Education: Principles and Practice*. San Francisco: Jossey-Bass.
- Stroink, M., & Nelson, C. (2009). Aboriginal Health Learning in the Forest and Cultivated Gardens: Building a Nutritious and Sustainable Food System. *Journal of Agromedicine*, 263-269.
- Sussman, L., & Bassarab, K. (2016). *Food policy council report 2016*. Johns Hopkins Center for a Livable Future.
- Tarasuk, V., Mitchell, A., & Dachner, N. (2016). *Household food insecurity in Canada, 2014*. Toronto: Research to identify policy options to reduce food insecurity (PROOF).
- Tarrow, S. (2011). *Power in Movement: Social Movements and Contentious Politics, Revised and Updated Third Edition*. New York: Cambridge University Press.
- The Dene Nation. (2016). *History*. Retrieved from <http://www.denenation.ca/history/>
- Tondu, J.M.E., Balasubramaniam, L., Chavarie, N., Ganter, N., Knopp, J.A., Provencher, J.F., Wong, P.B.Y., Simmons, D. (2014). Working with Northern Communities to Build Collaborative Research Partnerships: Perspectives from Early Career Researchers. *Arctic*, 419-429.
- T'seleie, D. (2016). *Dene Nahjo- Way of Life*. Retrieved from Dene Nahjo: <http://denenahjo.com/#history>.
- UNEP (2016). *Food Systems and Natural Resources. A Report of the Working Group on Food Systems of the International Resource Panel*. Westhoek, H, Ingram J., Van Berkum, S., Özay, L., and Hajer M.

- United Nations (2016). *Habitat III New Urban Agenda: Draft document for adoption in Quito, October 2016*. <http://www.eukn.eu/news/detail/agreed-final-draft-of-the-new-urban-agenda-is-now-available>
- Van Bibber, M. & George, A. (2012). *Doing Good Health Research in Northern Indigenous Communities: A Guide to Research Review*. Whitehorse, Yukon: Arctic Institute for Community-based Research.
- Watts, M. J. (2000). Political Ecology. In E. Sheppard, & T. Barnes (Eds.), *A Companion in Economic Geography* (pp. 257-274). Oxford: Blackwell.
- Wesche, S., & Chan, H. M. (2010). Adapting to the Impacts of Climate Change on Food Security among Inuit in the Western Canadian Arctic. *EcoHealth*, 361-373.
- Wesche, S., O'Hare-Gordon, M. A., Robidoux, M. A., & Mason, C. W. (2016). Land-based programs in the Northwest Territories: Building Indigenous food security and well-being from the ground up. *Canadian Food Studies*, 23-48.
- <http://www.yellowknifefarmersmarket.ca/vision-statement/> Winson, A. (2013). *The Industrial Diet: The Degradation of Food and Struggle for Healthy Eating*. New York: NYU Press.
- Wray, K., & Parlee, B. (2013). Ways We Respect Caribou: Teetl'it Gwich'in Rules. *Arctic*, 68-78.
- YKCGC. (2017). Retrieved from Yellowknife Community Garden Collective: <http://www.ykgardencollective.org/food-security>
- YKFM (n.d.) *Vision Mission and Values*. Retrieved from Yellowknife Farmers Market: <http://www.yellowknifefarmersmarket.ca/vision-statement/>
- YKFM. (2016). *The Yellowknife Food Charter*. Retrieved from Yellowknife Farmers Market: <http://www.yellowknifefarmersmarket.ca/foodcharter/>
- Zotor, F., Sheehy, T., Lupu, M., Kolahdooz, F., Corriveau, A., & Sharma, S. (2012). Frequency of consumption of foods and beverages by Inuvialuit adults in Northwest Territories, Arctic Canada. *International Journal of Food Sciences and Nutrition*, 782-789.
- Zuber-Skerritt, O., & Perry, C. (2002). Action Research within organisations and university thesis writing. *The Learning Organization*, 171-179.