Full Report | Winter 2022

BARRIERS & BRIDGES IN NORTHERN ONTARIO

NORTHERN FOOD 9

Exploring food value chain coordination

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Ontario 🕅 Canadä

BEFORE WE BEGIN

"Money does not bring forth food. Neither does the technology of the food system. Food comes from nature and from the work of people. If the supply of food is to be continuous for a long time, then people must work in harmony with nature. That means that people must find the right answers to a lot of hard practical questions."

- Wendell Berry (from his essay In Distrust of Movements)

When I was a child, there was an abundance of many types of fruit and nuts growing along the Sceine River. As children we could spend all day outside and not go hungry. These places were not accidental; they were deliberate places where Anishnaabe used to gather. They were cared for and monitored by members of nearby clans. Traveling throughout the region (Northwestern Ontario) it was not necessary to take food with you. The elders would tell you where to find these clusters of wild plums, berries, nuts. Pockets of wild rice. Places where fish have been trapped to be easily speared. We lived in harmony with the land and it supported us. Manitou Aki-Ehnakonegaywin describes the sacred relationships to all life and our environment, which is a responsibility we held in high regard. Now, our people have been forced to stay within reserves, which caused them to neglect these food areas. I still know people who are afraid to leave their reserve to hunt or gather food. The hydro dams disrupt the waterways. When the gates open, they can wipe out spawning grounds of the fish. The beaver are unable to maintain the water levels where it is optimal for the wild rice to grow, killing it off. Our people were forced to let go of our laws that allowed us to sustain ourselves and adopt western ways of living and being. When Freturn to the place where I grew up, there is no longer an abundance of food. These pockets have been bulldozed over, neglected, or destroyed. Medicines have been sprayed and killed to build power lines. All without consultation. Everyone in Canada is profiting from stolen land and resources. This has caused deep suffering across the north.

-Ralph Johnson, Pike clan, Sioux Lookout

NORTHERN FOOD 9 DISTRIBUTION 8 NETWORK

INTRODUCTION

The Northern Food Distribution Network (NFDN) and the Local Food and Farm Co-ops (LFFC) foster relationships across Northern Ontario that respect and retain northern knowledge and values, while catalyzing food system transformation. The LFFC and NFDN received Canadian Agricultural Partnership Funding in 2021, to examine the knowledge gaps in food value chain coordination (FVCC) in Northern Ontario as an attempt to enhance our contributions to Northern Ontario food system development. Assumptions from previous authors of inquiries, strategies, policies, white papers and other bodies of research on northern systems of food, healthcare, agriculture and economics can produce, reproduce and (often unintentionally) privilege Western values and ways of knowing (Castleden 2017). This in turn entrenches incomplete narratives and biases in the provided 'solutions' of these bodies of work (Akena 2012).

Weaving the complexity of food systems found in northern Ontario (forest, agricultural, mainstream imported) and Indigenous food systems and associated knowledges and perspectives could have positive effects at local, and regional scales across the north for protecting food environments, restoring Indigenous foodways and cultures, improving food security and accessibility, addressing food security and sovereignty, and supporting local economies. There is currently a lack of bridging among these different food systems reinforced by the physical infrastructure but discouraged from emergence by food histories and a policy framework that only speaks to one food system (Food Secure Canada, 2011). Moreover, current food policies can be barriers to addressing unique contexts in northern food initiatives (Nelson 2018).

What is missed or overlooked in these Western processes is the relational and inter-relational aspects of lands, waters, between peoples and food supply chains, and within food systems. Water is life, land is the first teacher, food is both sacred and medicine. **"Food for us comes from our relatives, whether they have wings or fins or roots. That is how we consider food. Food has a culture. It has a history. It has a story. It has relationships." --Winona LaDuke.** There are expansive understandings which are not captured or documented when only rigid, reductionistic and/or siloed academic methodologies are applied. Also, there are elements of Indigenous knowledge and Traditional Ecological Knowledge (TEK) that will not translate into Western paradigms.

When some forms of 'truth' are preferred or are privileged over others, it can instill asymmetric power dynamics between various ways of co-creating knowledge. This has resulted in aspects of northern food systems, cultures, languages, with a shocking proportion, to be discounted and discarded over the last 150 years.



A northern vision of a sustainable food system supports food and farming businesses that develop value-based food systems, where power is retained within the hands of Northern Ontario peoples, diversity of culture is respected, our lands are nourished and valued, and economic and social benefits are achieved for all engaged parties.

When examining food system transformation in 2019, Pendergrast et. al. suggested that the term *transformative agroecology* expands beyond regenerative agricultural practices, to integrate local and Indigenous knowledge in place-based solutions which address social inequities within the food system.

Comparatively, food sovereignty encompasses rural social movements to decentralize food systems, and shift political power back into the hands of food producers and the families they feed. Our observation of northern food practitioners suggests an adaptive, fluid approach to value chain coordination which is centred on transformative agroecology, with economic prosperity and food sovereignty held in equal value. To advance both transformative agroecology and food sovereignty efforts, people and relationships are needed to connect sectors, cultures, and organizations. These are roles embodied by food value chain coordinators (FVCC).

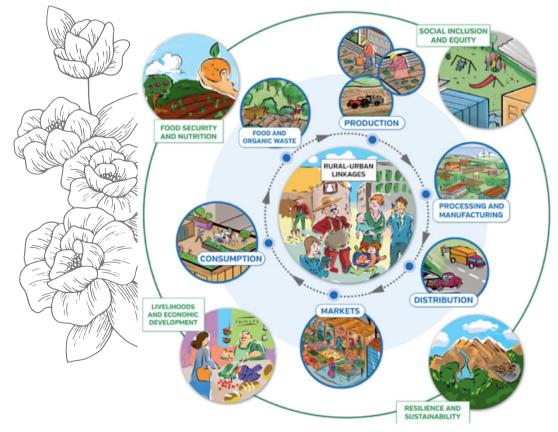


Figure 1: Image Credit: City Region Food System (courtesy FAO).



A multi-sectoral approach is necessary for effective adaptation and resiliency-building in response to climate change. Stakeholders involved in various sectors play significant roles in the food system without considering their impacts on one another, from transportation to agriculture, from urban planning to social policy and beyond. However, adaptation to climate change cannot be done realistically without addressing rights to sovereignty, land rights, treaty rights, and other environmental injustices. To do all of this requires an emphasis on high-quality relationship building, which will require a shift in mental models.

Instead of relying on our farmers and food producers to bridge these gaps, we considered the role of dedicated professionals who are skilled in relationship building and comprehensive food system development, to enhance efforts to connect sectors and cultures. Our approach to exploring Value Chain Coordination in a northern context looks beyond agri-value food chains to examine how these roles could further an inclusive and holistic approach to northern food system development.

"It was through her actions of reciprocity, the give and take with the land, that the original immigrant became indigenous. For all of us, becoming indigenous to a place means living as if your children's future mattered, to take care of the land as if our lives, both material and spiritual, depended on it."

-- Robin Wall Kimmerer, Braiding Sweetgrass



WHAT IS FOOD VALUE CHAIN COORDINATION?

Food value chain coordination is not a new concept; it's used globally to describe the coordination of agri-food supply management chains. The Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) defines a Value Chain as a 'market-focused collaboration; different business enterprises working together to produce and market products and services effectively and efficiently." (Agri-Food Value Chains, omafra.gov.on.ca).

The coordination of value chains differs from supply chain management, which focuses on streamlining the flow of goods in a supply chain to maximize consumer value and gain a competitive edge in the marketplace. In contrast, Value Chain Coordination (VCC) can be thought of as a "set of roles which foster soft infrastructure development to build regional communities and economies" (Wallace Centre Value Chain Coordination Quicksheets, n.d.). Where supply chain management is focused on products and businesses, value chain coordination is focused on people and communities.

The emphasis is on building trust and partnerships, rather than transactional budget focused relationships (fs Food Strategy, 2019).

The term 'food system development' describes creating systems that contain elements (processes and infrastructure) to get food from farm to fork. We would suggest that value chain coordination more specifically describes the actions and competencies of people who are developing these systems in ways which incorporate values and equitable benefits throughout an agri-food chain. These same roles and actions can be equally beneficial to food system development unrestricted to the agri-food chain. It is from this perspective that we conducted our research to examine the work of northern food leaders.



THE MANY HATS OF A FOOD VALUE CHAIN COORDINATOR

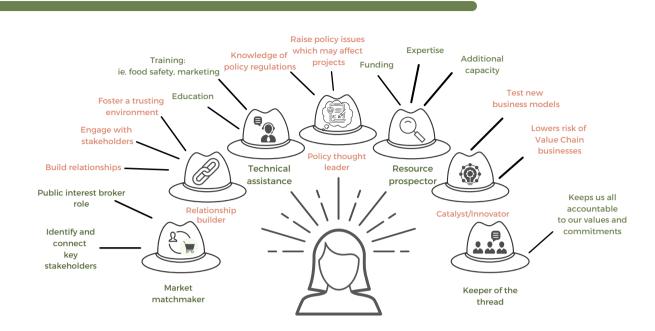


Figure 2: Image Credit: (LFFC) Redekop, Adapted from Wallace Centre Roles

VCC is a complex undertaking which may be performed by individuals, organizations, or a combination of both. VCC may be a primary role for an individual, in that it describes the main duties of a person's role within an organization, such as in the case of a Value Chain Coordination Professional (VCCP). Primary competencies within VCC may include market matchmaking, convening events and stakeholder events, providing technical assistance, and innovating or catalyzing new ideas and projects. These duties are often undertaken by enabling food system actors (farmers, distributors, buyers) who directly impact the value chain, and are also priority areas of focus within a VCCP's work.

VCC may also be a secondary role for an organization, individual or business, in that their work impacts, supports or enables the coordination of the food value chain but it is not their primary focus. Enabling or secondary roles, or those which enhance and enable VCC work, may be provided by businesses in the value chain, or by external support actors such as governments, or non-profits. An example would be when a municipal economic development advisor sources resources for an agri-food project, or acts as a matchmaker with buyers or other partners. Enabling roles include resource prospecting, advocating for policy, fostering relationships, research and assessment, and accountability keeper (Wallace Centre, n.d.). Collectively, these individuals and roles further the development of regional food initiatives, which then create more direct pathways from farmer to consumer.



All of these VCC roles are broad and often overlap. An organization may provide the opportunity to explore all of these VCC roles, just a few of them, and/or there may be very specialized or distinctly different approaches or focuses of the work. All of these variables depend on the specific nature of a regional food system's needs, environment and opportunities.

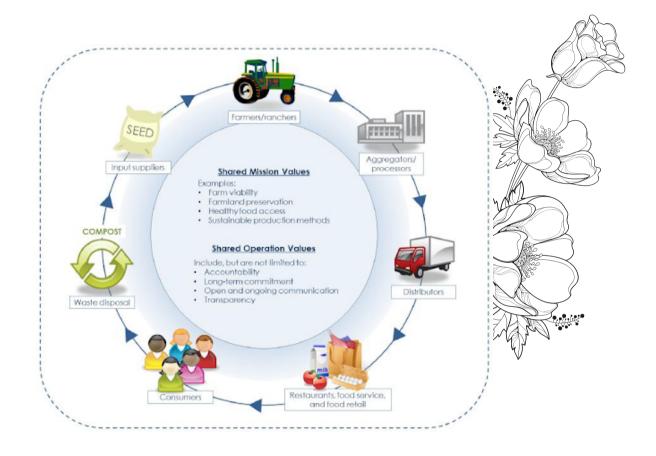


Figure 3: Image Credit: (Wallace Centre) Fisk, Value Chain Coordination in Regional Food Economies



LANGUAGE, RELATIONSHIPS & MENTAL MODELS MATTER

'Everything is connected, everything changes, pay attention.' - Jane Heirshfield.

Relationships past and present have contributed to building strong food systems, and other relationships have resulted in barriers within northern food systems. While non-Indigenous views tend to think of relationships only being relevant between human beings, relational accountability from Indigenous perspectives connects with every layer of Creation, human and non-human (Cajete, 2015; Styres, 2017). However, we acknowledge First Nations peoples of northern Ontario for whom inherent rights and responsibilities continue to be repeatedly denied and ignored by all levels of government, as well as, settler society.

ORIGINALITY, VALUE OF RESEARCH

This research contributes to the understanding of the complexity of transforming food systems in Northern Ontario, what role value chain coordination (VCC) might play in expanding those efforts, and strategies to expand and develop VCC capacity. Castledon 2017: Settler colonialism names a formation of colonialism whereby, as Wolfe (2006) has explained, settler colonizers come to stay and "invasion is a structure not an event" (p. 388). It is exemplified in the ongoing state building actions of nations such as Canada, the United States, and Australia and their relations to the Indigenous populations over whose territories their nations claim sovereign rule.

BACKGROUND & METHODOLOGY

The bulk of research for this project happened during a 2-dose vaccine summer; a national revelation of mass graves at Residential Schools; wildfires and subsequent evacuations in northwestern Ontario; 3rd and 4th wave Covid outbreaks in far north communities; air quality evacuees arriving into northern towns and cities; and over 4000 prepared meals being provided every month in the city of Timmins alone (Anti-Hunger Coalition Timmins, 2021) in an attempt to alleviate chronic hunger.

The work presented here will be inadequate due to funding limits, time limits and northern circumstances which were barriers to the full participation of all northern communities who may be impacted by these findings.

Leadership capacity has been explored in Northern Ontario to support sustainable food system transformation which is concerned with revitalizing local economies, supporting transformative agroecology, and building food sovereignty.

We suggest that community food system practitioners with value chain coordination competencies can play a role in shifting northern food systems to create more selfdetermined, economically viable, socially and culturally sensitive, place-based solutions that extend from soil to seed to plate and back to soil.

The late Mi'kmak Elder Albert Marshall's idea of "Two Eyed-Seeing," that values both Western and Indigenous ways of knowing, is a helpful framework. One eye sees the strengths of Indigenous knowledge and the other eye sees the strengths of Western knowledge (Martin, 2012). "If research hasn't changed you as a person then you haven't done it right" says Shawn Wilson Opaskwayak Cree, northern Manitoba. Both Elder Marshall's Two-Eyed Seeing framework and Wilson's quote serve to guide the work we are doing and the writing of this report.

The theoretical framework for the project was based on relational accountability where relationships are powerfully relevant to context, systems thinking, multi-level perspective and a critical social theory perspective. This critical social theory includes aspects of feminism and post-colonialism.



As researchers and northerners who are governed by Treaty 9 and Treaty 3, uninvited guests and settlers on the traditional territories of the Mattagami and Lac Seul First Nations respectively, we watched, listened and learned with and from northern food system respondents. In this way of being, We are not separate from our food systems work, nor will we be impartial because we are in relationship with the ideas presented, with the northern lands, waters and air that sustain us, and with hundreds of people that keep a deeply flawed colonial food system 'working'. With these relationships, living and nonliving, come responsibilities because it is in the spirit of reciprocity that our values reside.

An online survey was shared with over 148 and organizations and individuals across Northern Ontario who interact with food. Survey data was collected from 40 value chain participants ranging from food producers, procurement officers, food distributors, food coordinators, and registered dieticians working within Northern Ontario. Organizations included Indigenous, Mennonite, and non-Indigenous communities. Each participant was asked to refer food leaders, who were sent a survey if applicable. The data was verified and enhanced through 20 follow-up interviews, and additional feedback was collected from one focus group of 25 participants (Nourish Gathering, Sioux Lookout, August 25, 2021).

METHODOLOGY: RESEARCH SETTING

This research took place in northern Ontario, a region that represents 90% of the provincial land mass covering an area of 806,708 km². It is divided into two sub-regions - northeast and northwest. Although the Algoma district is classified as northeast, it functions geographically as north-central. The far north is considered yet another separate geographical region.

According to Ontario's 2010 Far North Act, the far north is defined as the lands located north of the Woodland Caribou and Wabakimi Provincial Parks. This is roughly north of the 50th parallel in the north east from the Quebec border and north of the 51st parallel in the northwest to the Manitoba border. This area covers 42% of Ontario's land mass, contains the largest wetland complex in North America which makes it a globally important area. The far north is also home to over 35 000 people and is projected to have a population increase of 30% by 2036 (Ministry of Finance, 2013; Woudsma, 2017).

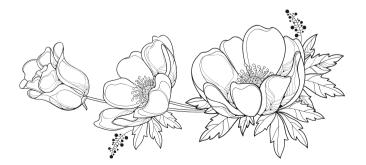
The north has a total population of approximately 810,000 people which is about 5.5% of the provincial population. Census data from 2016 indicated, more than half of the population (61%) is concentrated in the North's five largest centers of Greater Sudbury, Thunder Bay, Sault Ste. Marie, North Bay and Timmins. Four of these cities are situated along the Highway 17 (Trans-Canada) corridor.

Over 85% of the municipalities in Northern Ontario have a population under 5,000 and half (49%) of all municipalities in Northern Ontario have populations of under 1,000. Nearly 90% of all municipalities in Ontario under 1,000 people are in Northern Ontario (ENDM, 2019).

Muskoka and Parry Sound districts are treated as part of Northern Ontario for funding purposes according to the Federal Economic Development Initiative for Northern Ontario (FedNor). However, they are geographically in Southern Ontario and have not been included as part of this report for that reason. FedNor is a program of Innovation, Science and Economic Development Canada with a mission of addressing economic development, diversification and job creation in Northern Ontario.

Cree language and dialects, Oji-Cree, Ojibwe language and dialects, French and English are the predominant languages written and spoken in northern Ontario. The English made first contact in the far north in 1670 when they established trading posts on the James Bay and Hudson's Bay coast. The French arrived in the Algoma region of northern Ontario and began to settle in Sault Ste Marie in 1622 (van Haaften, 2018).

Seasons in the north are marked in various ways. Depending on teachings and culture it could be measured by 13 moons; by 5 seasons (spring, summer, late summer, winter); or by 6 seasons in the far north (which hinge on animal/bird behaviours as well as weather patterns and a myriad of other factors); or recognized as 4 seasons marked by the equinoxes and solstices; or perhaps a combination of these understandings.



RESEARCH FINDINGS

A lack of consistent terminology in the food and agricultural sectors can create confusion. Words such as 'sustainable', 'local', and 'organic' can become trendy, overused and commercialized, losing their integrity. Terms such as 'food hubs' and 'food sovereignty' can be interpreted differently depending upon the individual. As we mentioned, although the term value chain coordination is widely recognized and embodies some of the roles northern food practitioners hold when developing value based food systems, the term does not resonate with those carrying out this work in the north. The people we interviewed for our research are tied directly and indirectly to the food sectors across northern Ontario. They have deep attachments to the land and spoke about the stunning beauty of landscapes, the abundance and quality of natural gifts like big open lakes, vast forests and clean air. When asked 'what is it about the north that makes it unique and you wouldn't want to see change', many respondents also referred to the people and to the communities.

Although most participants were closely involved in food system development in the north, many expressed a difficulty connecting to VCC language: they didn't feel that it reflected the complexity or relational value of their food work. There were few commonalities in language used to describe the work between different sectors. It excludes indigenous food system values, such as moon cycles (Figure 4, page 17 of this report).

"Everybody just does the north in their own way because we have to and that makes us unique. This is also our strength (even though we complain about it). Our difficulties make us stretch." -Research participant

"We all experience the same challenges but each pocket of Agriculture is so unique and can't be compared but at the same time that is our strength and even though spread out we work well together and collaborate a lot better than other areas of the province." -Research participant There is both a stated and implied connection in the north between people and nature as well as to each other. There is also an understanding that living in the north requires different ways of relating to time, weather, seasons and distances between communities. We are as unique, diverse and complex as the northern environments that support us.

Respondents spoke of juggling priorities, fitting in food work "off the side of their desks". At least two respondents felt they were a "jack of all trades, and master of none." When asked which resources respondents did not have adequate access to, the majority of respondents listed gaps in infrastructure, training, and human resources.

Reports, strategies and policy commentary papers have demonstrated that northerners have been clear about what our needs are and how we would like them addressed:

- Northern Ontario Health Equity Strategy;
- The burden of chronic diseases in Ontario: key estimates to support efforts in prevention;
- Growing a more resilient Food Supply Chain in Ontario: Covid-19 Policy Brief;
- Policy Brief: Transformation of Two Farming Systems in Ontario's Changing Climate;
- The need for contextual, place-based food policies: Lessons from Northwestern Ontario;
- Understanding Our Food Systems: Building Food Sovereignty in Northwestern Ontario Evaluation Report;
- Current and Future Opportunities for Agricultural Development in Northeast Ontario: A Regional Development Perspective
- Giving voice to food insecurity in a remote Indigenous community in sub-arctic Ontario, Canada: Traditional ways, ways to cope, ways forward;
- FNFNES Final Report for Eight Assembly of First Nations Regions: Draft Comprehensive Technical Report
- Covid-19 Agricultural Impact in Northern Ontario Survey

In previous meetings with northern stakeholders about addressing these issues values and principles were captured in discussions as follows (Sheedy, 2017):

- by the North for the North';
- holistic, food system thinking;
- collaborative, cooperative, sharing;
- centre / include marginalized people in the process;
- trust, honesty, transparency;
- decolonization of the table and relations;
- asset based build on what already exists;
- simplify the system shorten the distribution chain.

LACK OF ABILITY OR CAPACITY TO IMPLEMENT STRATEGIES

Our research and surveys uncovered countless recommendations and aspirations to build stronger regional alliances, develop infrastructure, and overcome strategies that lacked capacity to deliver upon. For example, Harry Cummings and associates made regional recommendations in 2009 to enhance regional collaborative efforts. In 2015, the Rainy River Food Hub project report suggested that the Rainy River Regional District Abattoir Inc. (RRDAI) needed to participate in developing transportation networks to serve area First Nations, in addition to developing a stronger brand and marketing strategy, while simultaneously acknowledging that the organization is led by a group of volunteer farmers who are already stretched past their capacity limits.

During the Covid-19 pandemic, the Rural Agri-innovation Centre (RAIN) offered financial support to northern Ontario food and farming businesses via the Sustainable New Agri-Food Products & Productivity (SNAPP) program. Applications were accepted during July and August of 2020 to assist farmers in adapting their business model due to lockdown measures and/or in complying with new regulations.

An additional stream was offered to "Strengthen Value Chains", where more than double the amount of support was available to collaborations that would benefit more than one organization and improve regional economies. Of the total of 53 applications received, only 5 applications were for the "strengthening value chains" stream, of which only four were funded. The remaining four projects were of very limited scope- at most, a collaboration of two food producers with an on farm or off farm processing or storage facility. This provides further evidence of a lack of capacity to form strategic alliances and to broaden networks to form integrated value chain networks.

We will explore the foundation for transforming food systems in northern Ontario, by leveraging catalysts [who we will call Community Food System Practitioners (CFSPs)] to create place-based community food systems which encompass sustainability, agroecology, food sovereignty, and other outcomes and northern values we will describe in more depth throughout this report.

It is our assumption that CFSPs will at times take on the roles of VCCs, while adhering to northern values and responsibilities, and operating in the broader context of the intricacies of food system development in Northern Ontario.



LACK OF ABILITY OR CAPACITY TO IMPLEMENT STRATEGIES



Figure 4: Harvesting by the moon cycle, Indigenous Food Circle (Understandingourfoodsystem.com)



BIO-CULTURAL UNIQUENESS

'There are two distinct views of the north: one as frontier, the other as homeland.'--Thomas Berger, counsel to British Columbia in its 2017 challenge to Canada's approval of the Trans Mountain pipeline

Aside from the absurd realities of toilet paper and hand sanitizer shortages, the value chains in most northern Ontario towns and cities with road access, stood up to the pressures placed upon them in 2020-21(Blay-Palmer, 2021; Stark, 2021). Smaller and remote communities were not supported to the same extent as larger communities and were required to take more drastic measures to ensure adequate food supplies and to stay safe (Levi 2020). In some situations this meant moving to camps out on the land for many months, and in others, it meant roadblocks into communities (Mashford-Pringle, 2021).

With Covid-19 we are living a collective experience and it has become blatantly apparent that we are not addressing our food system issues in northern Ontario equitably for all peoples who call the north home (Dunne, 2021). Crowdfunding was needed (and done by the Mennonite Central Committee) to bring emergency food and supplies to Kashechewan, a fly-in community on the James Bay coast that had a Covid-19 outbreak in June 2021. The Northern Store was the only retail site for food in this region and it was forced to close (Baiguzhiyeva, 2021).

Non-communicable diseases (NCDs), many of which are diet-related, account for at least 75% of mortality in Northern Ontario and a growing share of healthcare costs (Chu, 2019). It would be inadequate and ineffective to frame this as a narrow, isolated issue to be 'solved' with a single solution when over 60% of adults and 25% of the youth in Northern Ontario are overweight or obese according to the Canadian Fitness and Lifestyle Research Institute's definition (Cragg, 2009). Eating habits and lifestyle have a role to play in NCD prevention. Northerners are diverging significantly from recommended diets of increased fibre, fruits and vegetables and instead consuming highly processed shelf stable items which tend to be high in salt, sugar and low quality fats (Di Daniele, 2019; Lieffers, 2018).



Northern food systems have historical and geographical contingencies which have been central to producing the circumstances which led to, and that played out, during Covid-19 where we were left to deal with prolonged uncertainty alongside trust, risk, and safety issues while trying to remain connected- as we physically distanced from each other (Dunne, 2021)

Now with the tsunami of price increases, fewer food choices are appearing and are projected to continue to increase (Charlebois, 2021; Rolfe, 2021) - more acutely for northerners. Food has moved from local forests, back yards and fields in the north to a complex knot of supply chains that span the globe that end up at retail outlets -- a radical change in only 80+ years. Most communities with road access, now get in excess of 95% of their foods from conventional food system supply chains (Kronfli, 2021).

Newcomers to the area over the last decade are Mennonite and Amish communities. They have established themselves in the Temiskaming District, Cochrane District, Algoma District and Rainy River Districts. The motivation to move to these regions is propelled in large part by prices of farmland. FCC Farmland Values 2020 Report lists prices per acre in the Kitchener-Waterloo areas at \$19 000 and prices in northern Ontario at \$3 700 per acre. Changing climate and the impact on soils furthers the financial incentives to leave southern Ontario - provided that multiple climate-risks in northern regions don't erase what might be gained from temperature increases.

NORTHERN INDIGENOUS FOOD SOVEREIGNTY

Indigenous peoples in Canada face a significantly different set of challenges related to food sovereignty compared to most Canadian farmers or members of urban and local food advocacy groups. These include disproportionate experiences of ill-health compared with the rest of the population, with shorter life expectancies as a result of unequal access to health, education and other public services, higher poverty rates, and diet-related issues (Adelson, 2005; Estey, 2007).

The majority (90.0%) of First Nations adults who responded to the FNIGC survey reported that traditional food was shared with their household. Three quarters of the First Nations adults living in remote (76.5%) or special access (75.0%) communities reported often eating traditional foods in the 12 months prior to the survey. A significantly higher percentage of First Nations adults living in remote communities (76.5%) reported often eating traditional foods compared to those living in rural (65.3%) or urban (63.4%) communities (FNIGC, 2018; Skinner, 2013).

In the words of Dawn Morrison, the coordinator of the British Columbia Working Group on Indigenous Food Sovereignty, "Indigenous food sovereignty describes, rather than defines, the present day strategies that enable and support the ability of Indigenous communities to sustain traditional hunting fishing, gathering, farming and distribution practices, the way we have done for thousands of years prior to contact with the first European settlers ... We have rejected a formal universal definition of sovereignty in favour of one that respects the sovereign rights and power of each distinct nation to identify the characteristics of our cultures and what it means to be Indigenous." (Morrison, 2011)

Anishinaabe people in and beyond the Treaty 3 territory in Ontario, Canada, protect and renew their food harvesting grounds, waters and foodways through everyday acts of resurgence that are rooted in their law of *mino bimaadiziwin* ['living the good life'] (Daigle, 2017). Manitou Aki-Ehnakonegaywin describes the sacred relationships to all life and our environment, (Land, Air, Water, Fire).

It is important to acknowledge the impact of policies such as the Indian Act and the implementation of "Indian Reserves" on Indigenous food systems in the North. The Indian Residential School system has played a major role in decreasing individual and community participation in local food systems for many First Nations people—for example, by disrupting the ability to access harvesting grounds and waterways—and continues to shape the types and amounts of foods that are eaten (Martin, 2012). It is known that Indigenous strengths in food systems are closely knit with language and participatory action (Morrison, 2011). Wilson (2003) noted that there was a strong link between food and medicine for Anishinabek people in Ontario. She indicated that: "certain plants, berries, and animals...are not only consumed for nutritional reasons but can also be used in the production of medicines." Access to cultural food in urban communities is a challenge for Indigenous people (Cidro, 2015). There is a moral imperative for settler society and all levels of government to reconnect people to their food systems.

Colonial interference manifests itself not only in the production of food, but also in its preparation and consumption, and represents a concerted effort at de-skilling in both realms. Because knowledge of food is taught, just as relationships with food are socialized, the decline of conduits for the transmission of traditional knowledge (augmented by the brutal instruction of residential schools) helped to secure a place for colonialists at the Indigenous dinner table. Through adoption of a Westernized diet, the colonial supplants the traditional in the most literal sense, with nutrient-deficient, industrial foods de-culturing people from the inside out. This displacement is so pervasive that many foods now seen as traditional —including the near-ubiquitous bannock or frybread—are actually creative reactions to the imposition of colonial provisions (Grey, 2015).

Understanding food sovereignty as an anticolonial struggle—and a struggle not merely for the levers of capitalist food policy but for the space to imagine social relations differently—is in keeping with the deepest spirit of food sovereignty. This struggle implicates non-Indigenous people, of course, if for no other reason than because it challenges us to make good on our longstanding legal and intellectual concern for freedom and agency. It also calls attention to the tremendous economic and ecological debt owed Indigenous Peoples, which remains unacknowledged, never mind unpaid (Grey, 2015).

Understanding food supply chain processes is central to reducing risks associated with periodic food shortages, price spikes and reductions in food quality. Food production, storage, processing, distribution, retail and consumption are all exposed to wide-ranging forms of environmental change, including slow-moving changes in average conditions (e.g. climate, nutrient and water cycling), smaller-magnitude variations around those means and larger, anomalous disruptions (Davis, 2021).

Given all of the challenges and possibilities, it is important to summarize the current reality. Right now we have a long-distance food system in Northern Ontario - an average food calorie travels about 3200 kms (even further for the Far North). Most of these calories are nutrient depleted before they hit our dinner plates. Under this model, Northern Ontario is neither food secure nor food sovereign. As a result, we are being forced to question the status quo of our current food system structures and the policies and funding models that uphold their trajectories of importing the vast majority of our food and depending on agricultural exports.

CLIMATE DISRUPTION

Warming has been occurring for over 60 years in northern Ontario and has not been distributed evenly. The far north is warming faster than other parts of the province. Northern Ontario is dominated by water and so these changes are having significant impacts. Hudson Bay & James Bay regulate temperature and weather patterns for northern Ontario and together comprise the world's largest polar inland sea (Rouse, 1991). They now freeze later and thaw earlier - just like many lakes and rivers farther south in the Hudson Water Basin, Nelson River Basin and Great Lakes Basin. Because these inland seas are connected to the Great Lakes atmospherically through wind patterns and the jet stream, there is a combined effect that is being felt across the north (McDermid, 2015).



The growing season in the north currently ranges from about 65 days in the far north to about 170 days in the northwest (Rainy River) to 180 days in more southeast areas (Nippissing). It is predicted that the number of frost free days will increase somewhere between 25 and 60 days over the coming decades.

Indigenous peoples in northern Ontario (Hatfield, 2018) and around the world have been some of the most vocal in acknowledging that (a) climate change is visibly occurring; and (b) that their communities, and all communities, should mitigate, plan for, and adapt to those changes (Harrington, 2006; Maldonado, 2017).

Climate impacts have begun to impact water and wild food systems: changes to bird and caribou migration patterns; drastic reductions in the quantity of harvestable resources available (berries, wild rice, fish, birds animals); and there is evidence that the worst is yet to come (Rall, 2020).

In 20 years it is projected that almost all areas in the north will be impacted on a regular basis in some way by drought (socially, environmentally, economically). Massive habitat loss and range shifting further north will have begun for key species like wild blueberries, Labrador tea, white spruce, moose. Aquatic systems will be adversely affected in a myriad of ways further compromising water quality, cold water fish habitats, damaging wetlands and peatlands. Wildfires will continue to increase in number, intensity and duration requiring evacuations and prolonged periods of reduced air quality. Over and above it all we can expect more frequent extreme rain events, even in the winter season, and flooding (Fram, 2019). None of these scenarios will bode well for any food or distribution system in northern Ontario.

Maintaining culinary identity through foods like maple syrup, birch syrup, wild rice and blueberries has been identified as important to food security. On a deeper level, food is used to define group identity, it helps to create the image of a place, and has been called a central definer of a nation - on par with language (O'Riordan, 2013).

Evidence indicates that every component of wild and conventional food systems production, processing, distribution, preparation and consumption--is climate sensitive and can experience impacts from climate change effects. Climate-related disruptions in the food system can indirectly impact human health by diminishing food security, which is a key determinant of health. Good water and a nutritious diet, are key aspects of food security and play significant roles in an individual's wellbeing. Food access or food safety programs, will have limited effectiveness in reducing poor health outcomes if other major drivers of food insecurity are not addressed.(Schnitter, 2019)



Climate change is linked to northern food production, food distribution and overall food security. Soil based agriculture is directly tied to precipitation, weather events and frost free days. Ice roads which open windows for shipping food and other goods by land are being compromised and have been drastically shortened (Hori, 2018). It is on average 4 times more expensive to ship goods by air than to move them over roads in the north.

Greater exposure to rapid climate change and more limited capacity to adapt makes Canada's North one of the most vulnerable regions to health impacts. Important differences in infrastructure, community design, health care and social service delivery, community resources, and demographic and health trends require the adoption of local or regionally planned public health adaptation strategies for urban, rural, northern, and coastal communities (Berry, 2014).

Engaging with Indigenous knowledge holders and their knowledge systems in a manner that ignores the political, historical, and geographical contingencies from which they arise is an act of epistemic violence. As we work toward reconciling and healing our deeply troubled relationships with both each other and with the lands, waters, and air around us, having Indigenous ontologies inform both governance of and responsibility to water represents an immense opportunity for co-learning and healing (Castleden, 2017).

RESULTS AND DISCUSSION

RECONCILIATION

Going forward, it will be critical for non-Indigenous organizations to continue to make space for Indigenous leadership and Indigenous principles to guide our collective work of "walking together" (Government of Ontario, 2016; Lawson Foundation, 2019). Walking together requires maintaining relationships through reciprocity, respect, and a mutual sense of responsibility.

It needs to be reiterated that First Nations peoples are not stakeholders in land-based discussions (which includes food systems), they are rights-holders as was established with northern Ontario treaties 3,5,9 and both Robinson's (these are binding nation-to-nation agreements). These treaties are enshrined in Section 35 of the 1982 Constitution, and are also upheld by UNDRIP (which went to royal assent in June 2021).

INTEGRATED UNDERSTANDING

Aside from capital and material infrastructure, political will, a shift in mental models and support is crucial to food system innovation. Many community leaders, decision makers and funders are not currently equipped with the understanding of food value chains and systems design required to help move high-quality projects from ideation to realization.

When integrated understanding is absent, strong partnerships fail to form and necessary infrastructure in the North does not get built. When most actors and higher level decision makers across the food value chain have a poor understanding of the multi-level acupuncture points, systems thinking and systems change fails to occur. Also, science is not adhered to, Indigenous rights and sovereignty is not respected, and key jobs are not created.

Decision making capacity and quality increases when food system complexity is deeply understood by all parties that act within this system - directly and indirectly. There exists a persistent gap in knowledge on the political nature of adaptation to multiple, concurrent environmental and social changes. Without directly challenging the legacy of pervasive dualisms that shape conceptions of economic thinking, ecological economics is incapable of enacting sustainable and equitable economies of change (Ruder, 2019).

PLACE-BASED STRATEGIES

Regional networks and transformative food politics are discussed by Levkoe (2017),where he explores some of the criticisms of Alternative Food Initiatives (AFIs), and the framework for transforming food systems. He suggests that to achieve more than slight changes to the way in which we address food access issues, we must stay grounded in the current realities, envision the sort of future for food that we desire, and focus on the transformative process to get there.

Levkoe (2017) then summarizes three key elements to a comprehensive food system approach (adapted from Levkoe, 2011) which are collective subjectivity, a comprehensive food systems approach, and politics of reflexive localization.

Collective subjectivity is the first element of transformative food politics, which emphasizes a reorientation towards social values and food justice, over isolated profit-driven markets, which may be inaccessible to vulnerable populations.

A comprehensive food system is the second element, which describes the integration of social values such as health and ecological sustainability along the entire food value chain. Levkoe suggests that this approach would provide a deeper understanding of the multiple sectors that impact food systems.

And finally, reflexive localization is the third element of transformative food politics which he describes as "transcending a static interpretation of the meaning of 'local' while preserving and maintaining the unique characteristics and diversities developed in place" (Levkoe, 2017, p187). This element suggests that food value chain coordinators (FVCCs)/ or CFSPs, must not be too restrictive in their prioritization of locally sourced goods, but instead should remain flexible when developing standards for food sources in the food value chain. In other words, not all AFIs are sustainable, and they don't all address some of the key issues northern Ontario residents are facing.

It's not enough to work outside of the conventional food systems and create new ones: we need to develop effective strategies to avoid replicating systems that don't work. Bringing value chain participants into the same room won't necessarily lead to the formation of a CFS- the ability to overcome the barriers to economically sound and just food systems in the north is unlikely to be found within only one organization, person or sector.

EMPOWERED FOOD PRACTITIONERS

Community Food System Practitioners (CFSPs) can build on comprehensive food system principles, and be instrumental in the development and maintenance of regional networks to foster growth and overcome barriers in Northern ON food systems. Their effectiveness will lie in cultivating the capacity and capability in people, communities, and other natural systems to renew, adapt, and thrive.

Despite the complexities of effective value chain coordination and comprehensive food system development, practitioners with the capacity to undertake them are not considered in policy, strategy or 'solutions' for northern food systems. There are underlying assumptions in the documents that the work will just 'get done' by a mix of community actors.

Critical principles such as these, and skill sets such as those embodied by VCCs, can be taught and modeled to regional CFSPs, who can then weave these strategies into food value chains and regional collaborations. As keeper of the thread, the CFSP can maintain accountability for each link in the chain. Without them, there is no mediator or convenor to create the linkages between different sectors to effectively engage in strategies such as those Levkoe suggests.



RESOURCE FLOWS

The desire to adhere to social values, innovate and improve the status quo can be hindered by a lack of resources and capacity. Although many great programs exist to support Northern Ontario development, the need to adhere to tight deadlines, and match funder expectations (usually heavily centred on economic development), can force projects to confirm to fit the box, sacrificing ethical goals and ecological considerations in order to meet economic objectives, effectively replicating issues present in the existing food chain. Furthermore, leaders in food are typically restrained to meeting objectives of currently funded projects, making it difficult or impossible to engage in new opportunities effectively as they arise.

Strategies are not always written or chosen for the unique people, situations, place or circumstances that are in front of us. Best practices, common processes and yesterday's logic won't help today's hairy complex issues and produce the necessary transformative results we need today and tomorrow. It also hinders northern sovereignty and limits possibility.

Funders and funding bodies tend to function at the lower end of potential change. We need to be able to hold more complex perspectives in order to field our way through the multilevel and vertical issues that will continue to compound without grasping for simplistic solutions that only end up being better than bad.

Northern food and agricultural resources and studies need to be centralized and made more accessible. The Northern Policy Institute (NPI) has developed a library of northern resources, but they have offloaded the responsibility of cataloguing agricultural studies to Northern Ontario Farm Innovation Alliance. NOFIA's library is currently directed primarily at applied soil-based agricultural studies, rather than northern food systems as a whole.



VALUE CHAIN COORDINATION IN OUR NORTHERN CONTEXT:

COMMUNITY FOOD SYSTEM PRACTITIONERS EMERGE

AGRICULTURAL HISTORY

The original value chain coordinators were First Nations, who have been here since time immemorial, and who had clearly successfully sustained themselves. Agriculture was part of northern food systems in addition to fishing, hunting and gathering (Andree, 2014). Trade of foodstuffs in the north occurred up and down waterways and it crossed over watersheds.

Today, agricultural areas are located in the districts of Kenora, Rainy River, Thunder Bay, Cochrane, Temiskaming, Sudbury, Algoma, and Manitoulin. Comprehensive reports written in 2009 by Harry Cummings and associates provided an estimate of the economic impact of agriculture on the wider economy for each of these districts and lists of recommendations for implementation.

Many respondents in previous agricultural studies expressed that they had long held ties to their operations, having been passed down through generations. There was a clear sentiment that past generations had come to the area as pioneers and established farms on difficult terrain and that this history should be preserved. It was also perceived that while the term was never used, people in the area valued farmland as part of their cultural landscape and not just as an under-utilized resource.

The value of agriculture is most often framed in economic terms; it is important to recognize that this sector has additional significance to the communities which is more difficult to quantify, though every bit as important. Many farm operators did not expect to pass their operation onto children or other family members and had no plan for the operation following their retirement (NeCN, 2011).



There is no concept of an "environment" as separate from the relationships to Anishinaabe collective first family: Mother Earth and Father Sky; Grandfather Sun and Grandmother Moon (Benton-Banai, 1988; Anderson Comay, 2017; Hart, 2002). People are not tied to the land in the north, they are of the land. Water, in all its forms, is the tie that binds this family of relationships and is considered sacred.

Just like language, solutions are placed-based. Here in the north, we need to look at those VCC roles in a more holistic way, and build on the northern unique context, and knowledge which already exists. From an interdisciplinary lens, VCC work will be a key and necessary part of effectively stewarding local/regional climate change strategies, adaptations and mitigations as these roles relate to food systems but also interrelate with transportation, health, environmental conservation, water/hydrologic systems, urban planning and social programs.

"People don't have a market based perspective in the North- words like "value chain" don't resonate with people trying to feed community. Value chain coordination excludes indigenous frameworks like clans and moon cycles." — participant feedback, Nourish gathering, Sioux Lookout

Most survey respondents we interviewed said that the term "value chain coordination" feels uncomfortable to Northern Ontario food system practitioners, although most of them are performing primary and enabling roles of a VCC.

Comprehensive food system development, as described above in solutions, drawn from Levkoe (2017), closely resembles the goals of a VCC in this context. While the established framework and roles of the VCC provide some foundation with which to draw some shared understanding and best practices from, the work of a northern food practitioner expands beyond agri-food chains and encompasses northern values, such as land based practices, for securing food.

We suggest that Community Food System Practitioners (CFSP) might better describe the food system development work happening in the north. We then suggest this role can be developed, through experience and training, to establish Comprehensive Community Food System Practitioners (CCFSP), who are specialized in systems thinking, multi-perspective food systems, and are well versed in best practices and principles for catalyzing transformative food system changes. CCFSPs would hold experience and recognized skill sets to foster food system transformation, similar (but not identical) to a Value Chain Coordination Professional (VCCP).

Community Food System Practitioners (CFSPs) perform various aspects of value chain coordination and are part of the solution to the multiple issues of northern food system development which currently are rooted in: policy/strategies; practices/systems thinking; long-term lack of capacities and resource flows; relationships and connections; power dynamics; and mental models that have omitted Indigenous knowledges.

There should not and cannot be a stagnant definition of Community Food System Practitioner role which hinders emergence, innovation, restricts the work or infers that it is replicable identically from place to place. This would be contradictory to place-based solution development. Indigenous communities have their own protocols and guidelines and it is important to look to the community rather than impose institutional understandings of community engagement (Andree, 2014). This is not a box ticking exercise of 'practices' but, like value chain coordination, there are some practices that are foundational from which to build, and can point to key competencies which impact successful outcomes.

This work is self-management work which is intentionally holistic and rooted to values; prioritizes a close proximity to place and people; and as a result, has multiple roles instead of job titles. This means that it is intended to be done in meaningful relationships, in teams and in networks. This is a role that anyone, regardless of cultural background, worldview, or age, that is willing to do the ongoing internal personal work as well as the external work, could aspire towards.

Comprehensive community food system practitioners (CCFSPs) function as the 'elder' in this nested system of work across the north. In this way there is no 'recipe' but a healthy space to allow conscious exchange and the emergence of uniqueness of place that needs to express itself. CCFSPs also are a source of mentorship for CFSPs as they are skilled in both complex and complicated food systems work, thus honouring the uniqueness of place-based work, assisting interdependence, encouraging reciprocity, and focusing on potential.

EXPANDING CAPACITY

Increased capacity for food system leaders (whether we call them CFSPs, CCFSPs, VCCs, all or none of the above), should be viewed as a key solution in developing stronger crossdisciplinary strategic alliances that improve our ability to move food from seed to plate. This was identified in Knezevic's 2013 report: "To date all of the existing northern food systems are supported by short-term funding and huge amounts of volunteer time..." During gatherings of Northern food leaders led by the Greenbelt fund in 2017, participants identified barriers to food distribution include a lack of collaboration among food producers to aggregate products for distribution, and a lack of human resources to facilitate the collaboration (Sheedy, 2017). Distribution is a major weakness in northern food system development which significantly reduces availability of fresh foods in remote communities and increases the cost of food across the north. Scaling up food hubs to aggregate products for cost-effective distribution is essential for economically sound systems in remote, rural areas (Rogoff, 2014). Aggregating food products requires more than physical warehouse space: these must be collaborative spaces for producers to leverage and share existing infrastructure and resources, and collaborate on marketing and distribution opportunities, in order to collectively further their goals. Local sustainable food systems like these need "catalyzing, facilitation and development of capacity, both at the enterprise and the landscape level" (Young, 2015).

A resistance or inability of some food producers to establish close strategic relationships with other members of the value chain has been cited as the primary hindrance to stronger, more competitive agri-food systems (Schmidt, 2013). The most common barrier to collaboration amongst food initiatives examined nationally was identified as a lack of time and resources to participate. Sometimes this has been driven by a lack of support from organizational leadership and/or funders, in addition to fears such as a perceived loss of autonomy (Levkoe, 2017).

We believe that CCFPs and CFSPs could play an integral role in expanding capacity for strategic collaboration, advocating for the value of strategic alliances, sourcing support to organize and facilitate spaces for cross-disciplinary discussions to build CFS, and support the growth of trusting collaborative relationships along agri-food value chains connected to comprehensive food systems. Not only can they act as the mediators to bring actors from different sectors together, as the trusted intermediary, but they can also advocate for financial support to enable the participation of some community members who may need it to participate in a meaningful way.

THE NEED FOR TRAINING AND LEADERSHIP DEVELOPMENT OF CFSP/CCFSPS

All food actors are not created equal. Most farmers are aging out and few have succession plans. Not all food producers and farmers have the ability to look beyond their own bottom line, and find time beyond balancing farm duties, family life and off-farm work, to actively engage in community development. Not every municipal economic development manager is interested in getting their hands dirty to deeply examine the food issues which impact the health of their community, and impede agricultural development. And still, those that do can struggle in this uncomfortable space of the unknown, and lack a basic understanding of the components of comprehensive food systems and the key social issues that affect them, undermining their ability to effectively participate at a systems level. This training should be available to good leaders who are interested and ready to further develop their skills.

"aware" to "very knowledgeable" about food value chain coordination, only 27% thought they may have taken training related to FVCC, and less than 10% thought they could confidently access relevant training. At the same time, 94% of these same res pondents perform duties related to primary FVCC in their regular work duties.

Transformative food systems need leaders who can cultivate strong, trusting, long-term symbiotic relationships with the individuals, organizations, and communities they serve.

Whether we call these leaders value chain coordinator (VCC)s, Food System Practitioner (FSP)s, or something else entirely, they must foster collaboration amongst others, and also amongst themselves to continue growth and knowledge building in multiple sectors. A more concerted effort towards northern knowledge sharing and genuine shared learning is needed to further advance community food system development knowledge and skill sets amongst these practitioners.

It is important to move beyond reading and hearing about one another's projects and create these meaningful spaces for critical reflection on both successes and failures, to create more opportunity for reimagining our food system with innovative solutions. "The more that leaders can hear from others' journeys, including how others had to let go of certain assumptions, mindsets, or beliefs to reach new leadership insights, the more developing leaders can understand that they are not alone in this process" (Walker, 2020).

The needs, strengths, interests, core values, goals, and well-being of those served must take precedence over the self-interests and limiting beliefs of the leader. In order to find hidden solutions to these complex, long-standing issues, these leadership collaboratives must be able to look beyond their own ethnocentrism and take an altruistic approach to examining the system issues to create economically sustainable models that further food sovereignty efforts and lead to lasting change.

A COLLABORATIVE APPROACH

Cross-disciplinary cohorts are emerging in the North. The Northern Food Distribution Network was formed to create a strategic alliance of food system actors and leaders across Northern Ontario, for the purpose of breaking down barriers to efficient food distribution. The new Northern Ontario Anchor Nourish Cohort, formed to expand land-based learning in the North, connects the health system to food system actors, indigenous partners, knowledge keepers, and academics, for the purpose of shared learning and development.

The need for multi-disciplinary collectives has received increasing recognition, as they play an essential role in transformative system changes. "Leadership collectives need to cross boundaries between disciplines, and between academia and society. Bridging these boundaries requires leaders with specific skills, including epistemological agility, knowledge brokering, creativity and self-reflexivity (Haider, 2018 as cited in Care et al., 2021). By developing leaders with these skill sets to act as bridges, we can support stronger strategic alliances.

PLACE-BASED TRAINING

A comprehensive training program encompassing all aspects of food value chains does not yet exist, particularly one which is sensitive to the complexities of the food crisis in Northern Ontario. Due to the place based nature of CFSP work, training should be developed from within.

Online self-paced curriculum, covering CFS principles, terminology, leadership best practices, and basic knowledge of relevant sectors and food policies would be an ideal starting ground, coupled with collaborative reflective analysis of real northern RFIs. Most of our survey respondents ranked relationship building high in their wish lists for this type of training, which could be achieved through leadership development training combined with collaborative reflection with other northern leaders. In this way, relationship building can begin and be strengthened, while simultaneously learning about other sectors.

Many of our survey respondents shared that they felt a lack of former experience impeded their effectiveness in food value chain coordination. More than one responded shared a feeling of being a "jack of all trades and master of none".

The need for training to support multi-sector collaborations such as agri-food chains is not unique to the North. "There is a need for educational and training programs that develop such capabilities among disciplinarily diverse cohorts and for further investment in funding programs that recognise the unique challenges facing inter- and trans-disciplinary research." (Care, 2021) These practitioners stated that infrastructure and training were the resources most lacking in their food system development work. Nearly 60% would prefer to take this training online, with another 20% citing on the job learning as most appealing to them.

Space to document, share, and reflect on food transformation work in various settings can provide critical opportunities to transfer knowledge across sectors, build self-reflection skills, foster trust, and strengthen longterm relationships across the north. "Purposely engaged leaders approach lived experiences with a learning orientation, test the boundaries of current knowledge through experimentation, seek feedback and regulate emotional states, and, finally, reflect on why things happened certain ways" (Ashford, 2012 as cited in Walker, 2020).



Strong leaders exist in multiple sectors from whom we can glean valuable key insights from their specific role across the chain. Working together, these leaders can piece together the relevant knowledge and skills needed to diminish knowledge gaps and create space for transformative solutions (Walker, 2020).

COLLABORATIVE TEAMWORK AND RECIPROCAL LEARNING EXCHANGES

It is important to note that while we refer to VCCs (or FSPs) as leaders, we are not suggesting they can or should hold any greater power than any other food system actor, nor should they further centralize or colonize food system development. As previously stated, a VCC can be a person, an organization, or a collaboration of representatives from each.

Furthermore, the needs of a comprehensive food system are extremely complex, requiring high level understandings of public health, nutrition, regenerative agriculture, land planning, community and economic development, social justice, cultural nuances, logistics and distribution, supply chain management....the list is extensive. It is not expected nor possible for a single individual to become an expert in each of these many areas. Instead, the hope is that key competencies can be achieved through collaboration, and that cross-disciplinary cohorts can expand knowledge for their area of expertise, while broadening their own awareness of other disciplines.

While engaging in comprehensive food system work, a practitioner might be a leader in one workshop or food project situation, while acting as a learner or follower in another. For example, a seasoned supply chain manager may be able to teach their effective procurement and tracking strategies that significantly increased local food purchases within their organization. In this way, they are acting as a leader, and sharing their successful experiences, which other similar organizations can replicate.

Reflecting on value chains developed in order to source and distribute these products, a distributor may see gaps or other opportunities to enhance the means in which the products arrive to the organization. In this respect, the supply chain manager now becomes the learner, while they examine their model through the eyes of a different expert. Working with an Indigenous community to source wild-harvested foods, they may be further challenged to become the follower, while they expand their understanding of land based practices and ethical harvesting, in order to meet their objectives in an ethically, socially conscious way. This type of learning exchange, where leaders and follower roles can be traded or exchanged while pursuing mutual goals and objectives, can enhance mutual respect, empowerment, and effectiveness (Malayan, 2014).

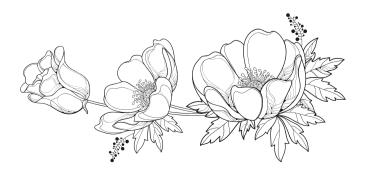
Therefore, similar to a VCC, we suggest that one role of a CFSP is to be the "keeper of the thread", who ensures accountability to these social values throughout the value chain. However, we do not mean to suggest by referring to CFSPs as leaders, that they should hold any greater power than any other food system actor. They are supporters, enablers, bridges, collaborators. They are the glue with which to build place-based solutions which encompass local knowledge and values, through building reciprocal relationships with other food value chain participants, and learning through collaboration with other CFSP and CCFSPs.



The surrounding landscape must also be examined simultaneously in these processes. Constraints in the north include government policies, societal norms and goals, market forces, incentives, power imbalances, knowledge gaps, and embedded social narratives. Changing mental models often means challenging power structures that have defined, influenced, and shaped those models historically and in the present. (Kania, 2018).

The food environment is greatly shaped by the policy environment, and policy action is needed at the municipal level and provincial levels of government to shift the food environment towards one that can promote healthy diets (Vanderlee, 2017) - especially in northern Ontario. The way forward is unpredictable and the stakes are high, but the magnitude of the wicked socio-economic and ecological problems demand radical theory and practice (Ruder, 2019).

CFSP and CCFSPs will require a new stance and trust from other food leaders and leaders in other community sectors. Not only will other members of the community need to show a strong commitment to the journey, but will also demonstrate a willingness to stay open in the face of any pretense that an all-encompassing up-front plan would ever be presented. Although comforting, this would be an illusion that would not demonstrate respect in reciprocity. Things will be out of balance and confusing for a while - especially during the post-Covid years and coming climate change disruptions.



CONCLUSION

Northern Ontario is challenged by complex issues, and privileged by relationships. Shared realities concern communities and neighbours extending throughout the north, despite the great distances which separate them. These relationships exist between peoples and land and culture and regions. Marginalized people, including First Nations, know big changes are needed.

Food leaders in the north have identified the need for more training and collaborative opportunities to share and build knowledge in order to overcome significant challenges impeding the adaptability needed for resiliency in food systems. Food system illiteracy gaps and systems thinking training need to be addressed for secondary and tertiary civic leaders. Many people who touch the food value chain in their work, wear a number of 'hats' as a unique northern reality.

We call for the will, understanding and structures to be put into place that support the responses needed from community members, agencies and municipalities, as well as, public health organizations, agri-food sector participants from: academics, policy researchers, political actors and funders. Naming, identifying lead organizations, and highlighting where responsibilities lie for addressing community/regional food system gaps in northern Ontario within northern specific reports and strategies are more likely to be acted upon and scaled to their full potential (provided there is political will, policy support and clear access to funding for implementation).

Research has demonstrated that Northern Ontario residents do not identify with market based language, such as value chain coordination, and prefer to think of food system development in more holistic, relationship based terms. Research has also shown that northern Ontario producers, research institutions, and agri-related businesses believe it is important to work on the development of regional/community food systems.

Community Food System Practitioners should be identified and developed as a means to honour, value and protect not only traditional and northern food practices and networks but also as bridges between local, urban, regional food value chains. Integrated strategies need a few place-based people with the skills, knowledge and relationships to develop and implement such plans. Recognizing the value of these roles, and establishing shared language to describe them, is an important step towards attracting more food leadership and supporting and developing this important work.

Northern Ontario farmers have typically filled value chain coordination roles in past decades. Much has changed since then. Northern producers are small to medium sized operations with few or no additional staff and it is common for farmers to also be employed off-farm. The vast majority of producers are now in their 6th and 7th decade of life. Yet, there is an implied assumption in policy and strategy that despite the lack of capacity, VCC work will be led by producers despite these untenable circumstances.

We can't apply solutions and recommendations to problems we don't fully understand. Knowledge gaps concerning northern food systems are wide across multiple sectors and must be filled. Mental models at the root of northern issues that keep most systemic problems in place must be confronted in order to be shifted. The local and regional food system transformation that northerners have requested, using concepts from agroecology, food justice together with participatory, action-oriented, community-centered practices and value chain coordination can potentially close the self-identified knowledge gaps of civic leaders and build bridges to the future that northerners need.

The Right to Food (especially for low-income and marginalized populations) must be foundational. Climate crises is changing the northern landscape faster than adaptation and mitigation is being realized at the community and regional levels. Piecemeal approaches and incremental gains can't get northern urban/rural communities to a place of resilience in the face of social, economic and ecological hardships that will be multiplying simultaneously in the coming years/decades (Ray, 2019). Leveraging resources through mutually reinforcing activities must be better communicated and prioritized. This will not happen 'organically' and needs deliberate coordination with the tools of value chain coordination and the skills of community food system practitioners.

"Establishing and maintaining a mutually respectful relationship between Aboriginal and non-Aboriginal peoples in this country" directly quotes the Truth and Reconciliation Commission's Final Report (2015, p.6) and it also requires "reconciliation with the natural world" (2015, p.6). "Reconciliation must inspire Aboriginal and non-Aboriginal peoples to transform Canadian society so that our children and grandchildren can live together in dignity, peace, and prosperity on these lands we now share." (TRC, 2015, p.8)

For more information:

www.localfoodandfarm.coop www.localfoodandfarm.coop/nfdn



ACT, Anti-Hunger Coalition Timmins. Personal communication. 2021.

Adelson N. **The embodiment of inequity: health disparities in aboriginal Canada** (2005). Can J Public Health. Mar-Apr;96 Suppl 2(Suppl 2):S45-61. doi: 10.1007/BF03403702

Akena FA. **Critical Analysis of the Production of Western Knowledge and Its Implications for Indigenous Knowledge and Decolonization** (2012). Journal of Black Studies, 43(6), 599–619. <u>http://www.jstor.org/stable/23414661</u>

Baiguzhiyeva D. 'High level of anxiety' in Kashechewan: Mushkegowuk's manager of emergency services.(2021) Local Journalism Initiative ReporterTimminsToday.com. https://www.thestar.com/news/canada/2021/06/14/high-level-of-anxiety-in-kashechewanmushkegowuks-manager-of-emergency-services.html

Benton-Banai E. **Mishomis Book: The Voice of the Ojibway** (1988). Minneapolis: University of Minnesota Press.

Berry, P, Clarke, K, Fleury M, Parker S. **Human health;In Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation** (2014**).** (ed)Lemmen D. Government of Canada, Ottawa ON <u>https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/assess/2014/pdf/Cha</u> <u>pter7-Human-Health_Eng.pdf</u>

Blay-Palmer A, Santini G, Halliday J, Malec R, Carey J, Keller L, Ni J, Taguchi M, van Veenhuizen R. **City Region Food Systems: Building Resilience to COVID-19 and Other Shocks.** Sustainability (2021). 13(3):1325. <u>https://doi.org/10.3390/su13031325</u>

Cajete GA. **Indigenous Community: Rekindling the Teachings of the Seventh Fire** (2015). St. Paul: Living Justice Press



Care O, Bernstein MJ, Chapman M, Diaz RI, Dressler G, Felipe-Lucia M, Friis C, Graham S, Hänke H, Haider LJ, Hernández-Morcillo M, Hoffmann H, Kernecker M, Nicol P, Piñeiro C, Pitt H, Schill C, Seufert V, Shu K, Valencia V, Zaehringer JG. Creating leadership collectives for sustainability transformations (2021). Sustainability Science, vol. 16, no. 2, pp. 703-708.

Castleden HE, Martin D, Cunsolo A, Lauridsen K. **Implementing Indigenous and western knowledge systems (Part 2): "You have to take a backseat" and abandon the arrogance of expertise** (2017) International Indigenous Policy Journal. DOI:10.18584/iipj.2017.8.4.8

Chan L, Batal M, Sadik T, Tikhonov C, Schwartz H, Fediuk K, Ing A, Marsha L, Lindhorst K, Barwin L, Berti P, Singh K, Receveur O. **FNFNES Final Report for Eight Assembly of First Nations Regions: Draft Comprehensive Technical Report (2019)**. Assembly of First Nations, University of Ottawa, Universite de Montreal. <u>http://www.fnfnes.ca/docs/FNFNES_draft_technical_report_Nov_2__2019.pdf</u>

Charlebois S. et al. **Canada's Food Price Report 11th Edition** (2021) Agri-Food Analytics Lab. Dalhousie University, University of Guelph, University of Saskatchewan, The University of British Columbia

Chisholm-Hatfield S, Marino E, Whyte KP. et al. **Indian time: time, seasonality, and culture in Traditional Ecological Knowledge of climate change** (2018). Ecol Process 7, 25. <u>https://doi.org/10.1186/s13717-018-0136-6</u>

Chu M, Truscott R, Young S, Harrington D, Keller-Olaman S, Manson H, Orr S. **The burden** of chronic diseases in Ontario: key estimates to support efforts in prevention (2019). CCO and Ontario Agency for Health Protection and Promotion (Public Health Ontario).Toronto: Queen's Printer for Ontario; 2019 <u>https://www.publichealthontario.ca/-/media/documents/c/2019/cdburden-report.pdf?</u> <u>sc_lang=en</u>

Cidro J, Adekunle B, Peters E, Martens T. Beyond food security: Understanding access to cultural food for urban Indigenous people in Winnipeg as Indigenous food sovereignty (2015). Canadian Journal of Urban Research, (24)1, 1–20.

Cragg S, Craig CL. (2009) Rating Canada's Regional Health: Which health region has the highest proportion of overweight and obese residents? (2009) Canadian Fitness and Lifestyle Research Institute, Ottawa, Ontario.

Daigle M. Tracing the terrain of Indigenous food sovereignties (2017). The Journal of Peasant Studies, 1–19.

Di Daniele N. The Role of Preventive Nutrition in Chronic Non-Communicable Diseases (2019). Nutrients. 2019;11(5):1074. doi:10.3390/nu11051074

Dunne N. Kashechewan's COVID-19 emergency had pre-pandemic roots (2021). TVO. <u>https://www.tvo.org/article/kashechewans-covid-19-emergency-had-pre-pandemic-roots</u>

Esty D. What stakeholders demand? (2007). Harv. Bus. Rev.. 85. 30-34.

Fram K, Rantala-Sykes B, Kirkwood A, Hulley E, Sarrazin-Delay C. **Up North on Climate** (2019)

fsStrategy Inc. A Value Chain Coordination Study: A Feed BC Summary Report (2019). Government of British Columbia. Ministry of Agriculture. <u>https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/feedbc/value_chain_coordination_study_-_feed_bc_summary_report.pdf</u>

Grey S, Patel R. Food sovereignty as decolonization: some contributions from Indigenous movements to food system and development politics (2015). Agriculture and Human Values, 32(3), 431–444. https://doi.org/10.1007/s10460-014-9548-9 https://rajpatel.org/wp-content/uploads/2009/11/Grey-Patel-2015-Food-Sovereignty-as-Decolonization.pdf

Government of Ontario. Ministry of Environment, Development and Mines (ENDM). **Far North Ontario** (2019). https://www.ontario.ca/page/far-north-ontario

Haider LJ, Hentati-Sundberg J, Giusti M et al. **The undisciplinary journey: early-career perspectives in sustainability science** (2018). Sustain Sci 13:191–204. https://doi.org/10.1007/s11625-017-0445-1

Hori Y, Gough WA, Tam B. et al. Community vulnerability to changes in winter road viability and longevity in the western James Bay region of Ontario's Far North (2018) Reg Environ Change 18, 1753–1763. https://doi.org/10.1007/s10113-018-1310-1

Kania J, Kramer M, Senge P. The Water of Systems Change (2018) FSG. Inc. https://www.fsg.org/publications/water_of_systems_change#download-area

Knezevic I, Landman K, Blay-Palmer A, Nelson E. (Eds.) Models and Practices for Building Sustainable Food Systems in Ontario and Beyond (2013). Guelph, ON: Ontario Ministry of Agriculture, Food and Rural Affairs.

Kronfli C. Growing a more resilient Food Supply Chain in Ontario: Covid-19 Policy Brief (2021). Ontario Chamber of Commerce. https://occ.ca/wp-content/uploads/COVID19-Policy-Brief-Food-Supply-Chain-final.pdf

Levkoe CZ. Commonalities of Food Practice: Regional Networks as Strategic Tools for Food System Transformation (2017). In Nourishing Communities: From Fractured Food Systems to Transformative Pathways (183-198). Springer International Publishing



Levkoe CZ. **The food movement in Canada: A social move-ment network perspective** (2014). Journal of Peasant Studies 41 (3): 385–403.

Levkoe CZ. **Towards a transformative food politics** (2011). Local Environment 16 (7): 687–705.

Levkoe CZ, Wakefield S. **Understanding contemporary networks of environmental and social change: complex assemblages within Canada's 'food movement'** (2014). Environmental Politics 23 (2): 302–320

Lieffers JR, Ekwaru JP, Ohinmaa A, Veugelers PJ. **The Economic Burden of Not Meeting food recommendations in Canada: The Cost of Doing Nothing** (2018) PLoS ONE. Apr 27;13(4).

MacDonald, J. Local Food Hub Project: Rainy River Abattoir (2015). Report prepared for Rainy River Regional District Abattoir Inc. with Local Food Fund grant. Unpublished. Malakyan PG. Followership in Leadership Studies: A Case of Leader–Follower Trade Approach (2014). J Ldrship Studies, 7: 6-22. https://doi.org/10.1002/jls.21306

Martin D. **Two-eyed seeing: a framework for understanding Indigenous and non-Indigenous approaches to Indigenous health research** (2012). The Canadian journal of nursing research = Revue canadienne de recherche en sciences infirmières. 44. 20-42.

Mashford-Pringle A, Skura C, Stutz S, Yohathasan T. **What we heard: Indigenous Peoples and COVID-19: Supplementary Report for the Chief Public Health Officer of Canada's Report on the State of Public Health in Canada** (2021). Waakebiness-Bryce Institute for Indigenous Health, Dalla Lana School of Public Health, University of Toronto.

McDermid J, Fera S, Hogg A. **Climate change projections for Ontario: An updated synthesis for policymakers and planners** (2015). Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, Ontario. Climate Change Research Report CCRR-44.

Morrison D. **Food sovereignty: A model for social learning** (2011). In A.A. Desmarais and N. Weibe (eds.), Food sovereignty in Canada: Creating just and sustainable food systems. Halifax: Fernwood Publishing

Nelson M, Zak K, Davine T, Pau S. Climate Change and Food Systems Research: Current Trends and Future Directions (2016). Geogr. Compass, 10, 414–428.

O'Riordan J, Karlsen, E, Sandford B, Newman L. Summary Report: Climate Change Adaptation and Canada's Crops and Food Supply (2013) Simon Fraser University (ACT): Vancouver, BC, Canada.

Pendergrast TL, Smith II, BJ, Liebert JA, Bezner Kerr R. Introduction to the symposium: Rethinking food system transformation—food sovereignty, agroecology, food justice, community action and scholarship (2019). Agriculture and Human Values, vol. 36, no. 4, pp. 819-823. https://doi.org/10.1007/s10460-019-09952-z

People's Food Policy Project. Resetting the Table: A People's Food Policy for Canada (2011). Food Secure Canada.

Rall K, LaFortune R, Tellez-Chavez L, Deif F, McLeod C, Gazendam I. "My Fear is Losing Everything" The Climate Crisis and First Nations' Right to Food in Canada (2020). Human Rights Watch.

https://www.hrw.org/report/2020/10/21/my-fear-losing-everything/climate-crisis-and-first-nations-right-food-canada

Ray L, Burnett K, Cameron A, Joseph S, LeBlanc J, Parker, B Recollet A, Sergerie C. Examining Indigenous food sovereignty as a conceptual framework for health in two urban communities in Northern Ontario, Canada (2019). https://doi.org/10.1177/1757975919831639

Rogoff J, Glasmeier A. Improving Systems of Distribution and Logistics For Regional Food Hubs (2014). MIT Dept. of Urban Studies and Planning.

https://dusp.mit.edu/sites/dusp.mit.edu/files/attachments/project/Food%20Hub%20Report% 2010_12_14.pdf

Rouse WR. Impacts of Hudson Bay on the Terrestrial Climate of the Hudson Bay Lowlands, Arctic and Alpine Research (1991), 23:1, 24-30, DOI:10.1080/00040851.1991.12002815

Ruder SL, Sanniti SR. Transcending the Learned Ignorance of Predatory Ontologies: A Research Agenda for an Ecofeminist-Informed Ecological Economics (2019) Sustainability, 11, 1479; doi:10.3390/su11051479

Schmidt C, Stiefelmeyer K, Gosch M, Marenick N, Siren C, Howes A, VanHerten A, Wilson J, Dover G. Benchmarking the Nature of Value Chain Relationships in Ontario and Determining a Value Chain Related Business Plan for AMI (2013). Agriculture Management Institute. https://vcm-international.com/wp-content/uploads/2013/06/AMI-Value-Chain-Benchmarking-Report.pdf

Schnitter R, Berry P. **The Climate Change, Food Security and Human Health Nexus in Canada: A Framework to Protect Population Health** (2019) International Journal of Environmental Research and Public Health Jul 16;16(14):2531. doi:10.3390/ijerph16142531.

Sheedy A. Northern Ontario Food Distribution Workshop Report (2017). Hosted by Greenbelt Fund.

https://d3n8a8pro7vhmx.cloudfront.net/greenbeltfund/pages/3085/attachments/original/1554 820675/Northern_Food_Distribution_Workshop_Report_-_Final_%281%29.pdf? 1554820675

Skinner K, Hanning RM, Desjardins E, Tsuji LJS. **Giving voice to food insecurity in a** remote Indigenous community in sub-arctic Ontario, Canada: Traditional ways, ways to cope, ways forward (2013). BMC Public Health, 13, 427

Stark D, Bilyea T, Fraser E. **Growing Stronger: Conclusions from the Agri-Food Community Consultations on the COVID-19 Pandemic** (2021). Arrell Food Institute and the Canadian Agri-Food Policy Institute. <u>https://arrellfoodinstitute.ca/wp-</u> <u>content/uploads/2021/01/Growing-stronger-final-report.pdf?</u> <u>Source=twitter&Organic=Team&Label=</u>.

Styres S. Pathways for Remembering and Recognizing Indigenous Thought In Education: Philosophies of lethi'nihsténha Ohwentsia'kékha (Land) (2017). University of Toronto Press.

Vanderlee L, Goorang S, Karbasy K, Schermel A, L'Abbe M. **Creating healthier food environments in Canada: Current policies and priority actions - Ontario report** (2017) Toronto; University of Toronto. <u>https://labbelab.utoronto.ca/wp-</u> <u>content/uploads/2017/12/FoodEPI_Summary_Report_WEB-Final.pdf</u>

van Haaften J. **Sault Ste Marie History 1622-1797** (2018). Sault Ste Marie, ON.: City of Sault Ste Marie Municipal Heritage Committee <u>https://saultstemarie.ca/Cityweb/media/Community-</u> <u>Services/Heritage%20Sites/Heritage%20Panels/SSM-1622-1797.pdf</u>

Wallace Centre. Value Chain Coordination 'Quick Sheets". (n.d.) https://wallacecenter.org/value-chain-coordination-quicksheets/

Walker DO, Reichard RJ. **On Purpose: Leader Self-Development and the Meaning of Purposeful Engagement** (2020). Journal of Leadership Studies 14: 26-38.

Wolfe P. Settler colonialism and the elimination of the native (2006). Journal of Genocide Research, 8:4, 387-409, DOI: 10.1080/14623520601056240

Woudsma C, Towns W. (2017). Ontario. In K. Palko and D.S. Lemmen (Eds.), **Climate risks and adaptation practices for the Canadian transportation sector 2016** (pp. 139-179). Ottawa, ON: Government of Canada.

Young C. Food Farms Fish and Finance: **Practical impact investment strategies to seed and sustain local food systems** (2015). J.W. McConnell Family Foundation. <u>https://assets.jhsph.edu/clf/mod_clfResource/doc/FoodFarmsFishAndFinance_WEB_FINAL_.pdf</u>