

Who's at the Table: A Community-Based Exploration and Mapping of Regional Food Security Initiatives and Structures in a Northern Context

A Report for the Community, July 2022

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Executive Summary

This report provides the final outcomes of our community-based project on food security initiatives and actors within the community of Prince George and the surrounding region. Here we briefly discuss what we did, before turning to focus upon what we heard from the knowledge holders and practitioners in Prince George and the northern region related to food security and local food sovereignty.

The project's methodology utilized community-based research methods that prioritized gathering the guidance of the food-focused knowledge holders through interviews and group engagements. Employing the 'snowball technique', regionally recognized knowledge holders were approached, interviewed, and then encouraged to suggest others who should also be interviewed thus enabling the knowledge holders to assist in guiding the research process and outcomes. We conducted a number of interviews, followed by an online facilitated group engagement. Finally, we invited interested people to a presentation of our preliminary findings, an additional opportunity for guiding and sharing. Due to the COVID pandemic, all activities were conducted online.

Our key findings were developed into 22 primary themes, that were then clustered into theme groups. The second engagement provided the participants the opportunity to review, discuss, and confirm the themes as well as provide feedback / guidance as to the clustering of these themes. This second engagement isolated the priority themes, including:

- Farmland management, access and protection
- Government supports and gaps
- Shared market resources
- Capacity and funding
- Alternate food production
- Food and culture are intertwined

The above priority themes were highlighted with the acknowledgment that all the identified themes are important to recognize and address if Prince George and region are to realize food security in the long term.

This research, through the knowledge and expertise shared, create the following recommendations:

1. We recommend that all levels of government and organizations recognize the expertise and diversity already existing in the north around food security work, that is north and regionally focused, and **build on** existing strengths and activities and initiatives. We recommend that this existing expertise, initiatives, and knowledge be honored and supported, rather than see new initiatives imported and imposed from outside the region.

2. We concur with the voices in this research who have consistently called for a **coordinated, collaborative and north centered and focused food security “hub.”** We note that people have called for a “hub” that is both physical (a food-focused space with necessary facilities such as community kitchen, gathering / classroom area, etc.) and a virtual “hub”, in which the needs and desires of all are acknowledged and meaningfully addressed.
3. We recommend that funding be allocated that will **allow sufficient staffing to be hired** that recognize and can support the multiplicity of demands, i.e., livestock production, agricultural products, as well marketing, education, and communication. This must include supporting the work to assist food insecure community members, who are frequently rendered **voiceless but are often the most food insecure.**
4. We recommend securing **lasting and sufficient funding** to hire knowledgeable and dedicated staff with food security expertise, regional connections among food security initiatives, and the community building skills to build connections and interrelations into the future. This is the beginning of the creation of the **physical + virtual northern food security “hub”.**
5. We recommend establishing sufficient funding to hire local champions and knowledge holders who can then support and guide, through mentoring and specific expertise, the hub staff. **Honoraria are critical** in acknowledging their time commitment and specialized knowledge.
6. We recommend that there is a **sourcing and acquisition of the physical resources** that have been consistently recommended to serve this region, i.e., Prince George based infrastructure that can address the unique culture and community needs in this region.
7. We recommend recognizing that the north has a wealth of knowledge and expertise, and this often is attached to **strong and committed personalities.** Staff must honor, recognize and balance between competing demands and personalities with competing interests and jurisdictions.

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1.0 Introduction

Food security is a serious issue within Canada, where 12% of the population³ experiences some level of challenge with respect to accessing or affording sufficient high-quality food. This affects Canadians' physical health and their mental health and wellbeing. Northern, remote and Indigenous populations may be subject to very specific forms of food security challenges.

This collaborative community-based research project examined food security in north central BC, centering primarily upon the city of Prince George and the Regional District of Fraser Fort George (although a few participants joined from outside this region, identified by other participants as someone to speak to, as they offered relevant knowledge). Using community-based research methods, we built upon earlier research, conducted by Everyone at the Table (EAT), who were foundational in assisting the researchers in identifying key areas of interest in this work.

The research was funded by a UNBC RSIG grant (SSHRC GRF21) and was reviewed by the UNBC Research Ethics Board. Our commitment was to return findings to the community and do so in this report, as well as through presentations to interested groups. Note: The findings in this report were summarized in a slide deck that was validated by an audience of practitioners and other interested knowledge holders by way of collective review.

1.1 Why This Research Was Important

One way to measure the health and/or well-being of individuals and communities is through understanding local levels of food security: to assess and gain an understanding about “the inability to access and procure, through conventional avenues, nutritionally adequate foods capable of supporting an active and healthy life” (Micevski et al., 2014, p. 258). This is a serious issue as, when assessed in 2014, 12% of Canadian households reported some level of food insecurity (Tarasuk et al. 2016).

Poor access to healthy food creates serious consequences, including “poorer physical and mental health and higher rates of chronic conditions, including depression, diabetes and heart disease” (Tarasuk et al., 2014, p. 5). Low food security also affects mental and emotional well-being (Williams et al., 2012).

Levels of food security are geographically contextual, however. Those living in northern and/or remote communities, such as Prince George, BC, demonstrate greater food insecurity compared to the urban and suburban centres in southern BC (Booth 2019; Gallant and Deboer 2018), This was especially demonstrated during the pandemic of 2020 – 2022, and during the increased numbers of natural disasters (fires, flooding, and highway closures due to land slides). Local initiatives to increase food cultivation and/or production (both wild and cultivated)

³ Other sources include: <https://www150.statcan.gc.ca/n1/pub/82-003-x/2022002/article/00002-eng.htm>;
https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/202047E

reduces dependence on external food supplies, while contributing to the local economy through increased employment and infrastructure, and interest in such activities is growing (Healy, et al. 2021).

It is also important to remind ourselves that this region has a long history of local food production. Appendix One has a brief discussion of the history of local investment in food production and regional self-sufficiency. Appendix Two discusses how important agricultural institutes of education have been to local food production.

2.0 What We Did

Applying community-based research methods, the research team built upon earlier research. More specifically, the project:

- 1) mapped the regionally defined approaches, initiatives and linkages of different agencies, NGOs, voluntary organizations and governments used to address regional food security,
- 2) identified gaps and political/ideology/cultural limitations, and
- 3) identified local preferences for organizational structures and approaches for future dialogue and consideration.

The project was executed over a six-month period, augmented by pre-design community consultations to inform the application for research funding. The project timeline was as follows:

2.1 Project Initiation

Project initiation by the research team (October 2021) occurred after research ethics approval. The commencement of outreach focused upon the soliciting and securing of interviews via an outreach method referred to as a 'snowball technique' whereby regionally recognized knowledge holders were approached, interviewed, and then encouraged to suggest others who should also be interviewed. This technique was effective in securing additional recognized knowledge holders while also honouring the knowledge holders with the trust to guide the research process. In all we conducted 25 interviews with 28 individuals.

2.2 Community Engagement #1: January 29, 2022

The first virtual engagement session served to share preliminary results with the research participants who had been interviewed, in addition to other members of the communities in the region who had an interest. Eight knowledge-holders were able to participate.

The project team received further insight and guidance from engagement participants to inform the research going forward. Following the engagement session, further interviews were conducted, transcribed and analyzed in preparation for the second engagement.

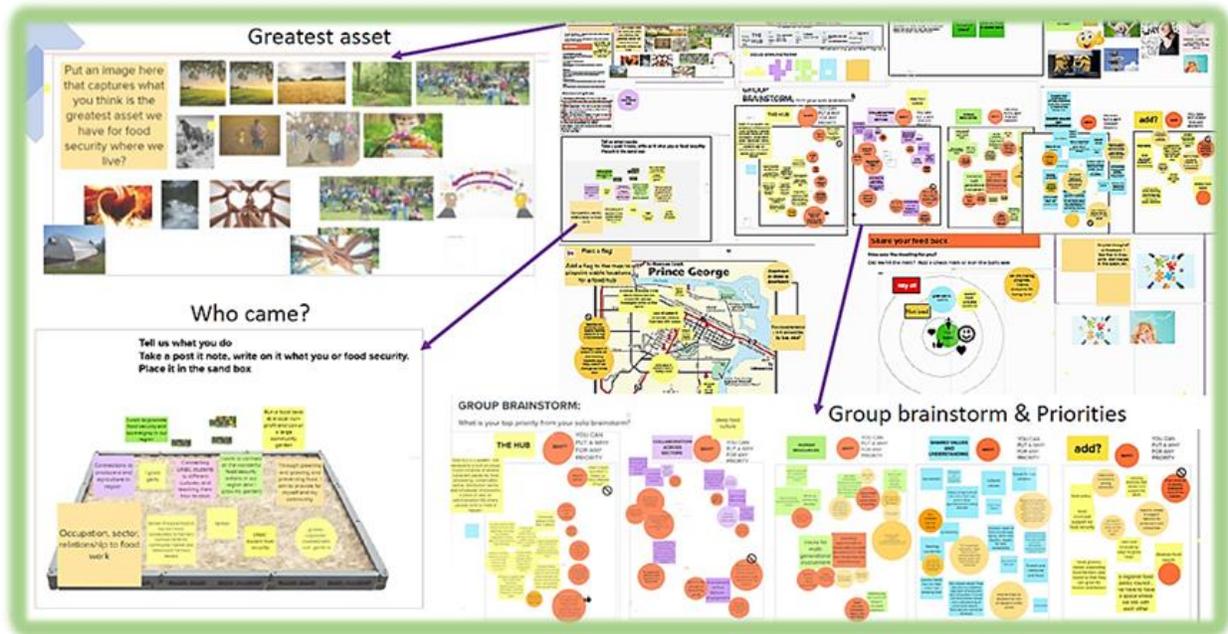


Image 1: Snapshot of the Final Mural Engagement Tool and Outcome from Group Engagement #1

The above image is drawn from the first virtual engagement, facilitated by way of the Mural engagement tool. From the research / interviews to date, four primary themes were posed (in the columns in upper right-hand section of image 1) and through facilitated dialogue, the participants were able to add detail, context, and further articulation as to how the themes may ‘look like on the ground’. For those who did not have the required internet capacity to physically participate in the Mural activity, the research assistant brought in their guidance by way of the ‘chat box’ in the virtual Zoom interface. (Quotes from this session are cited as Mural engagement.)

2.3 Community Engagement #2: March 19, 2022

The second community engagement commenced with a complete overview of the project to date and what had been gleaned from the knowledge holders. Twenty-one participants were engaged. To that end, there were 22 primary themes from the research that were then clustered into theme groups prior to the second engagement to review with participants. The participants then took the opportunity to review, discuss, and confirm the themes as well as provide feedback / guidance as to the clustering of these themes. This mural was left open for further, asynchronous, contributions. (Quotes from this session are cited as ‘Feedback session’.)

2.4 Who We Heard From

The research contributions have been generous, much like the participants throughout the project. Our snowball technique and receptiveness to an expected diversity of interested people meant we were able to engage with people from across the spectrum of food security,

from producers to those providing services to the food insecure. Overall, we conducted 25 interviews, individually or in small groups. The following (Image 2) represents the primary ‘hat’ that each of the participants wear, although many of the participants ‘wear many hats’. For example, a number of the participants in the non-profit food related ‘sector’ are also involved in food related research and in farming, as well as supporting farmers by way of associations such as the Farmers Institute. We note that the preponderance of our interviews were conducted with non-profits, as many of those on our interview lists were from non-profits.

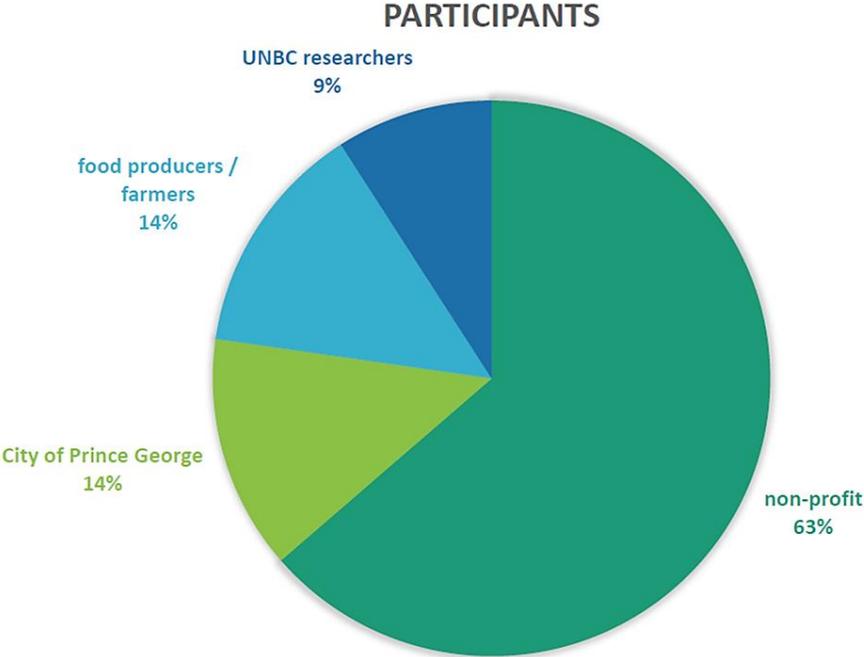


Image 2: Participants by Sector

2.5 Who’s Setting the Table

One of our key interests was “mapping” the diversity of people/groups working within the realm of food and food security. There is an impressive and critically diverse collection of people/groups engaged in the area, with great commitment and passion. As noted in the following table (Table 1), participants identified a considerable number of those doing a diversity of work in the region (not an exhaustive list):

Sector	Organization
Academic Research	College of New Caledonia (CNC) University of Northern BC (UNBC)
Education/Outreach	Recycling and Environmental Action Planning Society (REAPS) Everyone at the Table (EAT) Eco Living Kitchen Local Food PG

	BC Farm to School First Nations Food Systems BC Cattlemen Association Agricultural Association Council
Food Producers	Hope Farm Northern Lights Winery Felicity Farms P&R Organics Farm for Thought Gilead Gardens Cariboo Growers
Food Providers	PGPIRG (Prince George Public Interest Research Group) Eco Living Kitchen Farmers Markets BC Farm to School NUGSS (Northern Undergraduate Student Society, UNBC) Native Friendship Centre Salvation Army St. Vincent DePaul Soup Bus Soup Kitchens Good Food Box (PGPIRG/EAT) St. Michael's Church The Guru Nanak Langer New Hope Society Native Friendship Center Aboriginal Infant Family Development Program Hadih House Better at Home (Seniors) United Way Rotary Clubs
Professional Development/Education	Farmers Institute Young Agrarians BC Forage Council Young Agrarians 4H
Other Programs	Food Nutrition Coupon Program Farmers Market Coupon Program

Table 1: Groups Mentioned as Engaged in Food Security in Prince George & Region by Sector

Some organizations were mentioned more frequently than others, suggesting different levels of awareness amongst different peoples. In the following Word Cloud (Image 3), the larger the size the more frequently the group was mentioned.



Image 3: Word Cloud Depicting the Frequency with Which Organizations Were Mentioned in Interviews

3.0 What We Heard

We had several key questions we asked in our interviews (Appendix Three lists the formal questions); these focused upon who was working in the area of food and food security, what were the key activities, what was missing, what were barriers, and where there were opportunities to improve, enhance and connect and collaborate. In the responses, we identified several key themes, as illustrated in Image 4.

	 Issues	 People	 Focus
Food and Culture Intertwined	Indigenous Food Sovereignty	Consumer Education	Respect
Farm Land Management & Protection	Environment/Social Threats to Food Security	Social Capital & Equity	Land Stewardsip / Land Access
Alternative Production	Infrastructure	Existing Challenges	Provision of Community Food
Government Supports & Gaps	Impacts of Poverty.	Policy Makers / Funders	New Opportunities
Shared Market Resources	Cooperatives / and their limits	Famer's Markets & Other Local Outlets	Food Production Knowledge & Education
Capacity & Funding	Connecting / Networking	Using Existing Networks	Organization and Hub

Image 4: Key Themes from the Interviews, Engagement 1 and Initial Presentation Report Back

In the next sections, we discuss these key themes in more detail.

3.1 Food is Culture; Food and Culture are Intertwined

“How we interact with each other and create community in a new deep food culture”
(Mural engagement)

Participants in the research were clear that food, and food security, are a foundational part of both a person’s culture and the society they live within. As one person noted, “food is the glue of our society” (Interview 3). Food binds people together, as one respondent noted, “breaking bread together has always been seen as both a social and political statement in many cultures over many times” (Interview 3). Thus, by extension, food insecurity can be seen to threaten the

social bonds within a culture or community, “everybody needs to be [food] secure or in actual fact, none of us are secure” (Interview 3).

Approaches to addressing food security need to incorporate not just understanding food as a foundational physical necessity, such as adequate calories for basic health, but a collective and engaging social good. Food work must build those connections, bringing people together, and sharing culture through foods embedded in those cultures. For example, cultural barriers can include not understanding or accepting the sorts of foods that might be cultivated or provided as part of a food program. Culture and social connections must be both respected as well as recognized and incorporated meaningfully into any food security initiatives.

3.1.1 Indigenous Food Security

While this portion of the research did not include extensive work with Indigenous peoples⁴, a few participants did note that Indigenous food security is substantively different from other community approaches. Culture is, of course, foundational to their engagement with food, including traditional foods gathered/hunted or fished as part of a seasonal round. This is different from other food challenges, as one participant noted, “Indigenous food sovereignty, and then historical cultural food practices, which are so disparate from what I feel that I do with a food bank at the Friendship Center” (Interview 6). Another participant pointed out that historically, food or lack of access to appropriate food, was often used against Indigenous peoples, sometimes with fatal outcomes. Yet the traditional knowledge around gathering/harvesting and preserving foods was foundational to their survival as a people: “we would harvest all of the traditional foods and then we would share it with each other, and we would have feasts and potlatches and it was like a sharing, so nobody went hungry” (Interview 5).

However, our participant noted that sharing knowledge might be important:

If a Good Food Box was to come to our house, and there's a bunch of vegetables in there that we've never even seen before. You know, it's happened. Have that conversation. But hey, let us show you how to live off the land. These are some of the plants and berries that we harvest, and this is how we use them and then have that exchange happen. And set that up in a way that we can sit down and eat together. It's that cultural exchange piece. (Interview 5)

While some Indigenous food sovereignty issues might need to be addressed separately, food security activities need to be thoughtfully inclusive in the collaboration with Indigenous cultures.

⁴ We extended an invitation to Indigenous individuals and organizations to participate but recognized that Indigenous Nations are profoundly busy and academic research may not be a priority in the pressing cares they face. A separate portion of the research did engage with the Carrier Sekani Family Services, but the activities and data are theirs.

3.1.2 Respect

Respect was an issue that came to the fore in different ways. As was noted during the Mural engagement, we need to “build cultures of support/community/care for each other”. To be food insecure, to not have one’s culture noticed and included, to have to access to food related services restricted or denied because of poverty or homelessness is usually to experience a profound lack of respect.” Our participants felt that food security issues must be addressed through the intertwining of respect in all things. Recognizing the dignity of all is important when creating approaches and solutions to food security. One participant described just how important it was for their food insecure clients to be treated with respect when they sought support, to be not judged for being food insecure, which enabled them to utilize that support. When issues around food bring people together, warm, welcoming, and accessible spaces and events (and warm, welcoming, and non-judgmental people) would be critical for effective work.

3.1.3 Consumer Awareness & Education

Participants commented on the need for education for local consumers. They noted that people rarely understood how food is produced nor the amount of time and effort required to produce food. During the 2021 BC floods, many people demonstrated this lack of understanding when supermarkets ran out of food (due to disrupted transportation lines), and they could not understand why farmers could not quickly increase the vegetables available to compensate for disrupted supply chains.

Participants also indicated that many consumers, because of corporate superstores, expected food to be relatively cheap, and available all year round upon demand. Consumers have come to expect out-of-season produce at any time and that the cost of food production is offset by the massive corporate purchase of foods from other countries (with poor labour practices), thereby artificially keeping food prices very low. Consumers need to understand that locally produced food might be more expensive (and only available more seasonally until alternate production facilities are established) but it also is healthier, fresher and supports local community members and neighbours. The rise of fuel costs in 2022 however, is leading to steep jumps in imported food costs, which may make locally produced foods becoming more cost efficient to people’s minds.

In turn, however, participants also acknowledged that many community members do not always have the ability to manage their food budget. The rising price of most everything in 2022 as inflation increases, makes the issue of affordability one of concern to many more residents whose income remains fixed in the face of rising costs. While education is important, investment in supporting those with lower and/or fixed financial resources must also be investigated. This could be accomplished by subsidizing local food producers, so that they could reasonably reduce their prices or improve their market access, or through offering supports to the consumer choosing to support local purchasing.

3.2 Farmland Management and Protection

3.2.1 Land Stewardship

Access to food was linked with access to locally produced food, which requires access to appropriate local land capable of producing food, whether crops or livestock. One participant (a farmer) estimated that around 100,000 acres of productive, healthy land would be required to feed the population in the Prince George region (therefore ~1 acre/person). While there might be sufficient acres, there are challenges to accessing. One significant challenge is ensuring that land remains available and capable of agricultural production: “if we continue to destroy land/earth, none of this matters” (Mural). Land stewardship requires protecting agriculturally capable land from being lost to development or for other purposes. Proposed industrial development has threatened lands adjacent to Prince George, most recently in 2021. Maintaining healthy and intact tracts of agricultural lands in reasonable proximity to local consumers is foundational to creating food security/sovereignty.

A further component of land stewardship is developing the knowledge about the land and its capabilities, so that when land becomes available it can be put to agricultural use. We will discuss this aspect later.

3.2.2 Land Access

While the knowledge to work the land is essential, access to land is also foundational for regional food security. Gaining access to arable land is too often cost-prohibitive: “I don’t know of anything that’s really spurring people to be able to start up...They need access to land where they can actually be able to make a go at it for a reasonable price” (Interview 1). “There’s a lot of unused space in Prince George and/or the surrounding area. And if only there was somebody to financially backup... Somebody to put the workforce into it, I believe we could have a lot of potential for feeding our population year-round” (Interview 10).

We note that costs can be high if farmers are competing with other developments for access to land, i.e., agricultural land is not being reserved for agricultural production. Further, there are no or few long-term government programs assisting younger people interested in agriculture to get started through financial assistance for land acquisition and operational costs (an issue we discuss further in other sections of this report).

3.2.3 Social Capital & Equity

There are two aspects around social capital and equity that were raised: one concerning treating producers fairly and one recognizing the consequences of food insecurity. The second one will be discussed later in this report.

It is challenging to produce food. Many participants noted (discussed above) a perception that food should be cheap (for some, in fact, a necessity), however, local producers usually cannot compete on prices with big grocery-supplying corporations. While there are consumer

education components regarding reasonable expectations by consumers, one of those expectations is that local food producers can make enough from their labour to support themselves and *their* families.

There are very, very few growers who manage it just as growers, like most of the farmers that I speak with, have a spouse, they're both farmers, but one of the spouses goes out and has a 'real job' that ends up financing the farm basically. (Interview 9)

The biggest barrier, in my opinion is always the same in most cases as money is the affordability of growing sustainably and being able to make a decent living at it. (Interview 10)

If our local community is not prepared to invest in their own producers, and to expect government to support local producers, many committed food producers will not survive. One requirement is, for those who can afford to, to buy and promote local: "I think we could all, those of us that are privileged, could all reach deeper [into our] pockets to make local produce available and make it affordable in that we could provide the extra monetary support that's needed. Unless you actually make it a priority to want to do that it's not going to happen" (Interview 11).

There are community benefits to this in terms of the financial multiplier effect, as investing in local producers creates a circular economy that keeps money within a community, rather than have it leave, which 'raises up' (benefits) everyone:

...a lot of local businesses here do connect with local food producers, but I think really pushing on that idea, I think could change where restaurants source a lot of their food. And that might make some waves. We kind of have a circular community of leaning on each other, to produce a vibrant community that everyone participates in, I mean, helps obviously, the people who can afford to go to restaurants and be productive, but also people who kind of fall outside of that sphere of reach and who struggle with that, like the unhoused population. (Interview 2)

However, participants also stated that local food production could not just rely on those few with deeper pockets to ensure food producers were treated equitably, but needed government to realign their priorities:

I think more supports for farmers. I think it seems that we were rather ready, our governments are readily giving big money to oil exploration. But what about the smaller farmers not just the mega farmer's sons in Scotland. But what about locally produced food? Where if people got a little bit of a hand up to carry on with that profession, that they might end up in it or that their farm might grow? (Interview 14)

3.2.4 The Environmental & Social Threats to Food Security

Participants noted that local food security was critical to procure, given substantive threats to reliance on outside food sources:

I'm trying to grow my farm as quickly as I can. Because it's only a matter of time until climate change becomes more catastrophic. And global infrastructure and distribution of food sources really compromises our ability to rely on California and South America and Spain for vegetables. So, I'd like to see that happening sooner rather than later. (Interview 15)

Especially over the last year, actually two years since COVID, we've had more extremes with people losing their jobs or falling into poverty. And we've also had extremes in weather, which has actually created issues with food access. And so, we certainly start to recognize that Prince George is not well located to be able to serve people here around on its own. (Interview 16)

What would happen if something really serious happened, like a major earthquake in the Lower Mainland or something major, a major infrastructure destruction, we would all be in really big trouble. (Interview 14)

Words from the wise!

What these predictions highlight is a rare opportunity to initiate and expand local alternatives. More and more people will recognize the same threats to their access to cheaper food imports and be more amenable to local alternatives. The challenge will be enabling that locally based production to meet emerging local demand.

3.3 Alternative Food Production

3.3.1 Infrastructure

Participants pointed to a significant lack of appropriate infrastructure in the region necessary to create functional regional food security. Several challenges and opportunities were identified. One of the issues the researchers noted, corroborated by one participant, was that when discussing the lack of infrastructure, the discussion fragmented around specific siloed needs, depending on the product, and thus a fragmenting on how an approach addressing multiple needs could be developed:

I remember the community meetings were challenging because of the diversity of people that came. So, there were people from industry and people from farming and people from nonprofits and people just sitting there with question marks over their heads, not understanding where the other person was coming from. (Interview 6)

Figuring out a way to address this fragmentation was considered critical, "There's a very big desire to have processing on all levels - from community kitchen levels, kind of like the sprout

kitchen⁵, but also in need for animal agriculture processing” (Interview 12). Thus, moving forward on regional food security initiatives needs to be both inclusive and welcoming, as well as creative and innovative. The most necessary infrastructure is an inclusive mindset (mental and emotional infrastructure) that enables optimizing collaborative opportunities.

3.3.2 Challenges

Food production challenges, in addition to those already identified, include a lack of much needed physical infrastructure to support production initiatives. Food grown on the land can be sold as is (further detailed below) but in the north, a short growing season dictates that local food reliance requires the ability to preserve and store foods for the cold season. As well, this is an era where many people and families prefer to, or need to, purchase already processed foods. Thus, processing facilities are required to address the various food preparation needs:

But if you provide a space and a locale for people to do their jamming, and sell it, or pickling, and sell it, or whatever it might be, ... and that's sometimes where you run into issues with the farmers' market because you can't do it out of your kitchen without having a food grade kitchen. But if you have a location that people can go and use, maybe pay a small fee, ... (Interview 7)

For those raising livestock, the situation is even more dire, as there are no local processing facilities:

Especially when it comes to abattoirs and butchering, there has been significant challenges with producers being able to get cattle or especially birds processed. So that's already been a significant challenge. The problem with that is a lot of the staffing - there has been facilities available, but nobody wanting to come in and actually do that. (Interview 17)

Having to transport livestock considerable distances for processing not only raises concerns around animal welfare but doing so is unsustainable financially. Either transportation costs so much that it threatens a producer's ability to make a reasonable living, leading some to decide to get out of the business, or they are not able process their animals in a timely way, also leading to prohibitive costs. Not only can such costs lead to producers failing to thrive, they cause consumers to avoid higher cost meat and instead seek out other less expensive but also more socially and environmentally costly alternatives.

Finding funds to support several production needs is essential to foundationally support regional food security, in addition to keeping productive land producing and farmers and ranchers in the profession they love. However, infrastructure needs to be thoughtful, as one size does not fit all:

⁵ A small-scale food processing and innovation hub that serves the North Cariboo Food Hub Region with a physical location; <https://www.sproutkitchen.ca/>

People talk a lot about having a community root cellar or some sort of cold storage that is run by a co-op or a nonprofit or has some sort of shared usage of it. And I think that there are examples where that can work. And that's beautiful. But I think there's also a lot of situations where it doesn't make sense, because people are driving all over the place to try and move produce, and then store it somewhere and then go and pick it up and then take it to market. For me, it just made more sense to build that infrastructure at my own farm. (Interview 15)

3.3.3 Opportunities

Our respondents shared some highly innovative production opportunities, which we are going to simply list here as they are self-explanatory:

- We're surrounded by forests that have provided food for 1000s and 1000s. of years. And if we were to manage the forest via a better approach instead of just for fiber, that may be much closer to a reality of what we need [from local production];
- I think greenhouse production needs to be increased significantly, as well as access to the technology to utilize it. And the heating sources environmentally friendly;
- We can use, for instance, heated indoor environments that are already heated around and placing these hydroponic setups inside where, you know, a building is already heated;
- [Innovative and collaborative solutions] like a laundromat, and a place to put a bakery in the laundromat. So, people come in, do their laundry, with a coffee and locally made baked goods. And then with the heat that came from the dryers, they placed a greenhouse on the roof and enclosed it. And so, their food was just 24/7 / 365 days a year. And then people could come in and do their laundry and have coffee and leave with fresh vegetables;
- One of the intriguing possibilities of local agriculture is the waste heat from the from the pulp mills. They should be heating greenhouses, not just the rivers.
- A traveling grocery store;
- Conversion of shipping containers, for example, but whatever that can look like ... indoor growing facilities, and you can still be growing in the ground, but just having the infrastructure to make that happen would be game changing for up here;
- Taking school buses and creating greenhouses out of them, so that they're able to grow year-round;
- Food boxes for people that need food boxes;
- Having a bulk sharing order system.

We expect that this is just a tiny sample of the creativity in this region around food security (among other things), a creativity that should be engaged region wide.

3.4 Government Support and the Failures

3.4.1 Policy Makers & Funding (OR the Lack)

We discuss in a subsequent section the clear and critical need for programs that provide consistent and continuous appropriate funding, however the likeliest sources of funding for food security work are from various levels of government. Government investments of other kinds are also necessary, as identified by our participants.

The first step is for governments to recognize the different needs across a large province: “It's the same situation with Ministry of Agriculture - there's only one person with this massive geographical area” (Interview 15). The participants and the researchers understand provincial and federal governments are focused upon the Lower Mainland and Victoria in British Columbia and treat the “North” as an undifferentiated whole. Those who live in that north are aware that there are many social/economic/ecological regions within that north that require different resources and approaches, including regionally specific resources. While there is a provincially funded agricultural hub in Quesnel, the assumption this will cover everything in the north is problematic and does not address this region's food security needs.

I'd like for government representatives to step up in paying more attention to the growing capacity in this region. Like actually try and make a difference. I know that sounds cliché but understand the numbers in that how much food is being grown here is not nearly close to what we would need it especially should something happen, similar to what has happened in lower British Columbia. (Interview 10)

Participants are not solely interested in provincial attention; they recognize the need for the participation of other governments as well: “I'm always a little bit disappointed by municipal action or lack thereof on food security and food policy” (Interview 15).

... [T]here's little of local food policy recognizing there's very little throughout the OCP [Official Community Plan] and our sustainability plans ... the majority of those goals or objectives that are there are based at the individual level, and the language in these documents does not move to action, or even objectives for the City, things that the City wants to accomplish when it comes to food systems planning. (Interview 7)

The researchers note that some efforts at city food security have not been supported, such as a proposal to allow backyard chickens in the city (2016) or a beehive on the roof of City Hall that was removed in 2014.

While the Regional District of Fraser Fort George has, in 2022, hired a consultant to help them develop a Regional Agricultural Strategy, and this is an excellent first step, this research has documented that true regional food security needs to go beyond the purely agricultural to consider social, cultural, economic, and environmental issues in collaboration with those NGOs and individuals with long term experience and commitment to the different aspects of the complexity of food security:

I think that there is the opportunity for the City and the Regional District to get a little bit more involved with what people have already gotten the ideas and put the work in to create these things. (Interview 17)

Conducive policy environment is a priority – we need provincial, regional, municipal governments to speak and support the needs for the regions food security. Involvement of First Nations – engagement diverse in culture, perspectives, knowledge (Mural engagement).

The need, indeed the imperative, for different levels of government to be involved in working towards regional food security is clear to participants, but not without the engagement of and collaboration with those already working in all aspects of food security.

3.4.2 Community Food

For those in the region actively engaged in ensuring that food insecure community members do receive meals and support for accessing food, several challenges currently exist, as identified by our participants. The first, although also a benefit, is that different NGOs and people address different food insecure people (there are very different levels of need in the region):

For example, the people that go to St. Michael's for the lunch bag, are not the same people that come to St. Vincent's for lunch. Because I recognize the ones that come to St. Michael's, they tend to have more resources and tend to be better dressed and appear to me to be healthier. The people that come to St Vincent's are the ones with the most social concerns and health concerns...for the monthly hampers, the people that come for that generally tend to be housed and have more resources. (Interview 11)

All these different populations need to be recognized and included while recognizing their very different circumstances and needs.

Participants noted that the “Salvation Army was the hub for donated food in the community. “And they have a really cool program there, Food Mesh, that lets big box stores give their surplus to them. And then they give their surplus out to community members, to me and other agencies in the community” (Interview 6).

While there are some efforts to coordinate between the multiple agencies providing food to the insecure, this is fragmented and incomplete, largely due to both the unpredictable nature of how and how much food supplies comes to agencies as well as to a sheer lack of capacity in these agencies to effectively network:

Even organizations like Salvation Army are strapped to serve everybody that shows up at the door. I mean, I have been called on numerous occasions when all of a sudden they've gotten you know, dozens of eggs because all of a sudden they

went off the charts for their expiry date and there was there's just no way to move them. (Interview 16)

It's not every day that I'm aware that there is a meal three times a day. Sourcing out fresh produce is a bit of an issue. That's why we make a pot of soup. We usually use frozen or canned vegetables because it's easier to get those particular items than it is to get out to the farms and buy things. The farmer's market is great, but it's not large amounts. (Interview 11)

While all these organizations are doing essential and excellent work, it is always a community challenge when anyone needs such support. However, as that is reality, supporting this work effectively, while addressing a clear need for coordination, will be important.

3.4.3 The Impacts of Poverty

As one participant noted, “my idea around subsidies for farmers is more to the narrative around why people cannot buy local food or can't go to the farmers market, that it's more expensive than the store” (Interview 7). A question of social capital and equity is, can everyone access good, local food with dignity, which is a significant aspect of food security. To understand this, “we need more diverse groups/ individuals to participate [in food discussions]” (Mural engagement).

Our discussion with regional food security experts has documented substantive challenges in regional food security, as well as a complex map of efforts to address food insecurity that, in itself, offers challenge in its complexity and in its relationship with local food production.

As in every community, many of our fellow community members suffer from limited access to food. Much of this is due to poverty: “I think we need to advocate more for a guaranteed annual income” (Interview 14). “Income is THE issue – the dominant issue with it comes to food security” (Interview 18).

While there may be resources to supplement limited food income, participants noted that many people living with poverty often do not have the time or knowledge to effectively access these resources: “But it's not always the easiest thing to actually apply for the amount of time and energy it takes for somebody on their free time to go and apply for all these - to access funding is very time consuming... And just even [to access] the knowledge of what's available” (Interview 17). For example, the local farmers markets have offered coupons for low-income consumers but accessing the coupons or arranging transportation to the markets can prohibit interested people from accessing local foods. Like many other communities, Prince George also has restricted access to grocery stores. One grocery store currently nearer to lower-income neighbourhoods will be relocated from the area soon, leaving few cost-effective options, “For example, where are the grocery stores located? Are they located in areas where people don't have to transport to get to them?” (Interview 11).

3.5 Shared Market Resources

3.5.1 Food Production Knowledge and Education

As one participant noted, “The land knows how to take care of itself if we listen to it...we need more land stewards, that have the education to do what they need to do in their specific bio region.” (Interview 1)

Being, or becoming, or developing land stewards, our participants indicated, also requires knowledge about agriculture within the context of the land: “There's a huge education piece about what our land can produce, who has access to it, and who can grow on it, so we can produce the food” (feedback session participant). Participants noted a great deal of interest in food production in the region, but little else:

I get a lot of people applying to work for me who have gardening experience, but no farming experience. And there's no way to get farm education in the North right now other than working on a farm and so when I hire people, I have to train those people because none of them know how to farm because that's not an active industry here right now. (Interview 15)

Others noted a lack of northern knowledge, “[We need] a lot more development of resources that are specific to the north, because there's a lot of amazing stuff that is developed for realities of down south or more west. But a lot of things aren't truly applicable here” (Interview 12). There requires an ability to access and acquire the relevant knowledge, which northern post-secondary institutions can assist in: “this is something that I brought up to a friend who is in discussion with the government, we kind of need research and extension services, here. And we need a program at the university that can also train these new farmers” (Interview 1).⁶

Finally, participants felt that there was a need not just for education on farming/ranching itself, but all the other affiliated knowledges necessary to be an effective land steward, which are not always considered:

There's a lot of people that just want to go and farm and grow good food for the community and share it with people. But they don't know how to apply for grants, how to take advantage of tax incentives, how to collaborate strategically with partners that are going to allow them to decrease their operating costs or increase the gross revenue or whatever the case may be. There's a lot of skills there, too. I guess what I'm saying is that there's the capital, but there's also the skills that are required to get into agriculture

⁶ This is not without precedent. In 1913 an Agricultural Instruction Act was implemented federally which devolved responsibility for such instruction to provincial governments. University extension programs emerged which focused on improving the lives and livelihoods of farmers and their families, particularly through improved methods. More recently, such programs tend to focus on environmental objectives. A major issue with many extension programs is that they were based on the presumption of ignorance in the potential participants. Rollins et al. Evaluating an Agricultural Extension Program Aimed at Improving Biodiversity in Alberta, Canada. Canadian Journal of Agricultural Economics 06 Nov 2017

and get into entrepreneurship that a lot of people don't have. So, I think that a barrier is certainly obtaining the skills that are required before you jump into running a business (Interview 15).

This means working with established and experienced farmers to ensure their collective knowledge, experience and wisdom are not lost as well as more education options.

3.5.2 Cooperative Food Production

We heard a great deal about the need for improved and respectful cooperation and collaboration in how regionally based food was produced. As with the provision of food to those in the community who are food insecure, while some collaboration does exist, more could be done if producers saw advantages. Collaboration and cooperation could benefit individual producers by supporting them to focus their choices: "I think I'd like more collaboration in the common challenges that farmers have instead of feeling necessary to compete against one another" (Interview 10).

Everybody needs to have their own niche. And so, it's important for us to all look at what we can do well and look at where there's currently gaps in the market, and then focus on increasing your efficiency in that aspect in that realm. (Interview 15)

While producers will have their preferences, if everyone grows the same things, well, there are only so many vendors one can buy lettuce from each week. Instead, a diverse choice of food products will better meet modern sensibilities, within sensibility.

I want ease; I want to go shopping once or twice a week. Maybe I wanted to get everything I possibly need. And, to be honest, a lot of that might be ease of meals too, right? So, I don't want to go and buy all my ingredients in different places, I want to go and buy that meat pie or whatever that might be. And all of those things could be part of that central location. (Interview 7)

Such options do operate in other areas:

I believe sharing resources and collaborating with other farmers to get into markets is the best way to do it. I mean, this is a proven model ... this is ... the dairy quota system, ... the Okanagan Fruit Packers Association. (Interview 1)

Finally, cooperation and collaboration, especially through a collaborating organization, can allow food producers to focus on the aspects of the business they love, rather than trying to do it all:

And then many different farmers can grow ... whatever their acreage can, and contribute to this big pot, and not have to be concerned with the sales and marketing aspects of said products, they can just focus on the efficiencies of the farm, which would help out tremendously through shared resources, ... shared cost of inputs, ... everything you buy in bulk is cheaper. (Interview 1)

3.5.3 Where do We Sell Local Food?

What is grown or raised needs to be sold to someone. Local food needs opportunity to be sold somewhere regionally.

We recognize that it is vital that we make sure that we have local food sources, we have an abundance of farmers in our area that grow and supply food to us and to our grocery stores for that matter, so that we know that there's some that are actually supplying some great volume. But it's not anywhere near you know, the neighborhood markets that you can go to, to grab your local vegetables, you actually have to wait till Saturday, and go to the farmers market to get your local vegetables. (Interview 16)

Farmers markets are the usual outlet for regionally produced foods, but these have both plusses and minuses. Farmers markets offer a known outlet and they do allow consumers to see a real person, with real lives and needs, producing and selling a product that they are knowledgeable about and can market effectively. Producers can cultivate dedicated consumers who specifically seek out their product. However, farmers markets have significant limitations as well. We have already noted higher costs for consumers that limit the number of people, and the range of people, who can access their regionally produced foods in this way. There are other concerns: "I think that the farmers market already is a wonderful opportunity to get all of these people together. But I think that it's limited in it only being on Saturday mornings, a lot of people don't have access to it" (Interview 17). A farmers' market store where producers could leave their products for sale would benefit producers and consumers, "farmers markets year-round, and maybe having a farmers market store. So, where producers can sell their wares seven days a week, as opposed to just one day" (Interview 13). Consignment stores are common in other markets, such as used clothing, demonstrating this model does work.

On the minus side,

If every new farmer in the Skeena Valley relies on the farmers market for their weekly revenue, it's going to oversaturate that sales channel, and there's too much competition. And so, we need to diversify the ways that our farms are getting their food out to consumers. And that diversity is going to create more stability in the food system too. (Interview 15)

Nor can farmers' markets feed everyone.

The farmer's market is a very good thing. But it also doesn't really add to the pot in terms of food security, for the pounds of food, it's really needed to move through the community. And I don't I don't think most North American cities could say that the farmers' markets contribute to a majority of their food security issues. It's still going through the grocery store, I mean, that system is highly organized and developed. (Interview 1)

Having supermarkets and other food providers (restaurants, as mentioned earlier) invest in regional food producers thus becomes a critical part of food security infrastructure: “it would be advantageous for people to just big figure out the pipelines to get their products into those stores, who already have marketing, who already have all of the statistics to know what family is going to buy, what at what time of the year” (Interview 1). Other options, such as expanding the existing Good Food Box, would round out consumers access to regionally produced foods.

3.6 Capacity and Funding

You need to dedicate time and money and people to whatever the desired outcome might be in order to really get the ball rolling. And sometimes food security work feels like the thing everyone's doing off the side of the desk. It's like here's 20 fires. Once you put them all out, then think about this for two seconds. (Interview 6)

One very clear need many participants raised was for increased regional capacity, and the consistent funding necessary to create that long-term capacity. We noted briefly earlier that many engaged in the regional food security realm were already lacking capacity; here we will examine more closely the issue of lack of capacity and funding.

...that wonderful word of capacity, because everybody is ... there's so many already great groups of people that are just tired. (Interview 17)

While there are a great many groups, NGOs and individuals doing important food security work, many are reaching their limits and seeing little in the way of successors coming up behind them. Despite the sense that succession is critical, “I think that's what we need is just those younger people to help support some of the initiatives that the older generations have, and just don't have the energy to actually do” (Interview 17). However, much food security work is done on a volunteer basis or as a part of other responsibilities, limiting recruitment potential. Participants were quite clear about the consequences of attempting to carry on without sufficient capacity becoming possible:

We've seen initiatives - be it the market and various other initiatives - pop up that have come and run with the torch and done amazing things and then had to drop it because the funding kind of just petered out. (Feedback session)

It shouldn't be dependent on one person, or an individual or even just a really small group of people. It has to be a concern for the whole community...you see what happens when we lose the one champion, and there's a vacuum for leadership, or they retire or getting tired that will be the big thing, because I know that, you know, to watch activists retire, and sometimes illness, a whole bunch of things, is that we lose that force. We have to be bigger than that. (Interview 14)

Participants are quite clear about the necessary solution to the capacity conundrum:

The silver bullet to me is money. Unfortunately, the world goes around with money and for us to be able to accomplish so much more and to have a key person and to be able to address all these issues - whether it's infrastructure, whether it's land, whether it's resources, whether it's engagement, it comes down to money. (Feedback session)

Money allows the hiring of additional staff, staff who can undertake work on a fulltime and on-going basis. This would offset the issues of burnout, an over-reliance on volunteers and the loss of initiatives when volunteers move on.

However, funding can be very difficult to come by. Applying for funding in and of itself requires capacity to find and apply for. There is limited financial assistance available to for-profit producers or those trying to start and run food production businesses (though there are a few programs that exist for some growers). Funding that might be available to Indigenous Nations or municipalities or NGOs usually are short-term in nature, meaning programs will end, or may not be sizeable enough to support multiple agencies or projects. Continuous strategic and thoughtful funding is limited.

For functional food security work to move forward in a coherent way, funding to increase and, where needed, create capacity is essential.

3.6.1 Connecting & Networking

Participants had many thoughtful insights on connections and networks.

I think that there's a lot of room for improvement in enhancing opportunities for collaboration, I see like, all the way from the lot of the current funding models which pits a lot of organizations against one another, they're competing for the funding, they don't want to share ideas with the other one. And then there's a lot of overlap and redundancies that can happen because of that...I think it's just a lot of people might not even know that the group down the street is also trying to do something they want to do. So, they don't even know how to reach out to work together...some people don't have enough time for making new collaborations or doing this kind of stuff. (Interview 12)

We found that while participants were often aware of a great many actors and initiatives going on in the region, there was an acknowledged need for better connection and networking between them all. Often the failure of links was between different groups of actors/initiatives, i.e., livestock and vegetable producers, food producers and those feeding food insecure community members, etc. There are breakdowns within organizations. UNBC was mentioned by those trying to promote food security among students, for example. While some initiatives are trying to remedy these broken linkages, i.e. Everyone at the Table (EAT) and PGPIRG, much more could be done. Better connections are needed including:

- Better connections with Indigenous food security;

- Better coordination in transporting food products for processing and to market, across the region;
- Better coordination around communication and education;
- Better coordination around grant seeking;
- Better coordination and allowances between agencies, i.e., when one group receives more resources than they can use;
- Better connection between consumers and producers;
- Better collaboration and cooperation in bringing onboard all necessary levels of governments;
- Better engagement with those not usually at the table:
 “If the people who are experiencing food insecurity get to have a voice at the table where the decision making is happening, that would be really valuable...And then if the work is done to make sure that person feels safe to even come to that meeting, and is given the opportunity to even understand what food security means, those are kind of the pieces I think that are that are important. And the things that have been successful...over the years have been about building trust and collaborating and being mutually respectful” (Interview 6);
- Better ways of keeping busy, committed, independent and diverse peoples, agencies and initiatives working together.
- Finding ways to include those with different approaches:
 “There's always people that don't agree with other people's way of doing it or tolerate our people get. Also, people get kind of tired. They want to show up ... and do some actions. And they're not getting to do the actions” (Interview 4).

3.6.2 Using Existing Networks

Seeking out opportunities without ‘reinventing the wheel’ is an important facet of building capacity. It would be useful to look to other jurisdictions for approaches that may have merit for possible application locally. Also important would be reviewing funding that has been granted to understand what is working and what needs greater attention/gaps for optimizing.

I think there's so much already out there that's working, but just being able to implement it here and not necessarily coming up with all these new ideas but seeing what works in in other areas. (Interview 17)

Let's stop funding all the innovative projects - fund what's there. (Interview 8)

So, there's already a lot of existing collaboratives, like systems and networks in place there. (Interview 12)

There is often the impulse to look for the new, and many granting agencies focus upon the “new and innovative.” However, as participants have documented, there is already a great deal of activity, initiatives and organizations working on the various aspects of food security that

work for this region and would benefit from scaling. In our “mapping” of the many activities and actors, a few outcomes are clear:

- There needs to be a full “food mapping” and documenting of all activities, initiatives and actors in the region by way of collaborative engagement;
- There needs to be more effort to engage these agencies, initiatives and actors together to support current efforts to strategically bring initiatives together;
- There appear to be few gaps, but some overlap in efforts that might be rationalized for more efficient work towards food security; and,
- There are current activities underway that appear to not acknowledge existing activities, initiatives, and actors. We note work, for example, at UNBC on food security appears to have no visible interaction with the food security work being done in the community and hope that the Regional District of Fraser Fort George’s current research efforts (as mentioned) can remedy some of the disparities in connections.

3.6.3 Organizing & the Hub

The desire for a food policy focused entity was expressed by a number of participants.

Two things come to mind for me - a desperate need for a Food Security Council of some kind, and a network. (Feedback session)

Food hub is a system – not necessarily a built structure. Could comprise of several component pieces - i.e., food processing, [food] conservation centre [i.e., freezers], distribution centre, retail/wholesale, showrooms, a place of sale, an administration HQ where people work to make it happen. (Mural engagement)

Most participants thought some form of a “hub” was an important next step, whether a concept and/or a physical space. Most importantly, it needs to be regionally based.

I am aware that Lana Popham, Minister of Agriculture, is pushing for food hubs around the provinces, placing them but not recognizing, again, the food culture, right, so placing one in Quesnel now, and saying that it's going to serve the region of Prince George, Quesnel, and Vanderhoof. But yet, those areas are not only vastly different culturally, but also, they're also very far away between each other. (Interview 16)

There are risks to establishing a centralized hub:

My experience is that when you put in a bureaucracy, that the energy gets sucked into running the bureaucracy not doing the job. But on the other hand, it might prevent some duplication of services, there might be something going on, that the people I'm with are doing. But the same thing is being done by another group, we just don't know about it. And if we were to be able to share services that might cut down on cost and make it more efficient. (Interview 11)

If a regional hub was funded to provide the often called for extra body/bodies to assist with the work of promoting collaboration and coordination, and is developed in a way that brings, literally, all interested parties to the table where they are treated with equity and respect, a hub could start to move the work of creating regional food security forward together. Several purposes and activities were identified for a regional food hub:

- “Something that operates both as a food hub and *a continuous market* would be a really wonderful thing” (Interview 7);
- “There can be *processing areas*, a market area, there's all of that space in one. And then there we go” (Interview 7);
- “I think just more of a space for *people to come together and talk* about it...I think just more spaces for people to talk about it and create connections and be aware of what is happening in the community would be a big step” (Interview 8);
- “We need that *political infrastructure* to give us that hand up, you know, to keep the energy flowing” (Interview 16);
- “We need to support local growers all the time, not just in times of crisis. We need to help them connect with each other” (Interview 9);
- “A central place where those of us *who live regionally* can bring our produce regardless of how little we may have at a time to bring” (Mural engagement);
- “When I inquired about the need for coordination with various groups, they are basically saying, we are working. We don't have time for coordinating meetings... they don't have the capacity to communicate with other people...we live in a system where not-for-profits are unintentionally set up to compete with each other. So, we don't share information because we need to be applying for the same funds. *There's really a need for a coordinated system so that there's less duplication*” (Interview 9);
- “[Operate] the Good Food Box and process the goods, can people's veggies for them or quick freeze them” (Interview 33);
- “Promote collaboration of producers and not create a place where competition prevails” (Mural engagement);
- “A cooperatively owned and managed space with a *walk-in cooler* and a *professional kitchen*” (Mural engagement);
- Creates a space for *connecting and knowledge sharing*” (Mural engagement);
- A space that *advances general learning and understanding around food, and awareness of local options*” (Mural engagement);
- “A system that will connect the producers, the consumers food distributors working towards a common goal” (Mural engagement).

Finding the means to create the desired ‘hub’ will put regional food security efforts ‘on the map’.

4.0 The Complexity of Food Security

We must agree with our participants, that achieving true local food security for all will never be easy and yet is entirely feasible with the political will to do so. As food insecurity causes are complex, solutions must address these complexities in part by teasing out the main issues while keeping in mind the small but critical nuances.

To achieve full food security, I can imagine how to get there, it's huge, right? It's a lot of work. It's changing society, it's changing behaviors, it's changing the capitalist system that we operate in, really to truly get food security. (Interview 7)

However, participants also pointed out that such initiatives are not impossible if the issue is important enough:

To do something that I would consider being food secure, would require massive efforts - it would require the same efforts that the government has given the forest industry in the past in terms of mapping out the land or predictive ecosystem mapping kind of do the same thing for farmland utilize the technology that's available and making that land accessible to people the price and as well as the training. (Interview 1)

Further, our participants could articulate a very clear vision of what food security *could* be.

Because there's the people that are going to thrive in being on the land and producing food. And there's the people that are going to thrive being in the background and making those connections. And I think the beauty bringing us all together is that we can co orchestrate and have those things happening, paralleling each other at the same time, which is the chicken and the egg, of course. But you know, bringing everyone together with all the different pieces of the wheel, then both chicken and the egg can kind of be building and establishing at the same time. (Feedback session)

5.0 Recommendations for Going Forward

Based upon the feedback from those active in and committed to regional food security, we offer the following recommendations:

1. We recommend that all levels of government and organizations recognize the expertise and diversity already existing in the north around food security work, that is north and regionally focused, and **build on** existing strengths and activities and initiatives. We recommend that this existing expertise, initiatives, and knowledge be honored and supported, rather than see new initiatives imported and imposed from outside the region.
2. We concur with the voices in this research who have consistently called for a **coordinated, collaborative and north centered and focused food security "hub."** We

note that people have called for a “hub” that is both physical (a food-focused space with necessary facilities such as community kitchen, gathering / classroom area, etc.) and a virtual “hub”, in which the needs and desires of all are acknowledged and meaningfully addressed.

3. We recommend that funding be allocated that will **allow sufficient staffing to be hired** that recognize and can support the multiplicity of demands, i.e., livestock production, agricultural products, as well marketing, education, and communication. This must include supporting the work to assist food insecure community members, who are frequently rendered **voiceless but are often the most food insecure**.
4. We recommend securing **lasting and sufficient funding** to hire knowledgeable and dedicated staff with food security expertise, regional connections among food security initiatives, and the community building skills to build connections and interrelations into the future. This is the beginning of the creation of the **physical + virtual northern food security “hub”**.
5. We recommend establishing sufficient funding to hire local champions and knowledge holders who can then support and guide, through mentoring and specific expertise, the hub staff. **Honoraria are critical** in acknowledging their time commitment and specialized knowledge.
6. We recommend that there is a **sourcing and acquisition of the physical resources** that have been consistently recommended to serve this region, i.e., Prince George based infrastructure that can address the unique culture and community needs in this region.
7. We recommend recognizing that the north has a wealth of knowledge and expertise, and this often is attached to **strong and committed personalities**. Staff must honor, recognize and balance between competing demands and personalities with competing interests and jurisdictions.

6.0 Conclusion

This small research project has uncovered a wealth of untapped potential and illuminates the opportunities for successful, effective and replicable changes that can be achieved with the right infusion of people, resources, and respect. The circumstances and size of the food security landscape in Prince George and region would respond well to the support of external investments. Such investments, relying on local expertise and knowledge, would demonstrate how to translate individual passion and dedication – of which there is an abundance – into collective improvements to northern food security.

Reference Materials

Booth, A.L. 2019. Hungry Ghosts: The Impact of Food as a Workplace Health Concern Among University Staff and Faculty. *Human Ecology Review* 25(2): 69-88.

Gallant, L and Deboer, C. 2018. Better Together: Food Security Forum 2018 Post-Conference Report.

Healy, T. and the EAT Collective. 2021. Everyone at Table: Report on a Community Led Community Engagement Process. Report to the MYPG Granting Committee.

Kessing, P.B. 1965. A Study of Provincial Agricultural Extension Services in Canada: 1952-1961 Master of Science University of British Columbia.

Micevski, D. A., Thornton, L. E., & Brockington, S. 2014. Food insecurity among university students in Victoria: A pilot study. *Nutrition and Dietetics*, 71(4), 258–264. doi.org/10.1111/1747-0080.12097

Rollins, C.L., Simpson, S.R. & Boxall, P.C. 2017. Evaluating an agricultural extension program aimed at improving biodiversity in Alberta, Canada, *Canadian Journal of Agricultural Economics/Revue canadienne d'agroéconomie* 66(2): 331-353. <https://doi.org/10.1111/cjag.12158> Rollins et al. Evaluating an Agricultural Extension Program Aimed at Improving Biodiversity in Alberta, Canada. *Canadian Journal of Agricultural Economics* 06 Nov 2017

Tarasuk, V., Mitchell, A., & Dachner, N. 2014. Household food insecurity in Canada, 2012. Food Insecurity Policy Research (PROOF). proof.utoronto.ca/wp-content/uploads/2014/05/Household_Food_Insecurity_in_Canada-2012_ENG.pdf

Tarasuk, V., Mitchell, A., & Dachner, N. 2016. Household food insecurity in Canada, 2014. Food Insecurity Policy Research (PROOF). proof.utoronto.ca/wp-content/uploads/2016/04/Household-Food-Insecurity-in-Canada-2014.pdf

Williams, P. L., MacAulay, R. B., Anderson, B. J., Barro, K., Gillis, D. E., Johnson, C. P., Langille, L. L., Moran, S., & Reimer, D. E. 2012. “I would have never thought that I would be in such a predicament”: Voices from women experiencing food insecurity in Nova Scotia, Canada. *Journal of Hunger and Environmental Nutrition*, 7(2–3), 253–270. doi.org/10.1080/19320248.2012.704740

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Appendix One

HARVEST HOME

A Community-Based Exploration and Mapping of Regional Food Security Initiatives and Structures in a Northern Context: A History of Innovation

Northern BC has a rich history of food production, storage and preparation. Indigenous People's Knowledge of harvesting, preserving and presenting food from the rich abundance of natural resources, which themselves were not necessarily in year-round supply, to provide year-round supplies of food were the forerunner to the introduction of European Agricultural practices. Indigenous Science, created and carried over generations by knowledge holders, ensured reliable food supply based in local food sources.⁷ Elders speak of "caribou as thick as insects on the ground", and how "agriculture" was a holistic approach to managing local food resources in harmony with the specificity of local bio systems. However, new arrivals did not recognize Indigenous relationships with the land as agriculture.



Figure 1: Prince George Citizen, Special supplement. Nov. 29. 1963

⁷ Snively and Corsiglia, Chapter 7, A Window into the Indigenous Science of Some Indigenous Peoples of Northwestern North America in Gloria Snively and Wanosts'a7 Lorna Williams. (2016.) *Knowing Home: Braiding Indigenous Science with Western Science, Book 1.*

Yet, Western settlers depended on the knowledge and generosity of local Indigenous people to assure themselves and their families of reliable, year-round, food supply. Most families depended on this local effort and learnt how to improve food access including hunting and fishing and local trade, to supplement family diets and food supply.

The combination of knowledge and skills meant that the region had a significant local food supply.

... They used to produce a significant amount of vegetables. You had the vegan family that produced lots of poultry. You have caribou growers, at one point they produced this significant volume of root crops. there used to be more agriculture in the area that did produce pretty large volumes. But in terms of the population, it's still kind of a drop in the bucket. I mean, we're an area that has been colonized not too terribly long ago, and it's like, there's still a stream of flour going up the gold pan trail, you know what I mean? Given that, and the challenges of climate, agriculture just isn't a sought after industry, it has to be lucrative for people to come up as well. (KI #1 AH)

Before the advent of the industrial food system production erased local capacity to supply its own food, the region had more than adequate food supply as was demonstrated during World War Two. The capacity of local food production was reported in a 1940 the *Prince George Citizen*, originally run in the *Montreal Herald*, extolling the state of farming in BC. The article was based in the experiences of a family who had moved from Switzerland to the Bulkley Valley, saying that Canada "must be a rich country for farmers" because of the products sold in stores. However, they go on to say that local production of cheese, butter, bacon, sausages and vegetables set a better table for everyday meals. They also stated they intended to grind their own grain, and build a large oven for bread making, as was practiced in his home country. Asked why his family immigrated he said the threat of living under the swastika and the threat of open warfare had driven them to immigrate. The articles conclude that "Canada needs 100,000 more settlers of this type from the democracies of Europe to settle the vast spaces of rich arable land, and possibly to teach some of our existing farmers a lesson in home economics."

SWISS FAMILY LIKES B.C. FARM CONDITIONS

We reproduce hereunder an article published in the March 20 issue of the *Montreal Herald and Weekly Star* which was submitted by Alfred Miller of the Interior Creameries, Prince George.

About four years ago a Swiss family came to the central interior of British Columbia, later to settle in the Bulkley Valley near Smithers. They had been taken about in the country and had dined at many farm homes in selecting a suitable farm for a future home. In the course of conversations the man, who could speak fair English, made the following remark:

"This must surely be a rich country for farmers to live in. Do you know that the farmers here purchase their cheese, butter, bacon and sausages and in some cases eggs and vegetables and bread from the stores? If they can do that, they must be well off. We could no do that on the farm in Switzerland. But in spite of the fact that we make our own butter, cheese, bacon and sausages and raise all the vegetables and fruit we need, we are setting a better table for our everyday meals."

He also stated that it was his intention to follow the system he had been brought up to in his native land. He would put up a large oven for baking bread, and would grind his own grain into flour. The family were well dressed, he in a tailored grey suit of heavy cloth, and his wife in a travelling suit of checked material. It was from wool grown on their own sheep, spun and woven at home. The cloth could outlast ten ordinary Canadian suits. He had brought his family to a strange country with strange customs, but with him he had brought the best customs and traditions from his native land to transplant them in Canadian soil in a free democratic country like the one he had left.

Why did he leave? He had his well found reasons. This took place four years ago, long before the present European struggle had broken out. He said: "There will be war in Europe and it will not be long, and my children shall

Figure 2: Swiss Family likes B.C. farm conditions



Figure 3 Figure 2: improved technology for food storage. May 2, 1979. PG

While local food production in war time was promoted and valued, in peace time a shift towards mass produced foods emerged, even as western technology was adding tools to support local food production and storage (Figure 3). Affluence was seen in the purchase of mass-produced foods; a tin of peas at Sunday dinner was preferred to peas from the garden. The convenience of mass-produced food was also valued in the post World War II economy, which saw ever increasing numbers of married women in the paid labour force.

While knowledge of food production and preservation diminished, it was not entirely lost. However, many families, especially those with lower incomes, did not have the space, time or storage facilities to grow and preserve their own foods. The skills of making butter or brewing craft beer, often associated with a particular family or family member, became

staples of a consumer society, which made significant profits from the sale of mass produced, mass marketed foods. Grandmother's home-made pickles and relishes became gourmet purchases for those looking for specialities from outside the mass-produced market while families which still prepared and relied on home manufacture were seen as "less than" or economic failures because they did not purchase within the industrial food system.

Consequently, many people do not understand food, nor how it can be produced and stored safely, and the result is that local food is generally an expensive commodity purchased only by those with sufficient income to pay the higher costs associated with paying true cost values.

Recently, there has been a significant shift in thinking. The food shortages and higher prices, caused by the 2020-2022 COVID pandemic, exposed more people to food insecurity rather than only the lower income and more vulnerable members of society who face ongoing food insecurity. During this time, panic buying and hoarding emerged. Conditions worsened because of supply chain issues. The Suez Canal, a major short cut for 12% of global delivery systems, was blocked for several months in 2021. Wildfires, floods, mudslides and other highway destruction in BC

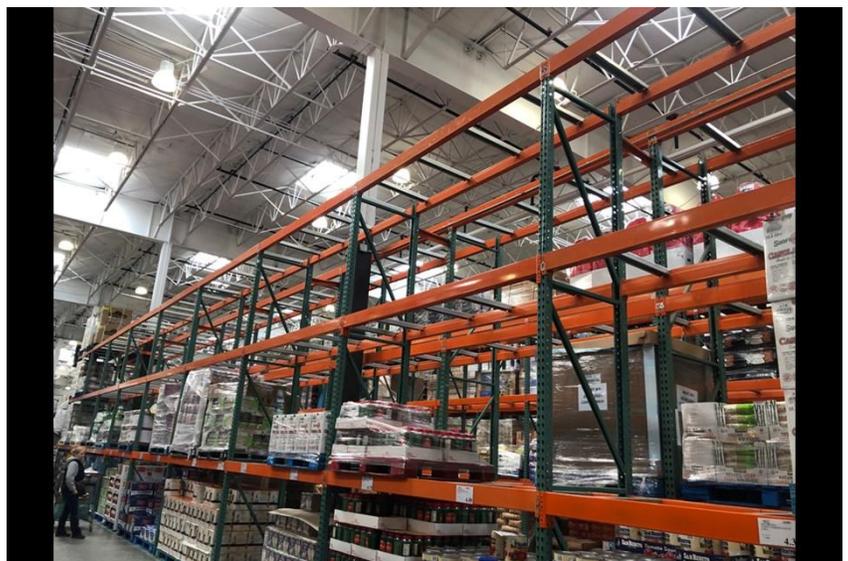


Figure 4: Visibly fewer items on shelves around Prince George. COVID-19: Here's a look at Prince George grocery store shelves. Prince George Citizen. March 17, 2020.

transportation infrastructure revealed the fragility and vulnerability of Prince George and the region's dependence on industrial food supplies.



Figure 5: A satellite photograph reveals how the Ever Given was wedged across the canal. BBC news. July 2021

Climate change related weather events in BC caused significant economic and infrastructure damage: extreme heat, wildfires, flooding, mudslides during 2021. In particular, flooding and other storm related damage hit the lower mainland agricultural plateau with severity, destroying the livelihood of farmers and destroying livestock with little chance of restoring livelihood and food / animal stocks for years. The

delay in providing assistance to farmers and Indigenous communities by government is threatening the potential of recovery for many who fear losing their family livelihood in the face of government inability to respond in more timely ways with assistance (CBC news). Early estimates of the cost of the damage are ~\$7.5 billion but full costs of the November 2021 flooding are still being assessed.⁸

While considering food security and the various benefits to local food supply might be a new concept for many, in Prince George there has always been a strong contingent of food activists understanding and committed to, the ideals of local food production. Northern BC has been a leader and at the leading edge of change in accessing and supporting local food champions, as this research has demonstrated.

⁸ Labbe, S. Dec. 26, 2021. B.C. floods among world's most devastating climate events of 2021. Times Colonist.

Appendix Two

Agricultural Resources

Farmers Institutes

Farmers' Institutes were a result a strong desire to have a scientific education for farming in Canada, an idea expressed as early as 1870.⁹ The ideals to support farmers in moving into more scientific approaches to farming became part of a generalized interest in providing education and the emergence of public education, including universities and technical colleges.

Universities in particular subscribed to a democratizing idea of education as a public service. At the University of Saskatchewan, the site of the first Extension program at a Canadian university the president Walter Murry had visited and been impressed by extension programs in the US:

What is the sphere of the university? Its watchword is service—service of the state in the things that make for happiness and virtue as well as the things that make for wealth. No form of that service is too mean or too exalted for the university. It is as fitting for the university, through correspondence classes, extension courses, supervision of farmers' clubs, traveling libraries, women's institutes or musical tests to place within the reach of the solitary student, the distant townsman, the farmer in his hours of leisure or the mothers and daughters in the home the opportunities for adding to their stores of knowledge and enjoyment, as it is that the university should foster researches into the properties of radium or the causes and cure of swamp fever; provided, of course that it is better fitted than any other existing agency for carrying on that particular work.¹⁰

The University of Saskatchewan was the first university in western Canada to establish a department of university extension. From 1910 through 1963, the Department of Extension was an integral part of the College of Agriculture. Between 1913 and 1950, a separate Department of Women's Work delivered extension programming to women

In this region, District C of the BC Farmer's institutes includes Eaglet Lake, McBride, Prince George, Reid Lake, Mud River and Beaverly. Like many Farmer's Institutes, the difficulty of attracting younger farmers into the work has impacted membership. Many of the interviewees in this research highlighted the complex and interconnected reasons that contribute to this. However, all the Farmers Institutes are committed to recruiting and growing the institutions and farming with the advantages and supports the Farmers Institutes can offer to farmers. The

⁹ Douglas A. Lawr. Agricultural Education in Nineteenth-Century Ontario: An Idea in Search of an Institution. *History of Education Quarterly*.. Vol. 12, No. 3, Special Issue: Education and Social Change in English-Speaking Canada (Autumn, 1972), pp. 334-357.

¹⁰ Ibid.

Eaglet Lake Farmers Institute, for example, illustrates what support can be generated by a Farmers Institute:

Eaglet Lake Farmers' Institute is located 50km east of Prince George, BC. LFI offers - 1. Young Farmers Program - incubator and fertilized eggs/brooder lending library and garden mentorship, youth and young families can apply for seed starter kits, small indoor starter greenhouse kit. 2. New Farmers Program - farm mentorship to new/entry farmers, tool lending/seed/small equipment grants. ELFI is active in our rural communities and serves the Eastline from Prince George to McBride, BC. ELFI advocates for organic farm development/practices, is an active political body advocating against industrial mine development that impacts ag.land, aerial glyphosate spraying, preserving old growth forests and is the new BC Climate Adaptation project administrator for our region.

The various Farmer's Institutes have a degree of independence, as the Mud River/ Beaverly Farmers Institute shows:

Mud River Beaverly Farmers' Institute is looking for more members! We try to bring in a variety of agricultural, educational speakers for each of our meetings which run October through to May or June. The institute has recently been able to help secure a trailer and panels to the local fire call for emergency services. We are looking to host some community events and would invite anybody interested to learn from the wealth of local knowledge in the institute to join!

Appendix Three

Interview Questions

1. Key informant Interviews:
 - a. What does being food secure look like to you in Prince George and the region?
 - b. What people, groups, organizations and initiatives do you know are working on food security in the city and region and what do they do?
 - c. What do you think are real success stories in the area?
 - d. What are people and organizations experiencing as barriers to food security?
 - e. What responses are needed, and from whom, to address some of these barriers?
 - f. What innovative ways could you suggest to increase access to food and support local food producers and processors?
 - g. Where are opportunities to link different producers to processing facilities?
 - h. What supports, structures and resources are needed to enhance existing networks? Where are there opportunities for collaboration, improved communication and flow amongst people, groups and organizations?
 - i. Who else should we speak to on this topic?