THE ELEPHANT IN THE MARKET: UNEARTHING PROVINCIAL POLICY ALIGNMENTS AND PERCEIVED CHALLENGES TO GROW THE IMPACT OF THE FARMERS MARKET SECTOR IN NOVA SCOTIA, CANADA

by

Emily Aisha Bibeau

Submitted in partial fulfilment of the requirements
for the degree of Master of Environmental Studies

at

Dalhousie University
Halifax, Nova Scotia
December 2020

For Joshua

Table of Contents

List of Tables

List of Figures

Abstract

Farmers markets (FMs) have identified potential as sustainable forms of economic life. However, they are rarely studied for their contributions to official sustainability policy. This study evaluates how FM activities align with sustainable development policy in Nova Scotia, Canada. Alignments are qualified based on an analysis of three provincial policies and FM public statements. Narrative inquiry is used to explore the challenges FMs face in advancing provincial goals based on interviews with FM organizers. The results suggest that, while FMs do align with multiple sustainability priorities in Nova Scotia, provincial policies do not reflect several key FM activities. The research outcomes highlight the role of FMs as enablers of smaller scale farmers and the need for increased government recognition and support for these actors in order for FMs to progress on provincial goals. This study contributes new insights on the potential role of FMs in shaping a more sustainable future.

List of Abbreviations and Symbols Used

ACT for CFS	Activating Change Together for Community Food Security
AEC	Acadia Entrepreneurship Centre
CFS	community food security
CSA	community supported agriculture
EGSPA	*Environmental Goals and Sustainable Prosperity Act*
F/V	fruits and vegetables
FAO	Food and Agriculture Organization
FMNS	Farmers' Markets of Nova Scotia Cooperative
FMs	farmers markets
GHG	greenhouse gas
LFNs	local food networks
NI	narrative inquiry
NS	Nova Scotia
NSE	Nova Scotia Environment
SD	sustainable development
SDGA	*Sustainable Development Goals Act*
SDGs	sustainable development goals
SNAP	Supplemental Nutrition Assistance Program
UN	United Nations
WOOF	Worldwide Opportunities on Organic Farms

Glossary

Community support agriculture (CSA): Consumers proactively subscribe to a farm's harvest (or that of many farms), allowing the producer and consumer to share in the risks of farming.

Direct marketing/markets: Products are sold to the end consumer through farmers markets, farm stands, farm stores, U-picks, collaborative sales with other direct marketers including internet or specialty retail sales (farmer and non-farmer owned), and indirect sales though an institution, restaurant or other store.

Farmers market (FM): A retail environment open multiple times a year where farmers and other vendors sell products directly to consumers.

Food insecurity: "A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life" (FAO, 2020b, para. 4). Measured at the household level in Canada using the household food security survey module of the Canadian Community Health Survey (Health Canada, 2007).

Food security: "When all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" ([FAO] Food and Agriculture Organization, 1996, para. 1).

Local: Defined in many ways such as by a given distance between point of production and consumption or within a political region. For the purpose of this study, it is used interchangeably with domestic, meaning within Nova Scotia.

Low income: Among households, the measure for low income is when a household's income is 50% below median household incomes, adjusted for family size. This measure is used to make international comparisons (Statistics Canada, 2015).

Small-scale farming/farmers: Defined for this study as farmers selling through direct markets to a maximum of 130 acres as per the Statistics Canada definition.

Sustainability: "Meeting current human needs without undermining the capacity of the environment to provide for those needs over the long-term" (*Environmental Goals and Sustainable Prosperity Act*, 2007, c. 7, s. 1; 2012, c. 42, s. 2).

Sustainable development: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bruntland et al., 1987, p. 16).

Sustainable prosperity: “[P]rosperity where economic growth, environmental stewardship and social responsibility are integrated and recognized as being interconnected” (*Sustainable Development Goals Act*, 2019, c. 26, s. 2).

Acknowledgements

I am very grateful, first and foremost, to my supervisor, Michelle Adams, for your steadfast support and trust throughout the process, from my undergraduate until now. You've helped me grow so much as a researcher and develop confidence in my own abilities. Thank you to Louis Beaubien, your guidance was invaluable, and it was an honour to work with you. Thank you to the Farmers' Markets of Nova Scotia cooperative, particularly Justin Cantafio, for supporting this research from the very beginning. Thank you to Liz Fitting for your input and encouragement near the end.

Thank you to the Faculty of Graduate Studies and the Nova Scotia Graduate Scholarship program for supporting me financially throughout my studies and research.

My heartiest thank you to the people at SRES; thank you to all the faculty members as well as to Brenda, Mary, and my fellow MES students for your constant encouragement, help and humor. I am also very grateful to my family; thank you to my mother and grandmother for your inspiration. A special thank you to my husband, Taras, for your unwavering generosity and patience.

Finally, I'd like to express my deepest gratitude to all the participants for sharing their knowledge and wisdom during a troubling time – you made this research possible.

Chapter 1. Introduction

1.1 Groundwork for the Research

1.1.1 Background

The sustainability of the global, commoditized food system is at risk given the rising threats of climate change, loss of arable land, resource depletion, shifting consumption patterns, population growth and food insecurity. As of 2019, approximately two billion people are food insecure, meaning they lack access to safe, affordable, healthy, and culturally appropriate food ([FAO] Food and Agriculture Organization, 2020c). Hunger and malnutrition are also set to worsen as a result of COVID-19 economic impacts (FAO 2020a). As part of Sustainable Development Goal 2, addressing world hunger, the 2030 Agenda for Sustainable Development urges countries to strengthen supports for smallholder farmers to grow domestic food capacity (United Nations [UN] General Assembly, 2015).

In recent decades, there has been revitalized interest in re-building local[1] food networks (LFNs) in higher income countries (DeLind, 2011; DeLind & Bigden, 2008; Leventon & Laudan, 2017; Rosling, 2019). A plethora of research contends that revisiting direct modes of food provisioning such as farmers markets[2] (FMs) can improve community food security, communal well-being and "transform nature-society relations" (Fang, Buttenheim, Havassy, & Gollust, 2013; O'Kane & Wijaya, 2015; Vail, 2014, p. 51). As cornerstones of LFNs, FMs aim to support local producers by connecting them directly with community members (Christensen & Phillips, 2016; Brown & Miller, 2008; Vail, 2014). They provide a low-cost venue for vendors to test their product, ply their trade, and build a consumer base to establish and grow their business (Gillespie et al., 2007; Feenstra et al., 2003). In an era of loneliness and isolation, they serve as places for social engagement where people can come together to eat, learn, and connect (O'Kane & Wijaya, 2015).

[1] While recognizing the subjective nature of *local*, this research does not unpack its many definitions and uses domestic and local food interchangeably throughout the document.

[2] Research on FMs calls for more inclusive language; *farmers' market* implies that farmers own and operate the market while *farmers market* recognizes that FM ownership/management can take many forms (Gantla & Lev, 2015).

There has been a rebirth of FMs across North America since the 1970s (Stephenson, 2008). Nova Scotia now has the most FMs per capita in Canada with over 50 markets, approximately 75% of which are members of the Farmers' Markets of Nova Scotia Cooperative (FMNS) whose mission is to grow, strengthen, and unite the FM sector in Nova Scotia (FMNS, 2019b). One of the cooperative's objectives is to understand how FMs contribute towards Nova Scotia's vision of sustainable development, including how they might support and advance the province's sustainability goals.

Despite the surge in FMs and popularity of local food, consumption of domestically produced food remains low in Nova Scotia and has declined since the 1990s. Though it is difficult to measure exactly, NS has yet to meet its goal set out in the *Environmental Goals and Sustainable Prosperity Act* (EGSPA), which aimed for 20% local food consumption by 2020 (EGSPA, 2007, c. 7, s. 1; One NS, 2020). Since the 1990s, Nova Scotian farmers have been receiving a smaller and smaller percentage of the food dollar, i.e. the spending that households devote to food each year. This share was 17.1% in 1997 but is down to 11.5% based on most recent data (Scott & MacLeod, 2010; Statistics Canada, 2020d; 2020f; 2012-2018). This figure is an indicator for how much local food is being consumed within the province. EGSPA also contains a goal to increase the number of farms in Nova Scotia by 5%. However, the number of farms and farm operators has declined in Nova Scotia since the EGSPA goals were set in 2007 (Statistics Canada, 2020h). Even when factoring in provincial limitations (e.g. climate and limited land area), feasibility reports conclude that Nova Scotia could be producing and consuming significantly more domestic food (Scott & MacLeod, 2010; Stafford, 2017).

1.1.2 Positionality of Local Food Research

There is debate among academics and practitioners to what extent local food contributes to sustainable development (Chapman & Perkins, 2019; Forssell & Lankoski, 2015; Deller, Lamie, & Stickel, 2017; Smithers, Lamarche, & Joseph, 2008). Local is not synonymous

with small-scale farming[3], and small-scale farming does not automatically produce environmentally and socially just food systems (James & Hendrickson, 2010; Jarosz, 2008). Much of the research to date on LFNs is indeed grounded in unexamined assumptions, local food agendas and biases as a result of stakeholders romanticizing and fetishizing local food (Born & Purcell, 2006; Deller et al., 2017). LFNs – or alternative food networks – are widely defined in research as the antithesis to a conventional, global food system (O'Kane & Wijaya, 2015). Critiquing scholars point out that focusing on *what they are not* versus *what they are* uncritically assumes that they are inherently more beneficial and sustainable than a counterpart without further specifications (Lowitt, 2009; Smithers et al., 2008). Given differentiated geographical growing capacities, many scholars contend that local food can only play a limited role in terms of future food availability and that transitioning towards domestic food production and away from certain imports carries social and economic consequences for the global political economy (Ballingall & Winchester, 2010; Born & Purcell, 2006). Further, consumer-producer relationships within LFNs cannot be assumed as genuine as they still occur within the context of established norms (e.g. virtue signaling, obligation, pressure to conform) and are still subject to the underlying problems of marketplace trading (Tregear, 2011). Like other re-localization initiatives, LFNs still operate within the wider neoliberalist global economy and can often replicate the system they claim to oppose:

> Relocalization can be seen as part of the restructuring of government toward ''governance'': the devolution of decision making to local networks of self-governing actors, coordinated through multi-layered institutional structures. From this more critical perspective, relocalization appears to be not so much in resistance to neoliberal globalization as an intrinsic part of it (Dupuis & Goodman, 2005, p. 367).

A kind of 'local trap' manifests from preconceived notions about local that assumes inherent benefits from local food production, discounts real inequalities within food systems, and fails to

[3] The definition of a "small farm" and "small-scale farming" is nebulous and depends on the context of the analysis. Metrics used include land area under 2 hectares, total farm sales from under $10,000 to $50,000, or the bottom 40% of farms based on the distribution of farm sizes within the region of study (FAO, 2017). In line with the purpose of this research, small-scale includes those selling to direct markets in NS to a maximum of 130 acres.

consider more telling indicators of food system sustainability such as farming practices and inputs (Chapman & Perkins, 2019; Born & Purcell, 2006). There is a myriad of other factors at play when comparing imported versus locally produced food, such as biodiversity conservation, water and soil health, food caloric and nutrient density, animal and worker welfare, consumer behavior and economic viability (Berry, 1987; Tavernier & Tolomeo, 2004). In terms of food security, systematic reviews find the local food, particularly among low income people, to be lacking, inconclusive, and largely theoretical (e.g. Siegner, Sowerwine, & Acey, 2018). Indeed, much research on LFNs is devoted to challenging commonly held assumptions around the environmental sustainability and social equity of local food and rightly so – the locality of food does not determine its overall sustainability.

However, many scholars argue that increased availability of locally produced food is key to improving community food security (CFS) and food system sustainability (e.g. Kaiser, 2011; Mazzocchi & Marino, 2018; Marino et al., 2013; Vail, 2014). While local food production does not guarantee environmentally sound farming practices (James & Hendrickson, 2010; Jarosz, 2008), smaller scale food production for direct markets is found to co-occur with other characteristics that can positively impact the food system, such as greater participation of producers, artisanal/low-impact production methods, and reduced physical and informational distances between actors, particularly when local economic boundaries are defined (Forssell & Lankoski, 2015; Ruzek, 2015). Furthermore, a growing body of research looks at the potential to leverage local food efforts to encourage sustainable farming practices (e.g. Foti, Scuderi, Stella, & Timpanaro, 2019; Hedberg & Zimmerer, 2020; Tsai, 2019). LFNs are found to increase social-ecological relations between people and the natural environment, which can bring about sustainable outcomes (Fang et al., 2013; O'Kane & Wijaya, 2015; Vail, 2014). For example, Hedberg and Zimmerer (2020) found that social interactions at an FM in New York City influenced positive environmental practices on vendors' farms. While there is much potential to harness this socio-ecological embeddedness, scholars stress that local food research and initiatives must be based on reflexive localism, meaning constantly questioning the "orienting values" behind the local food movement (DeLind, 2011, p. 273; Dupuis & Goodman, 2005; Ferguson et al., 2017; Tregear, 2011).

Altogether, the scientific consensus is that the scale, including farm size, does not determine food system sustainability and that both imported and domestic food must be continuously scrutinized for negative impacts on the natural environment, the climate, and communities (Born & Purcell, 2006; Chapman & Perkins, 2019; Smithers et al., 2008). The true impacts and benefits of LFNs ultimately depend on their supply/demand dynamics as well as the authenticity of their distribution outlets, including the authenticity of their FMs (Smithers et al., 2008; Wittman, Beckie, & Hergesheimer, 2012). This research does not engage the debate or argue the sustainability of LFNs or local food production. While recognizing that local food is not a cure-all to the social and ecological problems of the industrial food system, this research builds on the supposition that local food can positively impact CFS and food system sustainability and that FMs increase access to locally produced food within the communities they serve.

1.1.3 Sustainable Development Policy as a Measure of Sustainability

The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 and ambitiously aim to address worldwide poverty, hunger, gender and other inequalities, as well as to ensure environmental protection (UN General Assembly, 2015). However, advancing the SDGs must be done at the local level by implementing them through sub-state policies and efforts (Jones & Comfort, 2020; Stafford-Smith et al., 2017). In 2016, Canada adopted a national strategy to implement the SDGs (Environment and Climate Change Canada, 2019), while Nova Scotia's sustainable development initiatives were encapsulated by EGSPA, which set 25 goals for all the way out to 2020 (EGSPA, 2007). As of 2017, NS has achieved 13 of the 25 goals; those the province has yet to achieve include increasing local food production and consumption, decreasing the per capita waste disposal rate, as well as developing and implementing a strategy to grow the green economy (Nova Scotia Environment [NSE], 2017a). Another important policy document guiding sustainable development in NS is the Ivany Report, which also contains goals for domestic food production and consumption that have yet to be realized (The Commission, 2020). In 2019, the province replaced EGSPA with the *Sustainable Development Goals Act* (SDGA), which aims for carbon neutrality by 2050. Beyond emissions reduction targets, EGSPA goals have yet to be updated or replaced within SDGA (Grant, 2020).

Increasingly, research has been positioning local sustainability efforts alongside high-level objectives, such as the SDGs, as a way to measure sustainability among institutions, polices and regions (Davis, Matthews, Szabo, & Fogstad, 2015; Tan et al., 2020). The SDGs and their associated targets have been used to assess the sustainability of activities among Chilean cities (Steiniger et al., 2020), environmental impact assessments in Mexico (Koff, in press), cooperatives in Nova Scotia (Yichen, 2019), and urban food policies of North American cities (Llieva, 2017). Vail (2014) is the first to explore the contributions of an FM towards official sustainability policies, which they did at the city and state level in Brno, Czech Republic.

1.2 Research Purpose

Researchers have begun to undercover the potential for FMs to shape a more socially, ecologically and economically sustainable future (Brown & Miller, 2008; O'Kane & Wijaya, 2015; Stephenson, 2008). Nonetheless, how FMs fit within sub-state sustainability policies and advance their targets is still an emergent branch research (Llieva, 2017; Vail, 2014). It goes unspecified whether and how FM activities align with official sustainability policies in Nova Scotia; however, the province presents a promising area to study these connections given the identified potential to enhance local food efforts and the opportunity to meet provincial goals (ACT for CFS, 2014; Ecology Action Centre, 2019; Lowitt, 2009; Scott & MacLeod, 2007; 2010).

The purpose of this research is to explore how FM activities align with official sustainable development policy in NS inclusive of the EGSPA, SDGA and the Ivany Report. This study generates new knowledge connecting the activities of FM to high-level policy objectives in NS while exploring the main challenges and barriers for the FM sector to advance such goals and grow the impact of the sector.

1.3 Research Objective and Questions

The first objective of this study is to qualify how FM activities in Nova Scotia connect to and support provincial sustainable development policy. In a wider sense, the aim is to explore whether FMs serve as effective means to meet sustainable development goals in NS. The second objective is to understand the challenges inhibiting FMs from advancing provincial goals and enhancing its impact. These objectives translate to the following more specific research questions:

1. How do the public statements of FMs in Nova Scotia align with the goals/focus areas of the *Environmental Goals and Sustainable Prosperity Act,* the *Sustainable Development Goals Act,* and the Ivany Report?
2. According to the perceptions and expertise of FM organizers in Nova Scotia, what are the main challenges facing FMs in terms of enhancing its impact and further advancing the goals contained in the three policies?

1.4 Organization of Thesis

This chapter introduces and provides background information to contextualize the research. Chapter 2 outlines and synthesizes prominent literature relevant to the research. Chapter 3 presents the methodology and summarizes results for: 1) the analysis of FM public statements and provincial policies (Part A); and 2) the interviews with FM organizers (Part B). This rest of the thesis is structured in response to the two research questions above. Chapter 4 discusses the alignments between FM public statements and the provincial policies, thereby addressing Research Question 1. Chapter 5 presents participant narrative from the interviews with FM organizers with the intent of unpacking the main challenges facing the sector in terms of advancing provincial goals and enhancing its impact, thereby addressing Research Question 2.

Chapter 2. Literature Review

2.1 Introduction

This literature review presents the theoretical basis for the research, defines key concepts, reviews the research on FMs, and discusses the gaps in the literature that incited this study. It first goes over the theoretical foundations of sustainable development as well as those underpinning the local food movement. Key international and sub-national sustainability policies are discussed for Nova Scotia, Canada followed by a snapshot of the province's local food movement and the potential to boost domestic food markets. It then delves into prominent research on FMs, concentrating on studies within North America, Australia and Europe so as to be relevant to the study area. Research on the economic, environmental and social sustainability of FMs are assessed. Finally, it discusses the gap in the literature and makes the case for Nova Scotia as a promising study area.

2.2 Conceptualizing Sustainability through Sustainable Development

2.2.1 Theoretical Foundations of Sustainable Development

The theoretical foundations of Sustainable Development (SD) arose in response to the ecological problems of the twentieth century. In terms of their conceptualizations of sustainability, neoliberalist theorists tend to be economy-centric, producing theoretical iterations of "green capitalism", and include techno-optimists and ecological modernization theorists (e.g. Hawkin, Lovins & Lovins, 1999; Mol & Spaargaren, 2000; Spaargaren & Mol, 1992). Green theorists argue for logistic (tapered) growth rather than exponential growth and hold the view that we can harness technology to indefinitely increase the Earth's carrying capacity to suit human needs and desires (Eckersley, 2004). On the opposite side of the spectrum are theorists who denounce any capitalist version of sustainability. These include deep ecologists and back-to-land deep greens who call for dramatic change to or outright abolishment of the economy-centric neoliberal paradigm (e.g. Daly, 1996; Drengson, 1995; Schnaiberg, 1980; Speth, 2008). The concept of SD exists outside and above these polarized perspectives on sustainability, unattached to any particular political or economic way of thinking. In this way, SD and sustainability are not standards to be met but reflexive, continuous

processes whose parameters evolve as sustainability becomes an increasingly complex, intersectional, and necessary undertaking (Agyeman, 2005; 2013; Vail, 2014).

This research is not an attempt to examine the meaning of SD but rather relies on the official definition adopted by the United Nations' Member States; the widely accepted Brundtland definition, adopted at the UN World Commission of Environment in 1983, which states that SD: "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland et al., 1987, p. 16). The emphasis is on inter and intragenerational equity and harmony between the three pillars of sustainability – the social, environmental and economic. The pillars were incorporated in 1992 to further define and promote SD at sub-state levels. The Bruntland definition of SD was adopted into Canadian law and appears in Nova Scotia's *Environment Act* (1994-95, c. 1), which sets the stage for provincial sustainability-oriented legislation. SD can be signaled to by other terms in policy; Nova Scotia recently defined sustainable prosperity in the *Sustainable Development Goals Act* (SDGA) as, "prosperity where economic growth, environmental stewardship and social responsibility are integrated and recognized as being interconnected" (2019, c. 26, s. 2). The definition of sustainable prosperity also relies on the three pillars working together and, like SD, recognizes sustainability as a process, not a product.

Contemporary approaches to sustainability include the evolution of new terms and frameworks to further refine its meaning. Many materialized in response to the growing climate crisis and social inequities of the twenty-first century. Such terms have hit the mainstream, taking center stage in Canadian policy e.g. sustainable prosperity; regenerative sustainability; green, circular and inclusive economies (Cole, 2012; Gibbins, 2020; SDGA, 2019). A relatively recent development is the concept of regenerative sustainability (RS), which "aligns human consciousness and actions with living systems principles" (Gibbins, 2020, p. 1). This term was born out of circular systems thinking and claims closer ties to natural processes than SD (Gibbins, 2020). By the same token, Circular economy (CE) aims to minimize the amount of virgin material input into a system by following a cradle-to-cradle approach to sustainability (Korhonen, Nuur, Feldmann, & Birkie, 2018). This includes designing/purchasing goods for durability, reparability, and recyclability. In practice, moving towards a more circular economy

stands to take pressure off landfills, lower primary resource use, foster job growth, and grow local economies and communities (Korhonen et al., 2018). Unfortunately, SD efforts up to present have kept economic growth as the pinnacle of development at the expense of societal well-being (Gupta & Vegelin, 2016). Further, the inclusivity of SD has long been called into question as a result of being borne out of a white settler/colonial narrative that sees the environment as separate from humans. In response, Agyeman (2005) proposed the notion of just sustainabilities in an attempt to strengthen the social pillar of sustainability. The concept emphasizes equality, fairness, inclusion and recognizes that there are many possible interpretations of what it means to live "sustainability", hence *sustainabilities* (Agyeman, 2005; 2013). The term inclusive economy was incorporated into prominent SD policy in 2019 in NS and is defined as "an economy that creates opportunity for all segments of the population" (SDGA, 2019, c. 26, s. 2). Despite their use in the political agendas, these terms remain essentially contested concepts in that previous research and application has been highly fragmented; as such, they are only beginning to gain traction in the scientific community and among industry practitioners (Gibbins, 2020; Korhonen et al., 2018).

2.2.2 Localizing the United Nations' Sustainable Development Goals

In 2015, the member states of the United Nations adopted the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals (SDGs) along with 169 more specific targets and 230 indicators (UN General Assembly, 2015). Broadly, the aim of the SDGs is:

> …to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources (UN General Assembly, 2015, p. 3).

The indicator framework for the SDGs, which monitors progress towards the SDGs, is critiqued as being over-reliant on economic and social statistics, the targets lacking a conceptual backbone in local contexts (Hák, Janoušková, & Moldan, 2016). As it stands, the ability to localize the SDGs at the local, regional and sub-national level presents a challenge for

governments and other users, as does being able to measure such progress (Steiniger et al., 2020).

Efforts to localize the SDGs require connecting them through sub-state level policies and on-the-ground efforts (Jones & Comfort, 2020; Stafford-Smith et al., 2017). SDGs, their targets and indicators, are increasingly being employed as tools to measure the sustainability of institutions, policies and even regions (Steiniger et al., 2020; Tan et al., 2020). In positioning goals or activities alongside SDG targets, one can use the SDGs as a proxy measure for sustainability, forgoing the high costs of conducting a Life Cycle Assessment or Cost Benefit Analyses. Yichen (2019) measured how the activities of cooperatives in NS align with the SDGs by first re-expressing the SDGs targets in a local, Canadian context using federal SD policy, followed by a content analysis of co-op mission statements. Using this framework, they were able to identify textual linkages where NS cooperatives were supportive of the SDGs e.g. Goal 9: industry, innovation and infrastructure, as well as where cooperatives were unsupportive of the SDGs, e.g. Goal 5: gender equality and Goal 13: climate action and other environmental SDGs. The potential to realize the SDGs at the sub-national level has also been evaluated for urban food policy; Llieva (2017) investigated where SDGs themes converged with indicators of the urban food policy, Urban Food System Strategies (UFSSs), for five of the largest cities in North America. Using a score-based method, they found multiple alignments between SDGs and UFSS priorities, concluding that such policies represent a dynamic and effective approach for localizing SDGs in urban areas. Similar to the findings of Yichen (2019), key areas of divergence from the SDGs were on gender equality, climate change mitigation, and marine ecosystem preservation. Finally, Steiniger et al. (2020) developed locally relevant, urban sustainability indicators based on six Chilean cities in order to be able to compare them to the SDGs. When taken together, these studies reinforce the notion that implementation of the SDGs must be done at the local level and that connecting local policy to SDGs reveals both gaps and strengths in the sustainability efforts of organizations, policies and whole regions.

2.2.3 Sustainable Development Policy in Canada and Nova Scotia

In 2016, Canada adopted the Federal Sustainable Development Strategy (FSDS) – the fourth rendition – as the national agenda to implement the SDGs (Environment and Climate

Change Canada [ECCC], 2019). The main focus areas for the 2019-2022 strategy are clean growth, ecosystem health, community well-being and sustainability (ECCC, 2019). In the area of sustainable food and agriculture are goals to increase the value of Canadian exports, improve Canada's Index of Agri-Environmental Sustainability (index > 71), revise the 2015 Organic Production Systems Standard, and develop a national food policy by 2020 (ECCC, 2019). Pre-strategy public consultations stressed the need for government to recognize sustainable food choices and production practices such as regenerative agriculture and reduced pesticide usage as well as for government to increase promotion of circularly economy, reduced food packaging, and plant-based diets (Government of Canada, 2019). These concerns helped shape the unprecedented, plant-centric 2019 Canada Food Guide (Government of Canada, 2020a).

In Nova Scotia, The *Environmental Goals and Sustainable Prosperity Act* (EGSPA) was enacted in 2007 as the province's frontrunning SD legislation. It includes regulations detailing goals for up to 2020. The legislation emphasizes the interconnectedness between a healthy economy, environment and people and that merging economic and environmental well-being is a shared responsibility for governments, the private sector and citizens alike (EGSPA, 2007). As of 2017, the province has achieved 13 of the 25 goals (NSE, 2017a). Much of the goals achieved relate to energy efficiency and conservation, emissions and particulate reductions, and natural resource management. Goals the province has yet to achieve include domestic food production and consumption goals, namely, increasing the number of farms by 5% and boosting consumption of locally sourced food to account for 20% of food expenditures in the province (NSE, 2017a). However, EGSPA was replaced by the Sustainable Development Goals Act (SDGA) in October 2019. At its core are updated emissions reduction targets aiming for carbon neutrality by 2050. While the updated policy includes new language like inclusive economy and inclusive growth, its opponents claim it replicates EGSPA's nearsighted focus on the economy, contains insufficient detail, and lacks considerations for marginalized communities and those most affected by climate change (Beaton, 2019; Ecology Action Centre, 2019). Further, while the document acknowledges the Mi'kmaq principle of Netukulimk, it does not go on to specify how the government will be held accountable to Mi'kmaq rights holders in understanding and upholding it (Beaton, 2019). The SDGA goals have yet to be finalized as public consultations for

the regulations were put on hold due to the COVID-19 pandemic and limitations on public gatherings in NS (Grant, 2020). While unattained goals such as the local food goal may be kept with an updated target date (Ecology Action Centre, 2019), it is difficult to say at this point whether the SDGA regulations will prioritize food system sustainability to a greater extent than those of EGSPA. If the legislation itself is any indicator, it may be overshadowed by more overt, actionable climate change mitigation efforts. The deadline for submitting the updated regulations to the Minister of Environment is December 31, 2020 (SDGA, 2019).

Even though the economy is prominently featured in the SDGA, the guiding policy document for sustainable economic development in Nova Scotia has traditionally been the 2014 Report from the Nova Scotia Commission on Building our New Economy (the Commission), commonly known as the Ivany Report (the Commission, 2014). Its specific mandate is the sustainable development of the Nova Scotian economy. The local food movement is featured in one section of the report, which describes it as a business opportunity to meet the growing demand for sustainable products and a desire for greater variety of markets (The Commission, 2014, p.8). The Report's goals for 2024 include boosting agricultural exports, domestic food consumption, tourism revenues, as well as the number of start-ups, i.e. high-growth businesses (the Commission, 2014). There is potential to link the SDGA goals with the Ivany Report goals, particularly in the areas of local food consumption and production.

2.3 Contextualizing Food Insecurity

This research uses established definitions of food security. Food security was first formally defined by the FAO in 1974 and further refined at the World Food Summit in 1996. Food security is currently defined by the FAO as "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 1996, para. 1). This definition is characterized by the three dimensions of food security: food availability, access, and utilization (FAO, 1996). The conditions for food insecurity were defined by the World Bank Report on Poverty and Hunger in 1986 and later adopted by the FAO as "a situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life" (FAO, 2020b, para. 4). Food insecurity is an

issue of improper food and wealth distribution; it is fueled and compounded by social inequities, inefficient food supply chains, unemployment, low income and state welfare inadequacies (Riches, 1999). Income remains the strongest predictor of household food insecurity (Tarasuk, Mitchell, & Dachner, 2016). It is important to distinguish between household food security and CFS: the latter depends on the former and vice versa, but household food security is concerned with meeting the individual needs of a household while CFS holds a wider perspective of food accessibility and considers how food is produced, processed, distributed and made accessible to households within a community (Tarasuk et al., 2016; Voices for Food Security in NS, 2017).

Eradicating hunger is the aim of SDG 2 for 2030. Since the goal was set, the problem has grown – 820M people were undernourished in 2018 up from 784M in 2015 (FAO, 2020c; 2015). The FAO predicts that in the wake of a 2020 global recession – triggered by COVID-19 impacting global health and the economy – this number will grow by between 14.4M and 80.3M people with low-income countries accounting for the majority of the increase (FAO, 2020a).

2.3.1 Food Insecurity in Nova Scotia, Canada

Though it may be a high-income, OECD member country, hunger and malnutrition are growing issues in Canada. Recent data shows that Nova Scotia is the fourth most food insecure jurisdiction after the three territories; 15.4% of Nova Scotian households experience some level of food insecurity in 2017/2018 compared to 12.7% for all of Canada, see Figure 2.1 (Statistics Canada, 2020a). Furthermore, 33.7% of Nova Scotian adults struggle with obesity – compared to 26.8% nationally while only 25.5% meet their recommended daily intake of fruits and vegetables (F/V) (Statistics Canada, 2020e). Household food insecurity significantly increased in Canada when COVID-19 began affecting citizens and the economy in March 2020. According to a survey in May 2020, 14.6% of households in Canada reported experiencing food insecurity within the last 30 days (Statistics Canada, 2020c).

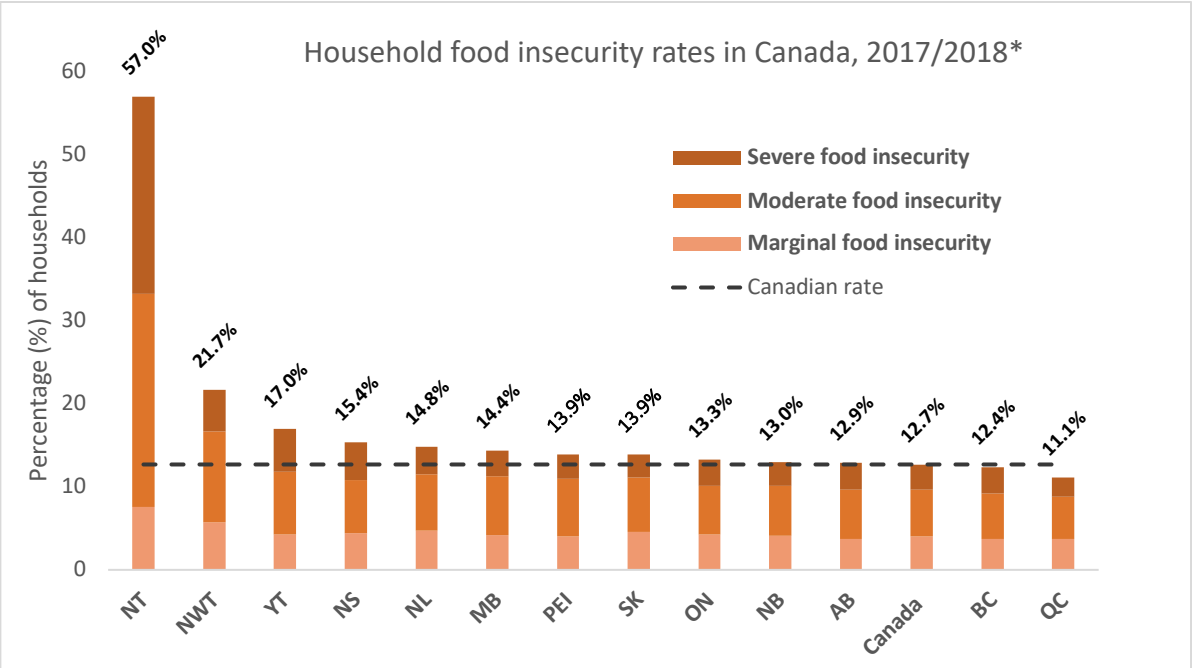

*Figure 2.1 Household food insecurity rates in Canada by province and territory (Statistics Canada, 2020a). *Statistics Canada estimates are based on combined data from 2017 and 2018 for higher precision. Severe food insecurity - members of a household may miss meals, reduce how much food they eat, and/or go days without food; moderate food insecurity - they may compromise the quality or quantity of their food, marginal food insecurity - they worry about running out of food and/or limit the variety of foods they choose (Voices for Food Security in Nova Scotia, 2017, p.8).*

Public sustainability policies often fail to adequately plan for food security, a necessary element of comprehensive plans (Evans-Cowley, 2011). Canada still lacks a national food policy, though $134M has been earmarked in the federal 2019 budget for one (Government of Canada, 2020b). Compared to other OECD countries, Canada exercises relatively little redistributive power as a result of cuts to federal health and social transfers in the 1990s, including an overhaul to the country's unemployment system (Riches & Tarasuk, 2014; Riches, 1999). Addressing food insecurity has since become the task of charitable and non-profit food organizations with public policy taking a backseat role (Chapman & Perkins, 2019). Indeed, Canada is criticized as failing to uphold its 1976 commitment to provide its citizens the right to adequate food, including ensuring equitable distribution of food (OHCHR, 2012; Riches & Tarasuk, 2014). This especially rings true among Indigenous people and northern communities who face the highest rates of food insecurity in Canada (Statistics Canada 2020a). Food system planning is also sorely lacking from regional planning strategies, which need to account for both the local and global dynamics of food security (Evans-Crowley, 2011).

While there are local and grassroot initiatives in NS, the province also lacks a comprehensive food policy (Scott & Macleod, 2007; 2011). However, all communities need to plan for food; along with accounting for natural disasters, regional planning strategies must consider both foodscapes (points of production) and food destinations (points of consumption), including direct markets like FMs (Evans-Crowley, 2011; Martin & Horst, 2017). Williams and colleagues (2006) identified the need to boost local food commerce in NS in the following ways: 1) increase producer capacity; 2) improve product variety and value; and 3) develop alternatives to conventional grocery stores. In Canada, five grocery store chains account for approximately 80% of all retail food sales (Zafiriou, 2005). These sales are not being captured by Nova Scotian farmers or communities. For reasons relating to price, quantity and quality standards, local food is not widely available in NS grocery store outlets (see Noseworthy, 2013, for a review on local food in NS grocery stores). It is clear that food banks and other food charities are only short-term relief strategies and that addressing food insecurity requires long-term systematic changes in the form of robust public policy and welfare interventions from government at all levels in Canada (Tarasuk, 2017; Tarasuk et al., 2016; Williams et al., 2006).

2.4 Food System Re-localization in Theory and Practice

Our increasingly commoditized, global food system is currently unsustainable. The dominant agricultural model causes a host of externalities to the environment that go captured in the price of food from eutrophication of water bodies from industrial fertilizer runoff to loss of genetic diversity form large-scale monocropping. Furthermore, agriculture is estimated to account for approximately 19-29% of global greenhouse gases (GHGs) (Leventon & Laudan, 2017; Vermeulen, Campbell, & Ingram, 2012). Food waste is a serious issue in high-income countries particularly in Canada where 58% of all food produced is wasted (Nikkel, 2019). International food supply chains are also vulnerable to global disasters that affect trade and transportation infrastructure (Falconer, 2020; Killawee, 2020). These impacts are escalating as a result of climate change impacts, loss of arable land, population growth, and changing consumption patterns (Vittersø et al., 2019). Climate change poses a serious threat to future food supplies through decreased crop yield, volatile food prices, increases in pests and diseases, and extreme weather events (FAO, 2020c; Martin & Horst, 2017). Rural farmers will be – and in

many ways, already are – particularly affected by climate change (FAO, 2020c). The unsustainability of our highly centralized food system has revitalized interest in growing, purchasing and supporting local food beginning in the 1960s (Stephenson, 2008; Pyle, 1971).

This research builds from theories behind the local food movement spearheaded by the works of Dahlberg (1993), DeLind (2002), Dupuis and Goodman (2005). Dahlberg (1993) established the guiding principles of regenerative food systems as equity, ecology, and ethics and that, akin to sustainability, a regenerative food system more closely resembles a process than an end-goal. The fluid nature of local makes it as hard to conceptualize and define as sustainability or SD (Noseworthy, 2013). Regenerative agriculture should be value-oriented and place-based (tied to locale) as well as dynamically connected to politics, ecology, culture and history (DeLind & Bigden, 2008; DuPuis, & Goodman, 2005; Noll, 2014). However, North American culture is seemingly at odds with food system re-localization; contrary to Europe, culture is defined not by locality or family ties but by individuality and place-free movement i.e. displacement. DeLind and Bigden (2008) find there is an internal struggle in reconciling displacement with re-localization efforts in the U.S. and Canada. While localism has the potential to manifest spaces for civic engagement and agriculture, the authors contend that local food efforts must occur within the context of a larger cultural shift in North America (DeLind & Bigden, 2008). Otherwise, they run the risk of becoming local iterations of the capitalism-based, global political economy, reproducing systems of oppression, wealth disparity, and ecological harm (Goodman, Dupuis & Goodman, 2012).

LFNs and FMs exist within a constantly shifting network of relationships where groups of individuals start to act as if they were a single unit. This phenomenon is described by actor network theory, elaborated by Callon (1984), Law (1994), and Latour (1992) beginning in the 1980s. Networks are, at their simplest, redistributed actions that give rise to an interdependent web of actors where a seemingly single actor comes to rely on a host of other actors all carrying out their own actions (Latour, 2011). As a result, networks can start to act as if they were a single entity instead of a series of actors (Bercherki, 2017; Callon, 1984). DeLind (2011) and Dahlberg (1993) posit that LFNs are “built upon a web of interconnections between different levels of society” and, recognizing that there is more flexibility at the grassroots level than the

global political level, “as consumers and/or producers, we are charged with recognizing our place in the larger ecosystem, restoring that ecosystem, and fairly distributing goods such as resources and power” (Noll, 2014, p. 217).

2.4.1 Local Food Efforts in Nova Scotia, Canada

There has been a resurgence of FMs across Canada and Nova Scotia since the 1970s as a community hub for local food, art and other wares. There has also been growth in agritourism spurred by Nova Scotia’s wineries, food festivals, U-picks, and FMs (Colton & Bissix, 2005; FMNS, 2019a; 2019b). NS now has the most FMs per capita in Canada with over 50 markets, approximately 75% of which are members of the Farmers Markets of Nova Scotia Cooperative (FMNS), which was formed in 2004 to grow, strengthen, and unite the FM sector in NS (FMNS, 2019b). The province has a long history of agriculture and, while smaller farms still dominate today, only 23.6% of farms in Nova Scotia reported selling through direct markets in 2015 (Statistics Canada, 2018).

Despite the resurgence of FMs and other direct markets in NS, consumption of domestically produced food remains relatively low and has actually declined in recent years. This is mainly due to competition with low cost imports, a stagnant economy, and a small population spread out over many rural areas (ACT for CFS, 2014; the Commission, 2014). While it is near impossible to know exactly how much of the food Nova Scotians consume is produced in the province, we do know that we have yet to meet the provincial goal of 20% local food consumption by 2020 (Noseworthy 2013). Furthermore, Scott and MacLeod (2010) found that an increasingly smaller share of food dollars – the total annual household expenditure on food items – is returning to farmers in the province. In 1997, farmers in NS captured approximately 17.1% of the food dollar, in 2008, this share was down to 13.2%. Using the same calculations as Scott and MacLeod, these estimates were updated using current data on household expenditures and farm cash receipts (see Appendix A for the calculations). As illustrated in Figure 2.2, the share of the food dollar returning to farmers in the province continued on a downward trajectory, reaching 11.5% in 2017.

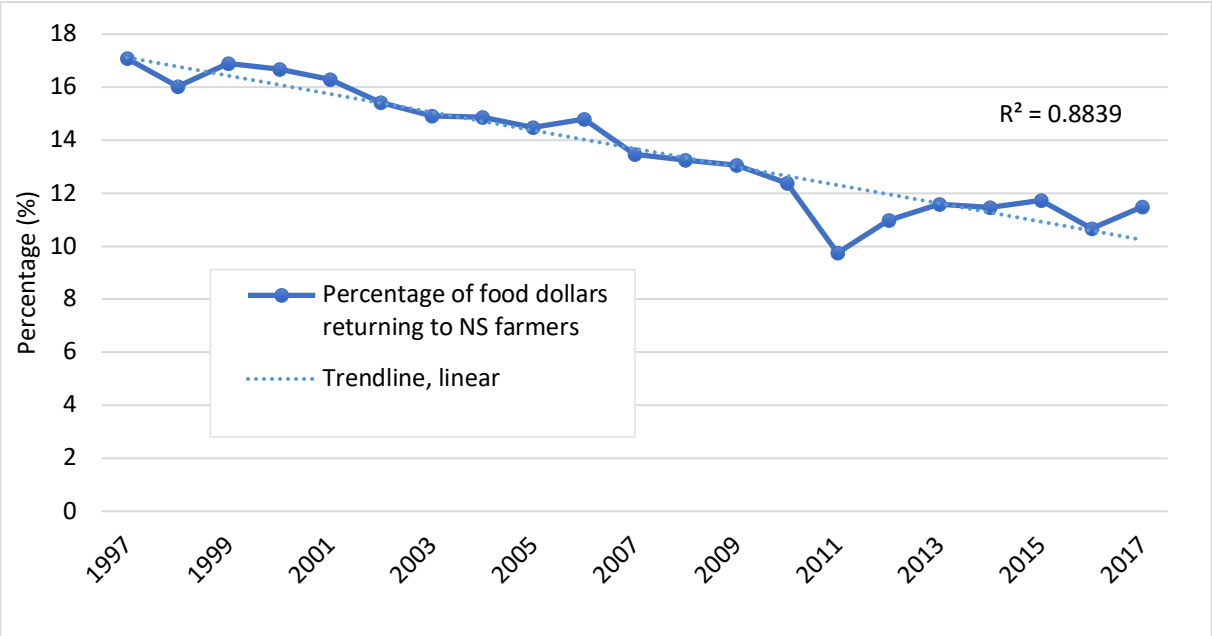

Figure 2.2 Percentage of food dollars returning to farmers in Nova Scotia (estimates found using the methodology developed by Scott and Macleod, 2010 and data from Statistics Canada, 2020d; 2020f; 2012-2018).

There is nothing inherently problematic with importing and exporting food, there will always be limitations on the amount and variety of food that can be produced in Nova Scotia. For example, Stafford (2017) showed that it would take a land area larger than the size of NS to meet the nutrition needs of just the city of Halifax under current production methods and consumption patterns. Nevertheless, Scott and MacLeod (2010) concluded that NS could be producing and consuming significantly more of its own food. Indeed, much of what gets imported is already widely produced in the province e.g. apples, beef and seafood, leading to redundant trade (ACT for CFS, 2014; Scott & MacLeod, 2010). Moreover, the amount of productive farmland has dropped from 493 thousand hectares in 1976 to 371 thousand in 2016 while the average farm size has risen from 91 hectares to 106 due to the agglomeration of mainly mid-sized farms (see Figure 2.3) (Statistics Canada, 2020h). Furthermore, the total number of farms in NS decreased 10.9% from 2011 to 2016, a greater decline than the national average of 5.9% (Statistics Canada, 2018). These data show that there is much potential to decrease Nova Scotia's reliance on imports by strengthening domestic food markets.

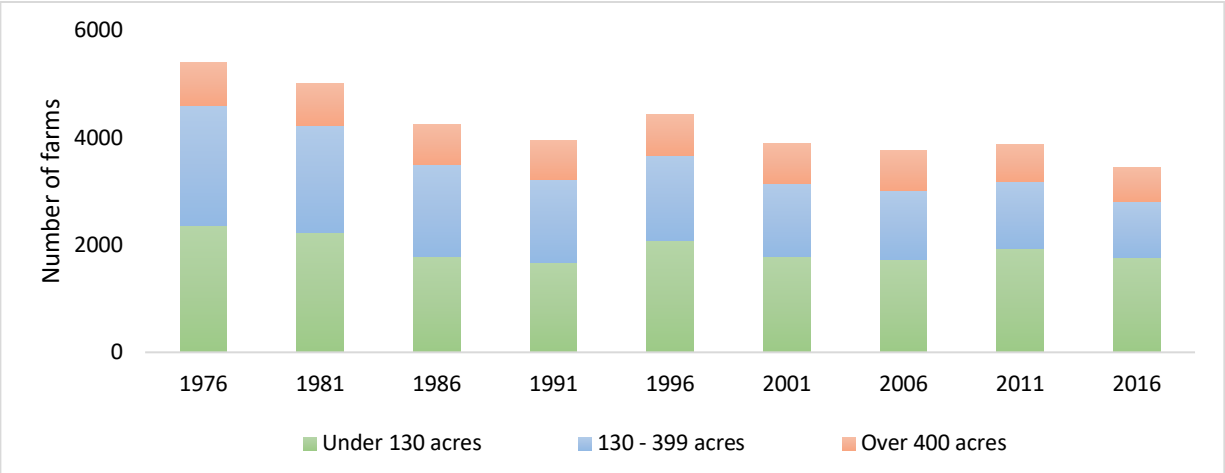

Figure 2.3 Total number of farms and proportion by acreage in Nova Scotia from 1976 to 2016 (Statistics Canada, 2020h).

2.5 Review of Research on Farmers Markets

In North America, FMs re-emerged with the institutionalization of flea markets and, even in the 1970s, they garnered strong public support despite consumers having a growing number of other options to choose from (Pyle, 1971). However, FMs are still on the peripheral of food retail in Canada and Nova Scotia (Robert et al., 2008). They form part of the informal economy, meaning they exist outside of the dominant economic model (Ruzek, 2015). There is thought to be two dimensions to FMs: the external or policy sphere and the internal or management sphere (Stephenson, 2008). FMs are closely associated with small farmers and farming; a colloquial saying in NS states that *there can be no farmers markets without farmers.*

Prominent research suggests that local food networks and informal sector including FMs are more in line with the principles of SD (O'Kane & Wijaya, 2015; Ruzeck, 2015; Vail 2014). Mazzocchi and Marino (2018) created a model to measure the sustainability of a conventional supply chain and compared it to that of an alternative supply chain in Bologna, Italy. They found that the alternative performed better in all indicators for environmental, social, and economic sustainability. Researchers argue that a greater degree of embeddedness exists among FMs due to a higher propensity for social interactions (Feenstra 1997; Gasteyer, Hultine, Cooperband, & Curry, 2008; Kunstler, 1994). FMs foster connections between the people and the natural environment by holding open air markets and through FM policies that mandate locally sourced products (Stephenson, 2008). Recent research finds that the sustainability of food systems greatly depends on the connection and co-creation of values between producers and

consumers (DesRivières, Chuenpagdee, & Mather, 2017; Harrison & Loring, 2016). A positive feedback loop of trust is formed between these actors that is mutually beneficial (Lowitt, 2009; Mazzocchi & Marino, 2018). According to actor network theory, such reciprocity can catalyze structural change such that the social begins to influence the technical dimension (Latour, 1992; Law, 1992). Such relationships, if they are nurtured, can positively affect consumer motivations and purchasing decisions, influence producer production practices and reinforce sustainable farming in policy (Conner, Colasanti, Ross, & Smalley, 2010; Foti et al., 2019; Tsai, Lee, Hsieh, & Somsong, 2019). Reviews of the field of research consistently call for more robust, empirical data on FMs in order to have a larger impact on public policy (Stephenson, 2008). However, despite a lack in empirical research, the general consensus is that there is potential to enhance local food networks, particularly through fostering relationships between and among different levels of actors to produce favorable outcomes (Cicatiello, 2020; Hedberg and Zimmerer, 2020; Tsai et al., 2019).

2.5.1 The Environmental Sustainability of Farmers Markets

There is limited scientific consensus around the environmental benefits of local food, LFNs and FMs. In terms of buying local as an environmentally beneficial eating strategy, Davies (2019) found inconsistent evidence to support the claim. While decreased food mileage is touted as the main environmental benefit of local food, GHG emissions from transportation are not proportional to the distance food travels (Davies, 2019; Desrochers & Shimzu, 2012). Mass-produced, imported food carries relatively lower attendant GHGs than local food that is produced and distributed in smaller quantities (Reynolds, Buckley, Weinstein, & Boland, 2017; Wallgren, 2006). For example, when farmers individually truck in relatively small quantities from rural Nova Scotia to an FM in Halifax, the attendant GHGs per pound of food will likely be higher than that of the same item imported by freight container. However, there is more at play than embedded GHGs in food. For one, much of the infrastructure on which trade in Canada relies on, such as the construction and maintenance of ports and highways, is subsidized by taxpayers and is not reflected in the price of food (Scott & MacLeod, 2010). For another, there tends to be less food packaging and storage requirements for locally produced food as it can be picked and sold when ripe, which can also result in higher quality or “fresher” products (Benis &

Ferrão, 2017). FMs act as a hub for organic and less-intensively grown agricultural products (Feenstra, 1997; Gillespie et al., 2007). FMs also often engage in waste reduction and zero-waste initiatives (e.g. Portland FM, 2010; Withrow Park FM, 2018; Wolfville FM, 2019). The environmental impact of local food and FM is debatable, yet, there are many ways LFNs can limit their ecological externalities.

Other indirect environmental benefits arise from the socio-ecological embeddedness of FMs. When food is sold through direct marketing models such as FMs, CSAs, and farm stands, there is higher potential for interpersonal connection between producers and consumers (O'Kane & Wijaya, 2015; Turner & Hope, 2014; Tsai et al., 2019). As discussed in Section 1.1.2, this can influence real outcomes in food systems (DesRivières et al., 2017; Harrison & Loring, 2016; Latour, 1992; Law, 1992). Hedberg and Zimmerer (2020) demonstrated the connection between local social relations and environmental practices on vendors' farms at an FM in New York City, concluding that the socio-ecological embeddedness of FMs can foster more sustainable food systems. Other studies find that small-scale farmers who sell through direct markets tend see themselves as stewards of the land, holding moral values like care for environment, stewardship of their land and dedication to community building (Cone & Myhre, 2000; O'Kane & Wijaya, 2015; Sage, 2003). As such, there may be greater propensity for environmentally sustainable farming practices e.g. usage of organic or animal manures, crop rotation, low tillage, agroforestry practices, and integrated pest management systems (Marino et al., 2013; Tavernier & Tolomeo, 2004).

Conversely, FMs are often critiqued as being overly focused on environmental issues, revolving around food quality and ecological sustainability, and lacking social and economic considerations (Agyeman, 2013; Watts, Ilbery, & Maye, 2005). This is often found to be the case within FMs with predominantly white, middle-class participants (Alkon, 2008; Alkon & McCullen, 2011). It indicates a divergent developmental pathway in that the network of FMs actors start to perpetuate an internal goal that differs from its original intent, which is to empower local people by providing a hub for local food at fair prices, not address ecological problems (Callon, 1984; Latour, 2011; Law, 1992). Such a divergence calls into question the

contributions of FMs towards a more just and inclusive economy (Agyeman, 2005; 2013; DeLind, 2011).

2.5.2 The Economic Sustainability of Farmers Markets

FMs have been found to play an important role in supporting smaller scale agriculture and farmers (De Bernardi, Bertello, & Venuti, 2019; O'Kane & Wijaya, 2015; Stephenson, 2008). Selling through direct markets garners higher profit margin for producers as they can sell directly to consumers for a higher price than what they would get from a wholesaler or other middle level buyer (Gantla & Lev, 2015; Brown & Miller, 2008). These cost savings have been shown to improve long-term farm viability and profitability (De Bernardi et al., 2019). Canada's FM sector is found to play a key role in marketing local agricultural products and generating farm incomes (Experience Renewal Solutions, 2009). Vendors are also able to participate in the decision-making process at FMs and exert greater control over the products they offer. For example, they can sell visually imperfect products at FMs (B and C grade products) while wholesalers and grocery chains will have specific standards for food aesthetics (Noseworthy, 2013). In a systematic review by Brown and Miller on the economic impacts of FMs, each study found a financial benefit to FMs even when considering the loss of conventional sales (2008).

However, the economic success of FMs can largely depend on their management structure. There are several different management structures among FMs: vendor-led, community-led, and managed by a sub-entity of an organization (Gantla & Lev, 2015). Producer-led markets, while strongly connected to vendors, have been found to make fewer sales on average than FMs managed by a sub-entity of an organization with experience in marketing and advertising (Gantla & Lev, 2015). Community-led markets elicit stronger ties with the public but may not connect to the needs and wants of its producers in the same way (Gantla & Lev, 2015; Hofmann, Dennis, & Marshall, 2008). In essence, there are benefits and drawbacks to each management structure.

FMs boost economic activity in their communities by revitalizing public spaces, creating job opportunities, and increasing the viability of surrounding businesses (Gantla & Lev, 2015). FMs are business incubators insofar as they "increase the density of local food networks and relations" (Gillespie et al. 2007, p. 75). A study on the impact of the local food in the

Sacramento region found that for every $1 million in products sold through direct markets, approximately 32 local jobs were created whereas only 10.5 were created from non-direct markets (Hardesty et al., 2016). Moreover, revenues from FM transactions are retained within the economic region and can be reinvested to benefit local communities (O'Kane & Wijaya, 2015). FMs can also work synergistically and be of mutual benefit to other retail shops in the area; based on customer surveys in the US, between one and two thirds of all FM visitors shop at nearby locations during the same market trip (Young et al., 2011). There is also opportunity for FM partners and sponsors to be found through these connections (Young et al., 2011). Contributing to the local economy is also a motivational factor among FM customers – stakeholders see FMs as a democratic event where people can vote with their dollar (though admittedly not all votes are created equal given existing social inequalities of LFNs) (DeLind, 2011; Fang et al., 2013; Pollan, 2006). LFNs are particularly effective at spurring community development – the symbolism of food holds meaning for everybody and thus has innate power to bring communities together (Christensen, & Phillips, 2016). Altogether, FMs contribute in numerous ways to the development and economic sustainability of local food systems.

The literature identifies FMs as having high potential within the agritourism sector, which includes farm tours/events/accommodations, FMs, U-picks, wineries, agriculture-oriented festival and volunteering through Worldwide Opportunities on Organic Farms (WOOFing) (Jolliffe, 2008; Silkes, 2012). In 2005, agritourism in NS was still an emergent industry and issues inhibiting sector growth included lack of effective marketing and government support, gaps in product development, and successful partnerships between the private sector and producers of agriproducts (Colton & Bissix, 2005). Since then, the province has ramped up its buy-local efforts, launching the Select Nova Scotia marketing campaign in 2007, which has been fairly successful in increasing awareness of local goods among Nova Scotians (Knight, 2013). However, in 2020, Select Nova Scotia was replaced by, and the funding directed towards, Taste Nova Scotia, which campaigns within NS but focuses largely on tourism, targeting international markets such as in the U.S. and Asia to showcase Nova Scotia's culinary experiences and products (the Commission, 2014; Taste Nova Scotia, 2020; Walton, 2020). FMs often struggle to serve as both meaningful community spaces and tourist destinations, a

tension which manifests at the interface between producers and consumers (Thompson, 2020b). Diversifying FM marketing and vendor composition can extend their reach beyond local populations (the Commission, 2014); however, FMs must strike a balance between maintaining the local, traditional meaning of FMs to their communities – their primary function – and serving as tourist destinations – a secondary function (Thompson, 2020b).

2.5.3 The Social Sustainability of Farmers Markets

Social sustainability is arguably the most researched pillar of FMs (Pothukuchi, 2012; Tsai et al., 2019; Vittersø et al., 2019). Amid rising individualism and social isolation in the digital age, FMs can reconnect people to their communities as well as to the land where their food is grown, going beyond spaces of ethical consumption and care for environment (Turner & Hope, 2014). More and more, consumers recognize the need for greater equity between actors within food systems with morality playing a larger role in our food choices (De Boer, Hoogland, & Boersema, 2007). FMs engage in the moral economy by reconnecting people to nature and their food and by relinquishing market control to producers. As open public spaces, FMs can provide a forum for community gatherings and knowledge transfer (Gantla & Lev, 2015). Research consistently identifies the terms of engagement among FM participants as bringing back sense of place, trust and community to their food choices (O'Kane and Wijaya, 2015; Lowitt, 2009; Vail, 2014). Wittman, Beckie, and Hergesheimer (2012) identified FMs as the link between the local food system and the social (i.e. community-embedded) economy in Western Canada. Lowitt (2009) found that producer-consumer relationships constituted "the heart" of markets in NS with FM purchasing behavior the result of social embeddedness between participants. FMs can act as nutrition interventions by offering seasonal fruit and vegetables, engaging in food literacy initiatives, cooking demonstrations and other educational programming (Fang et al., 2013). At their very least, FMs educate consumers on the seasonal and geographic limitations of food availability and engage the senses, making for positive shopping experiences (Brown & Miller, 2008; Turner & Hope, 2014). Altogether, the research is optimistic that FM networks can play a larger role in strengthening the social fabric of neighborhoods, reconnecting neighbors to a sense of community (Wittman et al., 2012)

While they have been found to produce tangible benefits for producers and community members, FMs in higher income societies are largely maintained as spaces for white, middle class, nuclear families (Pilgeram, 2012). A precursor for urban gentrification, FMs often manifest as exclusionary and discriminatory spaces for people of color and of low-income, who already face limited access to local food and higher rates of food insecurity (Agyeman, 2013; Freedman et al., 2016; DeLind, 2002; DeLind & Bigden, 2008). Whiteness and privilege pervade among many FMs in North America, maintained through the homogeneity of clientele, vendors, advocates and FM institutional foundations that, while perhaps unintentionally, give rise to unwelcoming and sometimes racist politics (Alkon & McCullen, 2011; Pilgeram, 2012). This has led to an "agrarian farmer imaginary" among FM advocates through the fetishization of a settler-colonial version of agriculture and the whitewashing of farm workers – further marginalizing migrant workers – as well as what the authors called a "community imaginary", a predominantly white affluent consumerism masked by a false sense of togetherness (Alkon & McCullen, 2011). Indeed, terms of engagement and motivations can vary drastically between FMs depending on participant values. In their comparison of two FMs in the San Francisco Bay area, Alkon (2008) found the one located in an affluent, largely Caucasian neighborhood to be primarily motivated by ecological sustainability and a desire to connect people and nature while the other, located in a low-income area with predominately African American participants, was primarily motivated by social justice efforts. However, both FMs emphasized social and environmental equity to some extent. The author concluded that FMs are fertile ground for both ecological and social justice efforts to take root alongside one another (Alkon, 2008). FMs have a responsibility towards their communities to create more inclusive, just spaces and economies, which was the original intent of the local food movement (Agyeman, 2005; 2013; DeLind, 2011; Kulick, 2018). As part of the movement, FMs need to be cognizant of the culture they foster, the social and ecological issues they perpetuate, and constantly challenge normative societal assumptions around local food.

2.5.4 The Potential of Farmers Markets to Improve Food Access and Security

There exists a widespread assumption that local food is inherently more expensive than conventionally produced and distributed food. However, several studies have found prices at

FMs to be more often competitive with conventional food prices than more expensive (Lülfs-Baden, Spiller, Zühlsdorf, & Mellin; 2008; Ruelas, Iverson, Kiekel, & Peters; 2012). From a random sample of grocery stores in Nova Scotia, Noseworthy (2013) found the local food option to be the least costly option 75% of the time. Millichamp and Gallegos (2012) found no significant difference between cost or quality of food at FMs compared to supermarkets in Queensland, Australia. Other studies estimate prices at FMs to be 10-28% less than among grocery stores in the immediate area (Flournoy, 2011; Young et. al, 2011). Indeed, prices at FMs are often found to be fair and of good value, in part due to in-season products (O'Kane & Wijaya, 2015; Lülfs-Baden et al., 2008). Altogether, there are several widely held misperceptions about local food and FMs that are not tested in daily life, both positive and negative (Lowitt, 2009).

Nevertheless, locally produced food cannot always compete with industrial, subsidized food produced in larger quantities. As shown in section 2.4.1, NS farmers have been receiving a smaller and smaller share of the food dollar since the 1990s. Many of these farmers struggle to support themselves and their operations; in the 2016 Agriculture Census, 60% reported a net farm income under $50,000 and 44.7% supplemented with off-farm work (Statistics Canada, 2018; 2020g). Local food advocates highlight that low-income is the strongest predictor of food insecurity in that there is a real difference between affordable food and being able to afford healthy, nutritious food (Scott & MacLeod, 2010; Tarasuk, 2017; Tarasuk, Mitchell, & Dachner, 2016). Researchers argue that local food requires intentional protections and interventions from government before it can scale up to become more of a public norm; there are many opportunities to increase local food accessibility by subsidizing FM purchases through state and federal food assistance programs (Hecht et al., 2019; Young et al., 2011).

There is a need to improve the reach and adoption of FMs among low-income populations (Freedman et al., 2016; Savoie-Roskos, Durward, Jeweks, & LeBlanc, 2016). The role of FMs as nutrition interventions can be readily combined with food assistance programs to benefit low-income communities and household food security (Fang et al., 2013; Hecht et al., 2019; Leone at al., 2019; Young at al., 2011). Low-income and food insecure households have less access to healthy food options and consume relatively less fruits and vegetables (F/V) as a

result (Statistics Canada, 2019). One of the most widespread FM incentive programs in the U.S. is through the Supplemental Nutrition Assistance Program (SNAP) whereby participating FMs match every SNAP dollar that program participants spend at FMs, distributing vouchers to participants to redeem (Garner et al., 2020; Young et al., 2011). An FM incentive program in Utah, which matched SNAP benefits up to $20, resulted in less food insecurity-related behaviors and a significant increase in F/V intake among participants (Savoie-Roskos et al., 2016). A follow-up study found that overall participant satisfaction was high, owing to increased affordability of high-quality F/V (Garner et al., 2020). SNAP-FM incentive programs have also been found to be effective nutrition interventions among specific populations such as women with infants and children (Ball, 2014; Ball, Andrews, Gruber, & Dharod, 2019) and hypertension patients (Schlosser, 2019). Leone at al. (2019) tested the potential of a mobile market dubbed the "veggie van" in an underserviced community in North Carolina, offering low-cost produce while removing transportation barriers. The Mobile Food Market brings affordable, culturally appropriate food to underserviced neighbourhoods in Halifax and offers home delivery for bulk orders (Mobile Food Market, n.d.). Relocating Flint, Michigan's FM to an underserviced neighborhood in an accessible location resulted in a more diverse market clientele and increased F/V access in the area (Sadler, 2016). The FM incentive program in NS, Nourishing Communities Food Coupons Program, piloted in 2019, provided $42,000 worth of government funding to low-income families and individuals via community organizations (e.g. food banks) redeemable at one of six FMs spread across the province (Acadia Entrepreneurship Centre [AEC], 2020). Participants rated the program 9.4 out of 10 and redeemed 84% of the benefits on agriproducts. This speaks to participant need as well as the importance of centering the program and FMs around food (AEC, 2020).

FM incentive programs are not seamless and can be continuously improved. The most frequently cited barriers among participants include inconvenient operational hours and location, and seasonal limitations on product variety – FMs are not a "one stop shop" (Leone et al., 2019; Schlosser et al., 2019; Young et al., 2011). Other issues for participants include lack of time required to prepare food and lack of familiarity with ingredients (Leone et al., 2019). In one program, participants reported feeling a stigma when using the vouchers at FMs (Garner et

al., 2020). On the program management side, key barriers include a lack of buy-in from vendors, the need for digitized, empirical data collection, funding uncertainties and lack of program coordination and information resulting in confusion among participants (Garner et al., 2020; Hecht et. al, 2019). Program facilitators are needed to welcome and communicate with participants, provide program information, and work with managers, vendors and customers to collaboratively problem solve (Garner et al., 2020). Economically vulnerable participants also require support beyond FM seasonal vouchers, e.g. transportation assistance, program expansion to other F/V outlets such as local grocery stores to ensure year-round access to affordable healthy foods (Schlosser et al., 2019). There is also a need to build purchasing and food preparation skills among participants (Leone et al., 2019). Furthermore, mobile markets models must ensure they are serving the target population to be effective (Deller et al., 2017). To remove the stigma of using market vouchers, FMs can distribute the same alternative currency to other customers using wireless terminals that accept SNAP access cards but also process debit/credit transactions. This can also be accomplished online or manually at FMs (Young et al., 2011). Doing so has the added benefit of expanding payment options for customers without putting the onus on vendors to accept debit or credit cards. The province-wide coupon program in NS uses this non-discriminatory token system (FMNS, 2020b).

Beyond incentive programs, FMs have been found to decrease food insecure behaviors when located in communities who lack access to supermarkets, grocery stores, and other fresh food outlets, as Young et al. (2011) found in their study on FMs in Pennsylvania. Strategies to build successful FMs in underserviced, food insecure communities include (1) providing affordable prices, (2) stocking basic food necessities, (3) subsidizing FM purchases, and (4) being community-based with local partners who understand the community, physical and retail environments (Young et al., 2011). To be a viable enterprise, FMs must resolve tension between the need to be profitable and providing affordable food to communities, with the later taking precedence (DeLind, 2011). Akin to food charities and other local food initiatives, FMs build community food capacity but cannot address systemic food access issues (Williams et al, 2006). In their interviews with high-level FM stakeholders, Fang et al., (2013) concluded that:

> though politicians may seek a "silver bullet" solution, FM[s] are just one part of a comprehensive strategy to promote food access and economic revitalization in underserved neighborhoods (p. 39).

2.5.5 Literature Gap: Linking Farmers Markets and Sustainable Development in Nova Scotia

Researchers have begun to undercover the potential role of FMs in shaping a more socially, ecologically, and economically sustainable future. However, measuring their sustainability by how FMs connect to SD-oriented policies and targets is still an emergent branch research (Vail, 2014; Llieva, 2017). Two studies measure the sustainability of FMs against SD-oriented policy objectives, one directly and one indirectly. Llieva (2017) found that the UN's SDGs could be effectively localized by Urban Food System Strategies (UFSS), a relatively new policy tool, which includes, by extension, FMs and other LFN initiatives. However, the study evaluates city-level policy and does not touch on how local FMs contribute or connect to the SDGs. Another study by Vail (2014) out of Czech Republic explored whether the Brno city FM connects to sustainability policies at the city and state level, as well how FM activities contribute to regional sustainability as a whole. Using observational data, surveys and interviews with vendors, along with a content analysis of SD-oriented policy, Vail shows that the city's historical FM promotes the sustainability of the region through a myriad of ways – as a primary vendor income source, through increasing public access to food and by fostering healthy urban lifestyles. Vail also found the city lacked a comprehensive sustainability plan; its SD priorities lacked consideration for environmental issues, overemphasizing (physically) healthy urban living, e.g. recreation, traffic safety, and active aging. Vail makes recommendations for government interventions and policy improvements to enhance the function of the FM where there has been no active state involvement previously (Vail, 2014).

It is unknown how market activities connect/align with official sustainability policies in Nova Scotia. Previous research unpacks participant terms of engagement among FMs in the province (Lowitt, 2009), the need for local public procurement policies (Scott & MacLeod, 2007), and the trajectory of domestic food consumption in the province (Scott & MacLeod, 2010). Ongoing research examines the social and economic mobilities as well as the externalities of Nova Scotia's food system (Bryan, Fitting, & Foster, 2020). Given the prevalence

and long-standing tradition of FMs in NS, as well as its identified potential to increase local food consumption and production, the province presents a promising study area to examine the impact of FMs – the social, economic, and environmental realities and the viability to enhance FMs as local food access points. Further, it is also unspecified how or whether NS policies reflect or support FM activities. This research will fill a gap in the literature within the context of Nova Scotia and determine the main challenges for the FM sector to advance provincial goals and grow the impact of the sector. This study will generate new knowledge connecting the activities of FMs to high-level policy objectives for Nova Scotia, exploring the part they play in advancing sustainability through the lens of SD policy.

2.6 Summary

This literature review presented theories that led to the evolution of SD, as well as those underpinning the local food movement. It provided an overview of the international governance understanding of SD and sub-state efforts to localize global priorities. This was followed by a brief introduction to food insecurity, food policy and food re-localization efforts in Nova Scotia, Canada. The available information speaks to Nova Scotia's potential to decrease reliance on imports and improve local food security by enhancing local food production and consumption in the province, bringing the province closer to realizing EGSPA and Ivany Report goals. Scholarship on FMs was analyzed, resulting in the following conclusions:

- The environmental benefits of FMs are largely assumed and more robust data is needed in this area; however, the socio-ecological embeddedness of FMs can be harnessed to produce environmentally sustainable outcomes.
- FMs contribute to the development and economic sustainability of local food systems by concentrating economic activity. FMs also benefit the start-up and agritourism economy; however, tourism efforts must be calibrated by keeping to the traditional functioning of FMs and putting the needs of community members first.
- Public preconceptions and assumptions exist surrounding local food/FM affordability and inclusivity that must be challenged. FMs and other local food initiatives must continuously strive for more socially just economies and communities.

- There is much potential to increase the accessibility of local food through food assistance programs that subsidize FM purchases; however, these programs should be continuously improved for the mutual benefit of participants and FMs.

There is potential to expand local food initiatives and build successful and sustainable FMs, particularly by fostering relationships between producers and consumers. However, it is not well understood how FMs localize sustainability targets, connect to high-level policies as well as how policies reinforce the activities of FMs. Nova Scotia presents a promising area to study the connections between SD policy and FM activities given the growth of the sector, recent changes to the policy, and potential to grow domestic food markets in the province.

Chapter 3. Methodology and Results Summary

3.1 Part A. Alignments between Farmers Market Statements and Nova Scotia Policies

3.1.1 Methods: Content Analysis

The methodology used to respond to Research Question 1 is modeled after Shen (2019) in their assessment of the sustainability of cooperatives in Nova Scotia according to the alignment demonstrated by their mission statements with SDG targets. To answer Research Question 1, FM public statements were used to determine how FM activities align with three SD-oriented policy documents in Nova Scotia. The policies were chosen based on the extent to which they guide decision-making in the province on SD. In this regard, thematic content analysis was carried out for: 1) EGSPA, specifically the 12 of 25 goals that have yet to be achieved (contained in Section 4(2)) (EGSPA, 2007); 2) the Ivany Report and the 18 of the 19 goals that have yet to be achieved (contained in pages 47-50) (The Commission, 2014); and 3) SDGA, and the focus areas for its future goals that have yet to be determined (contained in Section 6) (SDGA, 2019). The use of the entirety of these three documents was unnecessary given the broad focus of the two Acts and the sector-specific nature of the Ivany Report. The inclusion of those goals already achieved was also irrelevant to the analyses. Each policy was imported as a PDF into the qualitative analysis software, NVivo 12 and coded for specific themes using a constant comparative approach (Gibbs, 2007). When all three documents had been reviewed and all coding categories exhausted, sub-codes were grouped into parent nodes to produce a deductive coding scheme to apply to publicly available statements from FMs (see Appendix B for the coding scheme) (Gibbs, 2007; Strauss & Corbin, 1998).

Mission statements are widely used by organizations to define purpose, acting, in theory, as a reference to motivate and focus the trajectory of an organization's activities (Ireland & Hirc, 1992; Rigby & Bilodeau, 2011). Indeed, analyzing mission statements has become a legitimate method to assess organizational performance – including sustainability performance (Baumgartner, 2014; Ferreira & Otley, 2009). However, the evidence for the efficacy of these performance indicators remains mixed; their connection with organizational outcomes is still a "black box" for researchers (Desmidt, Prinzie, & Decramer, 2011; Toh & Koon, 2017). Toh and Koon (2017) found that organizational alignment with mission statements

was primarily determined by leadership efficacy and prioritization of this alignment. Braun et al. (2012) found that it depended on why the statement was created (its purpose), how it was articulated and implemented (the process), what it contained (its substance), and how organizational members regarded it (perceived). Statements fail to capture the internal dynamic of a company if not adequately developed and declared (Collins & Porras, 1996; Desmidt & Prinzie, 2011). In any case, the use of mission statements in this work intends to follow an organizational cultural perspective within mission statement studies, one that is less concerned with evaluating statement efficacy/alignment (Toh & Koon, 2017). Rather, it looks to the statements themselves to provide context and meaning, recognizing them as an extension of the culture of the organizational as well as being able to shape its public image and identity (Babnik, Breznik, Dermol, & Širca, 2014; Klemm, Sanderson, & Luffman, 1991).

The official mission statements of FMs can be few and far between. This may be attributed to a lack of resources that would afford FMs the capacity to articulate their underlying purpose, beliefs or aspirations on a public platform. On the other hand, they are no more prevalent among established FMs in NS. For example, the Seaport Market, Nova Scotia's largest and longest running market, lacks an official, publicly available mission statement. Additionally, in place of a mission statements, FMs may be more likely to focus on the market's advertising and PR. While mission statements can form part of an FMs marketing strategy, advertisements are not mission statements in and of themselves (David & David, 2014). It is also difficult to determine the number of operating markets in Nova Scotia as their number can fluctuate from season to season and there can be many definitions as to what constitutes a FM (Stephenson, 2008; Personal Communication, FMNS Representative, January 30, 2020). According FMNS's FM registry, which is updated on a regular basis to account for new and permanently closed markets in NS, there were 59 operational FMs in the province as of May 2020. This internal list from FMNS was used to perform web-based searches for each of the 59 FMs for publicly available mission statements. Statements were either posted on FM websites directly or were contained in reports/documents accessible through FM websites, e.g. strategic market plans, vendor applications, or market rules and regulations. For the 46% of FMs without an operational website (n=27), mission statements could also be found on FM Facebook pages.

The following mission statement was found on the Greenwood Mall FM Facebook "about" page and included in the analysis:

> *"Our mission is to promote healthy living by eating, drinking and shopping local! We're also helping to grow the local economy by having a venue for farmers, chefs, wineries, local producers and artisans to have a place to sell healthy products!"*

Only nine (15%) of FMs in the FMNS registry have an official, publicly available mission statement, meaning declared as the mission/vision by the FM itself. For those lacking a mission statement, an unofficial public statement was used as a proxy and included in the analysis. These were substantially found to do the same thing as an official mission statement in that they were written by a market representative and spoke to the FM's core values, purpose, and/or underlying functioning. Evidently, these pubic statements had to go beyond advertising for the market. For example, the following statement did not qualify:

> *"Vendors with products they grow, make or bake, live music, BBQ and wagon rides held at Lismore Sheep Farm from Canada Day weekend until Labour Day weekend" (River John Sunday Market Facebook page).*

Whereas the following statement, also from a Facebook about page, was included in the analysis as it speaks to the market's purpose and underlying values:

> *"The Earltown Farmers' Market will support and enhance the community's economy by providing a vibrant market venue featuring the sale of a diverse selection of locally grown and produced food and quality artisanal crafts for residents and visitors" (Earltown FM Facebook page).*

Out of the 59 markets, 41 (69%) had qualifying statements. Of those, 28 were accessed through FM websites, 11 through FM Facebook pages, and 2 through parent website posts written by FM representatives. The 41 qualifying statements were then pasted into a Word document and imported into NVivo 12. The average statement length was 196 words but ranged from 36 to 513 words. The coding scheme that emerged from openly coding the provincial policies was applied to the FM statements. The intent was to find areas of alignment using a semi-deductive approach, developing new codes where necessary, which indicated divergences between FM activities and the three policies. The number of alignments with FM

statements was found for each of the 12 EGSPA goals, 18 Ivany goals, and the 6 focus areas of the SDGA. Regardless of how many textual interlinkages in each FM statement, each market was only counted once towards each goals/focus area though one FM statement could align with multiple goals/focus areas in each policy. As such, the maximum number of alignments for each goal/focus area was 41. See Appendix B, Supplemental Table 2, for how the alignments were found using the policy-derived, deductive coding structure. Conversely to Shen (2019), who carried out a more in-depth analysis, this study only considered direct alignments between FM activities and did not take into account the types or number of interlinkages between policy goals whereas Shen considered 4 different types of linkages between SDGs.

3.1.2 Summary of Results from Content Analysis

Overall, all 41 FMs studied align with at least one goal or focus area, as shown in Figure 3.1. Nonetheless, a strong alignment, meaning over 20 alignments or half of all statements, exists for only 6 policy goals/focus areas. There are 10 goals/focus areas with between 6 and 20 statement alignments (15-49% of statements), indicating moderate alignment. There are no alignments with 11 out of the 36 goals/focus areas and few alignments with 9, together, accounting for over half of all goals/focus areas.

Figure 3.1 shows that all market statements (n=41) align with Ivany Goal 16, EGSPA Goal T and Goal U, increasing consumption and production of local food. Following that, 30 (73.2%) FM statements align with EGSPA Goal S, growing the green economy, 27 (65.9%) align with Ivany Goal 19, increasing the province's fiscal health, and 22 (53.7%) align with SDGA Focus A, leadership in sustainable prosperity. There are sixteen (39.0%) alignments with policy goals linked to circular economy (SDGA Focus D), municipal stability (Ivany Goal 18) and decreasing the provincial disposal rate (EGSPA Goal O). Thirteen (31.7%) FM statements align with policy goals for tourism (Ivany Goal 14) and business start-ups (Ivany Goal 4) while 11 (26.8%) align with goals for building an inclusive economy (SDGA Focus E) and 10 (24.4%) with goals related to employment and immigration/migration (Ivany Goals 2, 3, 7). There are few alignments (1-5)[4] with export-related goals with only 5 (12.2%) statements aligning with Ivany Goals 5, 6 and

[4] Five represents the second quartile of the dataset, meaning 50% of all alignments were below five (includes zero alignments).

15. Four (9.8%) statements align with SDGA Focus F, conservation of natural assets and biodiversity, and 2 (4.9%) each with policy goals for clean and efficient energy and transportation (EGSPA Goal A, SDGA Focus B) and increasing venture capital (Ivany Goal 13). Only 1 (2.4%) statement suggested a linkage with post-secondary education and training (Ivany Goal 10), or youth employment (Ivany Goal 9). The analysis found no alignments between FM statements and policy goals related to reducing emissions (EGSPA Goals F, G, H, I), climate change action (SDGA Focus C), clean water (EGSPA Goals L, N), renewable energy (EGSPA Goal B), post-secondary research and development (Ivany Goals 11, 12), or employment of Indigenous and African Nova Scotians (Ivany Goal 8).

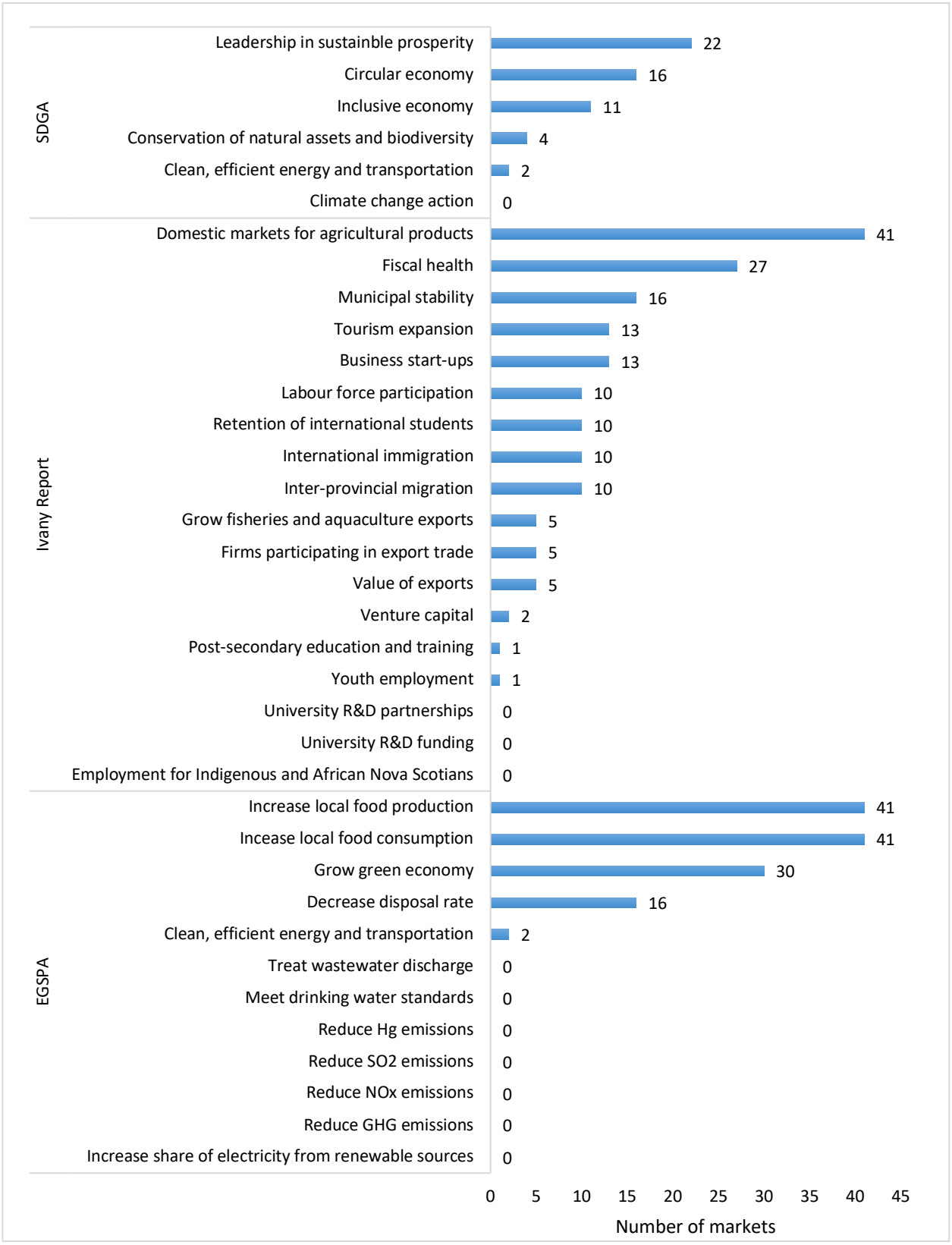

Figure 3.1 Market alignments with the EGSPA and Ivany Report goals and the focus areas for the SDGA goals.

3.2 Part B. Perceptions among Farmers Market Organizers

3.2.1 Methods: Interviews

To meet research objective two, semi-structured phone interviews were held with FM organizers including market managers, staff or FM board members in Nova Scotia. The original methodology of this study was to conduct six focus groups with FM organizers. Due to the COVID-19 public health emergency and limits on gathering, it was decided that one-on-one phone interviews were the most convenient and least time-intensive way to collect the necessary information from the target population.

Among all the FM stakeholders in NS, market organizers were chosen for this study given that the information sought called for practitioners in the field who were knowledgeable regarding the financial and operational activities of their FM, its relationship with tourists, its current vendor base, past vendor successes, and the long-term, wider vision for their FM within Nova Scotia's local food movement. Market organizers in Nova Scotia typically wear many hats; some serve as market manager and vendor simultaneously. Several may also manage, sit on the board of and/or vend at multiple markets. This study did not exclude multiple participants from the same FM; however, data was gathered from as many different markets as possible. Select participants represented multiple markets, and several represented the same market. In such cases, the data from participants with the most experience, often the market manager, was used to inform any market-specific questions. Perspectives or opinion question were analyzed for all participants regardless of their membership to the same or multiple FMs.

Participants were recruited via email using FMNS's registry of FM contacts for all operating FMs in NS as of May 2020. The registry contacts for FMs were primarily market managers and board members. When the contact information was outdated or the contact was unavailable, the researcher used publicly available contact information posted on FM websites of FM Facebook pages to recruit potential participants. They were sent the recruitment email in Appendix D along with the interview consent form in Appendix E. A second recruitment email containing the same information was sent one week later to those that did not respond.

The researcher conducted all interviews via telephone with a total of 30 interviewees representing 28 of the 59 markets in NS. This yielded a response rate of 47% from within the 63

contacts listed in FMNS's registry. This study aimed to capture information from as many different FMs as possible; however, no new interviews were sought once data saturation became apparent, meaning new data contributed only marginally to the data that had already emerged (Guest, Bunce, & Johnson, 2006; Saunders et al., 2018).

Interviews were audio recorded using a digital audio recorder unless the participant did not consent to this, in which case hardcopy notes were taken by the researcher. Interviews were designed to require approximately 30-minutes of a participant's time. In practice, interviews took 20 minutes to just over one hour. Interview transcripts were transcribed verbatim and then imported into NVivo 12 as a word document to be manually coded. To be able to compare between participants' answers, the following two non-identifiable market characteristics were included for each participant:

1. **Affiliated market type**: rural or urban. Urban areas, otherwise known as population centres, have populations of at least 1,000 people with 400 or more per square kilometre. Rural areas include all the territory that lies outside these areas (Statistics Canada, 2017).
2. **Affiliated market size:** small (under 19 vendors), medium (between 20 to 49 vendors), or large (over 50 vendors).

The interview questions were developed in collaboration with the executive director of FMNS and were based upon the themes expressed within those most relevant goals from the Ivany Report and EGSPA. Those themes from these two provincial policy documents, as well as the focus areas for the SDGA, informed the make-up of the final questions (see Appendix C). The interviews were both quantitative in nature – to collect information about each participant's market (unit of analysis being individual FMs) – and qualitative, using open-ended questions to query participants' perceptions on the impacts of FMs. Specifically, the aim was to better understand how FMs connect to the most relevant policy goals, and what was inhibiting their ability to further advance the goals (unit of analysis was FM organizers). To capture the research context, several interview questions were included on the impact of COVID-19 on FM operations as well as public support of local food. See Appendix F for the full list of interview

questions. The following information was collected from participants during the interviews (unit of analysis = FMs):

1. How their market was experiencing and adapting to COVID-related effects;
2. The importance of tourism to their market and any vendor types attracting tourists in particular;
3. Examples of vendors who were able to expand their business beyond the market;
4. The importance of primary producers to their market (split between primary, secondary and tertiary producers);
5. Farming practices among producers, such as how many were certified organic and/or disclosed the use of other sustainable agricultural practices (e.g. no pesticides);
6. Whether the vendors were also producers;
7. The relationship between vendors and temporary foreign farm workers, i.e. whether any producers employed temporary foreign workers.

Questions that explored participant perceptions covered the following topics (unit of analysis = FM organizers):

1. Impact of COVID-19 on public interest in local food in NS;
2. Role of FMs as business incubators and how FMs can further support new businesses;
3. How FMs can further increase domestic food consumption and production;
4. The social impact of the market and its level of 'local community' representation (who is included/excluded?);
5. The role of FMs to increase food security and resiliency in the province.

To interpret participant responses, the methodology draws from hermeneutics, first used to interpret religious text using an emphatic approach and inserting oneself in the author's place (Patterson & Williams, 2002; Stewart, 1983). In particular, the analysis is guided by projective or productive hermeneutics, which holds that interpreters can never fully renounce their subjective positioning to extract objective meaning from texts (Greenbank, 2003; Nicholson, 1984). Instead, it follows a constructivist viewpoint in that meaning is produced by the interpreter during the process of reading and analyzing the data (Conolly & Keutner, 1988; Mauthner & Doucet, 2003).

To extract the results from the raw text data, i.e. interview transcripts, a bottom-up coding technique was applied with open and axial coding (Glaser & Strauss, 1967; Patterson & Williams, 2002). Open coding was used to look for key emergent concepts or events elaborated by participants (Strauss & Corbin, 1998). This involved breaking down the transcripts into their smallest components and coding at a fine level of detail, not line by line but by similar concepts within and between transcripts (Corbin & Strauss, 1990). This was an iterative process involving multiple readings of each transcript to identify participant-based codes, constantly correcting for and minimizing researcher bias, as recommended by Glaser (2002). This resulted in sub-codes which were then grouped into key codes using axial coding, the second stage of the coding process (Strauss & Corbin 1998). Axial coding looks for relationships between sub-codes, identifies areas of overlap, and classifies sub-codes into more comprehensive categories, i.e. key codes (Strauss & Corbin, 1998). Selective coding was then used to find connections between key codes and congregate them into explanatory themes to produce insights (Strauss & Corbin, 1998). However, qualitative coding must be reflexive of and tailored to a study's aims (Blair, 2015). After all, the aim of any coding technique is to extract meaning from raw data to answer research questions. To this effect, template coding was also used to some extent to guide the selective coding process. Template coding uses an *a priori*, pre-established language, to extract meaning from text (Blair, 2015; Crabtree & Miller, 1992). The analysis used the interview questions, and, by extension, the research questions, to categorize emergent key codes from participant data into themes. For example, lack of public support for local food was categorized as a barrier to meet provincial goals among FMs. The main themes were grouped into three sections to summarize the results: 1) market-specific data on FMs (unit of analysis = FMs); 2) primary FM activities based on participant perspectives (unit of analysis = FM organizers); and 3) barriers to increase FM sector impacts based on participant perspectives (unit of analysis = FM organizers).

3.2.2 Summary of Results from Interviews

Data was collected for 28 markets in NS from a total of 30 interviews with FM organizers. Table 1 shows that the majority of FMs are small (n=12) and medium (n=10). Fewer large markets were represented (n=6) but there are relatively fewer large markets in Nova

Scotia. There is fairly even representation from urban and rural markets with 15 markets situated in rural areas and 13 in urban areas.

Table 3.1 Markets represented by study participants.

		MARKET SIZE			
		Small	Medium	Large	Total
MARKET LOCATION	Rural	8	6	1	15
	Urban	4	4	5	13
	Total	12	10	6	**28**

1. Market-specific themes

Table 3.2 contains a summary of the market-specific findings from the interviews.

Table 3.2 Market specific findings, their underlying coding scheme and examples of coded text in the transcripts.

	Finding	Codes and sub-codes	Coded participant discourse
1.	Tourism played an important role for 16 out of the 28 FMs; 8 of the 16 were small FMs located in rural areas, indicating that tourism is particularly important for these kinds of FMs.	Tourism (122), importance of tourism (99), tourism sustains the FM (46)	*The market wouldn't go without the tourists.* *We are a very touristy market…about 80% of the revenues do not come from locals.*
2.	Tourism was fairly important for 9 of the 28 FMs.	Tourism, importance of tourism, tourism does not sustain FM (31)	*Tourists give sales that boost and extra $100 on a market day.* *Tourism is not a huge factor. It helps, but we're not relying on them.*
3.	Tourism did not play any significant role for 3 of the 28 FMs.	Tourism, tourism impact is negligent to FM (11)	*I don't know that tourism is connected to our market particularly at all.* *Our market is not one of the ones that relies on tourism.*
4.	The most popular vendor types among tourists / most likely to attract tourists were reportedly artisans followed by prepared food vendors.	Tourism, importance of tourism, artisans/crafters (18), prepared food vendors (17)	*I would say our crafters, absolutely, attract a lot of tourists.* *[tourists] pick up some things that are ready to eat now.*
5.	Contrary to tourists, primary producers were reported as the most popular vendor types among locals.	Tourism, importance of tourism, vendors favored by locals (9)	*The locals go directly straight to the vegetable tables and leave.* *They're [tourists are] not there to buy carrots and kale.*

Table 3.2 (continued)

	Finding	Codes and sub-codes	Coded participant discourse
6.	Participants described a total of 44 examples of market-born businesses who were able expand outside the FM to their own brick and mortar store, restaurant and/or tap into larger markets such as grocery stores. This is most frequent among medium and large urban markets.	Business start-ups (124), established through FM (85), restaurant/store (44)	*A lot of our vendors would have definitely started at the market and grown a storefront business or a larger business.* *She's no longer at our market because she's selling direct in grocery stores.*
7.	Participants described a total of 41 examples of businesses who were able to establish themselves within the market network and who are now attending two or more markets. This happened most frequently among small and rural markets.	Business start-ups, established through FM, still selling through FM (41)	*…it's small growth but they might end up having a second table at a different farmers' market or third table at another market.* *Many of our vendors might have started here [at our FM] but now they go to other markets as well.*

2. Primary farmers market activities

The primary FM activities are visualized in Figure 3.2. The activities are presented as a proportion of total references to the FM activities among the 30 interview transcripts. The absolute number of references are in brackets beside each activity. The primary activities in which FMs most frequently engage include supporting producers (growers, markers, bakers) and local food production, increasing consumption of local food, improving food security (community and household) and local food access, fostering social interactions and sense of community, and strengthening local economies (both directly through vendor sales and indirectly through spin-off benefits).

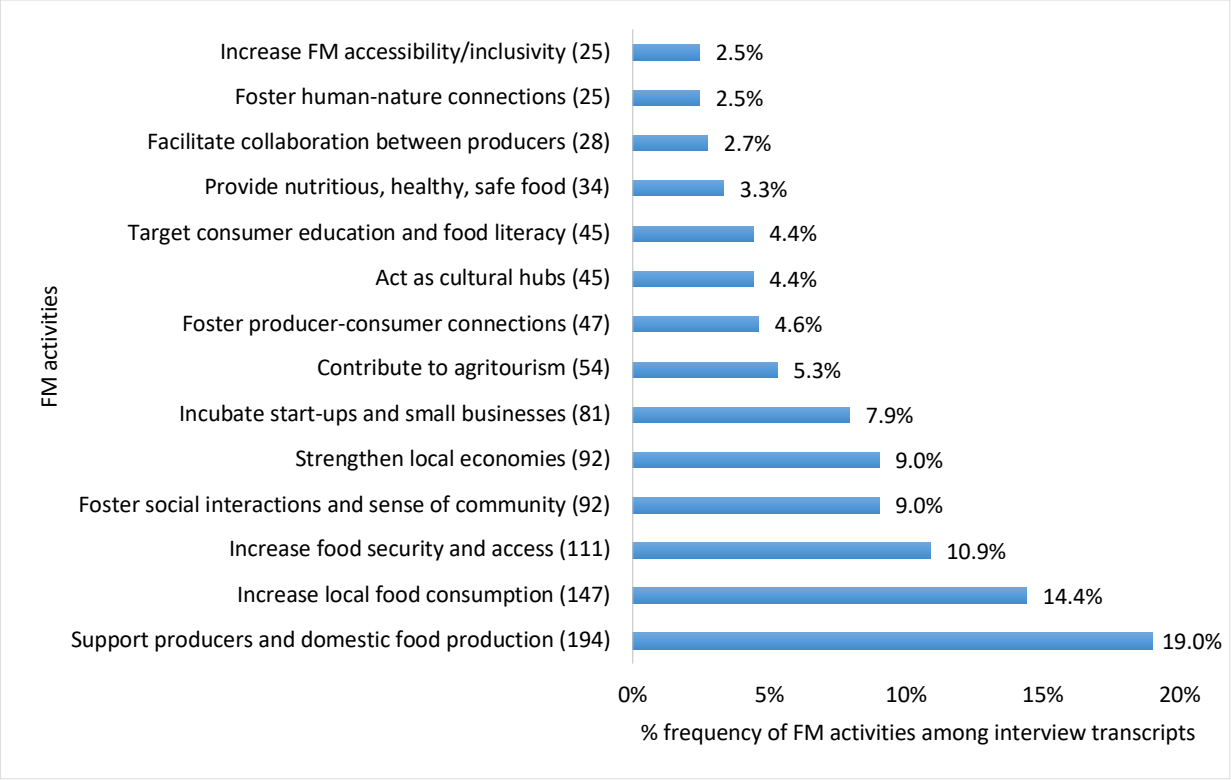

Figure 3.2 Frequency of FM activities expressed as a proportion of total activities discussed by FM organizers. The total number of references within all transcripts are shown in brackets.

3. Key challenges and barriers for the farmers market sector in Nova Scotia

Based on participant discourse, the primary challenges to increasing FM sector impacts (Figure 3.3) include a lack of government support for small-scale agriculture, a gap in public perception and support for local food and the difficulty of farming and vending in general, including high start-up costs for producers. Rather surprisingly, issues internal to markets themselves (lack of resources, funding, inter-market competition) are not as frequent as issues facing current and future small-scale producers in NS. Moreover, the greatest internal FM challenge is a shortage of primary producers in NS and the challenge for markets to secure them.

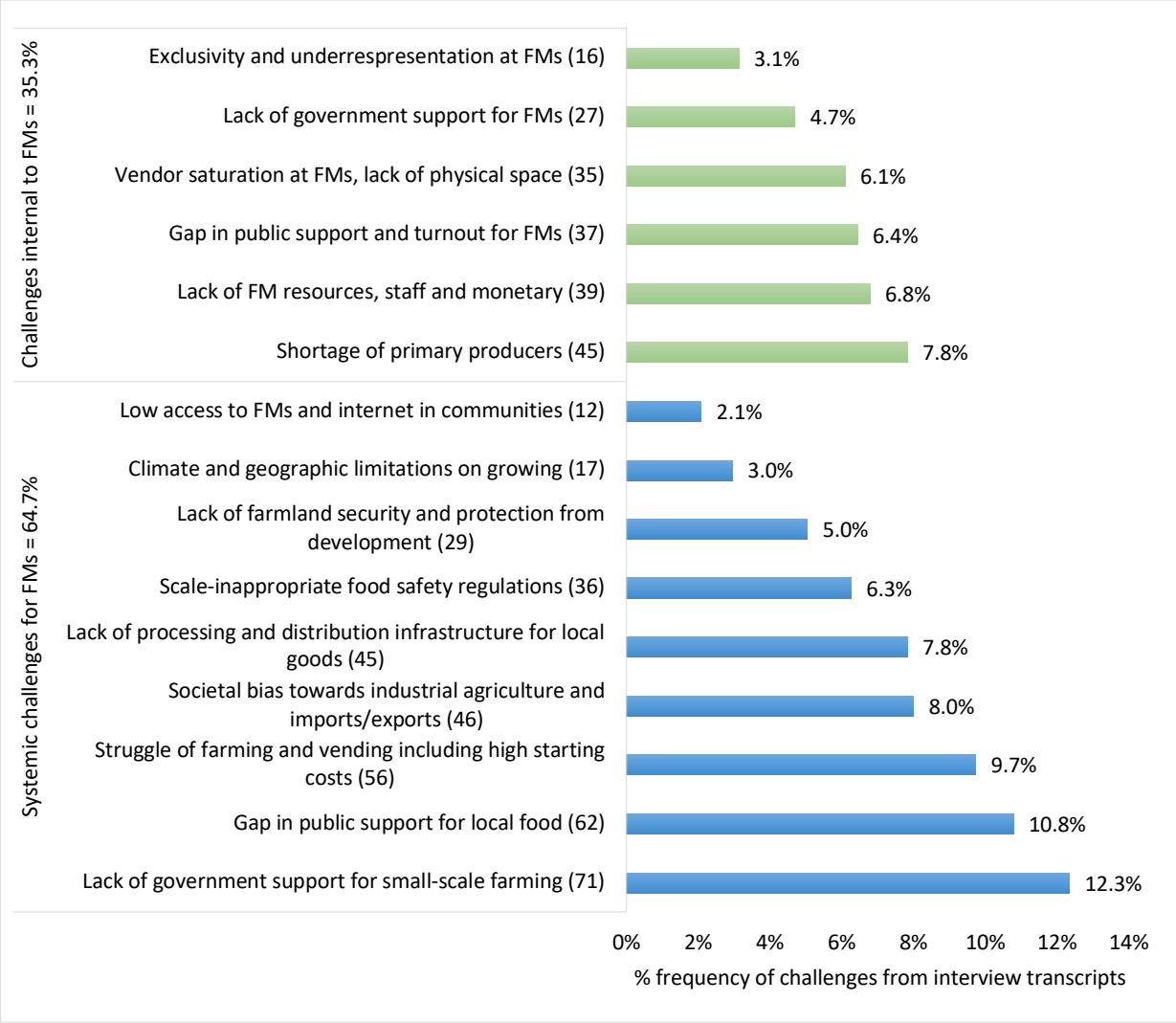

Figure 3.3 Key internal and systemic challenges facing FMs in NS as a percentage of the total challenges discussed by participants. The total number of references within all transcripts are shown in brackets.

Chapter 4. Discussion of Alignments between Sustainable Development Policy and Farmers Market Activities in Nova Scotia

This chapter discusses the connection between FM activities and SD-oriented policy goals in Nova Scotia beginning with those policy goals supported by FM public statements (Section 4.1) followed by the discrepancies between FM public statements and interviews with FM organizers (Section 4.2), policy goals unsupported by FM public statements (Section 4.3), and FM activities unsupported by policy goals (Section 4.4).

4.1 Alignments with Farmers Market Public Statements

4.1.1 Impact on Local Food Production and Consumption

All 41 FM statements aligned with local food production and consumption goals, indicating strong alignment. This is reinforced by the literature on the importance of FMs in supporting local food production (De Bernardi et al., 2019; Gillespie et al., 2007; Stephenson, 2008) and the centrality of food in LFNs (Fang et al., 2013; Watts et al., 2005). It is further reinforced by the interview outcomes; analysis of participant discourse revealed that supporting producers and local food production ranked 1st within the most prevalent FM activities and increasing local food consumption ranked 2nd (see Figure 3.2). The FM statements express support for producers and domestic food production in various ways, for example:

> *"[the market] promotes, supports, and enhances the development of the local food and artisan industry" (Cape Breton FM).*
>
> *"We provide a strong, vibrant year-round venue for local vendors" (Lunenburg FM).*
>
> *"…a community gathering place where vendors can provide high quality, locally produced food, products and services to our community" (Avon Community FM).*

Of course, promoting local producers and products is a marketing strategy for any FM looking to attract more customers (Garner, 2019). However, it is simultaneously a value statement about the importance of supporting local producers and local food in general (O'Kane & Wijaya, 2015). At the end of the day, this role is about fostering connections between producers and consumers (Hedberg & Zimmerer, 2020), which ranked 7th within the most prevalent FM activities according to participant discourse. Indeed, 28 (68.3%) of the 41

FMs studied explicitly position themselves as direct market venues in their statements, for example:

> *"[the market] promotes a sustainable economy through partnerships connecting local farms and small businesses directly to customers" (Amherst Downtown FM).*

Importantly, FM statements primarily emphasize *local* and not *domestic* food production. Only six FM statements elaborate on their perspectibe of local; four of these FMs are located in and support producers in Cape Breton specifically while the other two specify carrying Nova Scotian products. Also of note, only seven FM statements emphasize supporting small-scale producers specifically while only four emphasize supporting sustainable food production practices in particular. Ambiguity in FM messaging is identified in previous studies (Garner, 2019; Lowitt, 2009). Specifying what kind of food producers and types of production methods FMs support could further clarify their contributions to the environmental sustainability of LFNs. As an aside, they would also do well to elaborate on their definition of local so as not to perpetuate widely held public perceptions around local but help in their dismantling (Lowitt, 2009). Nonetheless, the three policies also fail to unpack the sustainabilities of local/domestic food production; instead, the policies imply, particularly EGSPA, that local food production inherently exists within the realm of environmental sustainability (EGSPA, 2007; the Commission, 2014).

4.1.2 Impact on Local Economies: Connection to the Green, Circular and Start-up Economy

While the FM statements do not use the terms *clean* or *green economy*, 27 FM statements promote the economic sustainability of their regions and 16 promote sustainable consumption, aligning them strongly with goals for green growth and fiscal health. The findings of the content analysis support the assertion that FMs can revitalize local economies by concentrating economic activity and facilitating direct sales (Brown & Miller, 2008; Gillespie et al. 2007; Young et al., 2011). As farming is a low-margin business, direct sales bring greater profit margins for farmers and have been shown to improve long-term farm viability (De Bernardi, Bertello, & Venuti, 2019; Gantla & Lev, 2015). Compared to non-direct markets, they can also create more employment opportunities, both directly and indirectly; compared to larger operators, smallholder farmers tend to employ more workers per hectare with a greater

share of their budget dedicated to labour (Irshad, 2010). FMs also increase the viability of neighbouring businesses through increased foot traffic (Gantla & Lev, 2015; Hardesty et al., 2016; Young et al., 2011). Additionally, FM transactions are retained within the economic region and can be reinvested to benefit the community (O'Kane & Wijaya, 2015). Many FM statements hold that the primary purpose of their FM is to bring economic vibrancy to their region:

> *"The mission of The Baddeck Farmers Market is to create a vibrant market that encourages local food production and economic sustainability" (Baddeck FM).*

The ability of FMs to revitalise local economies plays into their role as business incubators and safety nets for small rural businesses (Cameron, 2007; Gillespie et al., 2008). However, while 27 statements emphasize the economic importance of their FM, only 13 statements refer to their market explicitly as a business incubator or as a starting ground for local entrepreneurs. Further, only seven statements emphasize supporting small businesses in particular. On the other hand, the interviews unearthed 44 accounts of unique businesses who had their start in a FM but who were able to eventually expand beyond the FM, tapping into larger markets (see Table 3.2). Furthermore, there were 41 accounts of businesses who were able to start and sustain a successful business through the FM network itself, supporting the notion that FMs could better play to their strengths if their role as small business incubators and safety nets for rural enterprises received greater emphasis in their public messaging.

Another theme expressed within 12 FM statements was the provisioning of economic resources. FMs provide in-kind economic contributions to producers by offering them a relatively low-cost venue, marketing local agricultural products, and amassing support for the local food movement via educational programming and outreach initiatives (Experience Renewal Solutions, 2009; O'Kane & Wijaya, 2015). These efforts are often facilitated by technology, such as the online markets and multimedia platforms, as well as through delivery and other alternative FM distribution services (FMNS, 2020a). FMs can also streamline services, eliminating inefficiencies in the food distribution system (Beckie, Kennedy, & Wittman, 2012; Vail, 2014). Many are non-profit organizations that rely on external funding, volunteers and partnerships with non-profit and charitable organizations (Gantla & Lev, 2015; Gillespie et al.,

2007; Stephenson, 2008). This, along with their direct economic contributions, resulted in 16 FM statements aligning with Ivany Goal 18, increasing municipal financial stability.

There is moderate FM alignment (16 or 39.0% of statements) with SDGA Focus D, fostering circular economy (CE), and EGSPA Goal O, decreasing the provincial disposal rate. Aligning statements emphasize sustainable consumption and procurement - key components of CE as they go beyond back-end recycling and landfill diversion efforts (Korhonen et al., 2018). FMs act as outlets for organic and less-intensively grown agricultural products and are also known to engage in waste reduction and zero-waste initiatives, such as providing composting and recycling receptacles, eliminating single-use plastics and promoting reusable bags and flatware (Feenstra, 1997; Gillespie et al., 2007; Wolfville Farmers' Market, 2019). There is often less food packaging and storage requirements for locally produced food given shorter transportation distances (Benis & Ferrão, 2017). However, only two statements explicitly identify waste management as a priority and only four emphasize sustainable production practices among vendors. These aspects are crucial to CE yet were not reflected by the FM statements. Again, further specifying what kind of sustainable production practices FM support may result in greater alignment with Nova Scotia's goals for a CE and waste management.

4.1.3 Impact on Tourism and Export Markets

The results of the content analysis suggest that FMs in NS may be more concerned with serving locals than attracting tourists, which is necessary to ensure long-term FM sustainability (Dodds & Holmes, 2017; Thompson, 2020b). While the majority of FM statements emphasize their role in growing local economies, only 13 FMs explicitly position themselves as a space for tourists in their statements, for example:

> *"The Saturday market is a year-round, vibrant destination that is loved by the community and a must visit experience for visitors" (FM – Alderney Landing).*
>
> *"[we] provide residents and visitors alike the opportunity to shop and support local" (Port Hawkesbury Ceilidh FM)*

Thompson (2020b) stressed that FMs should be loyal towards their communities first and foremost in order to preserve the authenticity of FMs. Indeed, community support has been found to play an integral role in maintaining long-term FM economic viability, whereas

tourists can help diversify and increase FM revenues (the Commission, 2014; Thompson, 2020b). How customers engage with FMs, their purchasing behaviour and perceptions, differs between locals and visitors; Dodds and Holmes (2017) concluded that value-added products hold the greatest appeal for tourists while locals are better served by a diverse set of vendors and products. This assertion is supported by the interview results in that artisans and prepared food vendors are reported as the most popular vendor category among tourists while primary and secondary vendors are favored among residents (see Table 3.2). By this token, centering FMs around tourism stands to "disenfranchise local residents" as they would be ill-equipped to meet the needs of community members (Thompson, 2020b, p.7).

The results of the content analysis align with Thompson's guidance to prioritize communities above tourism. And yet, to realize the tourism potential among FMs and enhance the agritourism economy in Nova Scotia, one would expect a greater number of FMs to position themselves as spaces for tourists in their statements. Indeed, tourism is seen to play a role for 25 of the 28 markets represented by interview participants, with 16 highlighting it as playing a significant role (see Table 3.2). This importance of tourism is absent from FM statements. At the same time, expressing the traditional, local culture of the market can be a way to appeal to tourists in some regard (though this strategy was not considered in the analysis of FM statements for alignments with tourism goals).

Counterintuitively, five statements align with Ivany Goals 5, 6 and 15, which seek to increase the value of exports, the number of exporting firms, agriculture and fishery exports, respectively. At first glance, these goals seem incongruent with the primary activities of FMs – support domestic markets and keep spending within local economies. Indeed, one of the main challenges facing the sector according to the FM organizers is a governmental bias towards large-scale food production and an export-oriented economy (see Figure 3.3). On the other hand, FMs can be steppingstones for start-ups and small businesses to increase their output and expand to larger markets, including grocery stores, restaurants and even export markets (Andrée, Dibden, Higgins, & Cocklin, 2010; Cameron, 2007). While some FMs take the view that having vendors grow beyond the market is not necessarily their goal, as is highlighted by

several participants, five FM statements explicitly reflect the intent to help businesses transition from small to large scale:

> *"The Market serves as a small business incubator for new startups, many of which have gone on to build successful large-scale businesses" (Antigonish FM).*

Key takeaways

- Based on statement alignments, FMs statements most closely align with provincial goals related to increasing domestic food production, consumption, and economic health including growing the green economy and boosting fiscal health in Nova Scotia.
- There should be greater effort among FMs to specify and declare a mission statement including how they define local as well as what producers / production methods they support so as to not perpetuate commonly held preconceptions about local and to reveal potential alignment with goals on CE and waste reduction.
- The role of FMs as business incubators and tourist destinations is muted in the FM statements. FMs might further emphasize the importance of tourism and their role as business incubators in their public messaging.

4.2 Form versus Substance: Discrepancies between Market Statements and Interviews with Farmers Market Organizers

The previous analysis of policy alignments assumes that FM public statements are a direct proxy for FM functions. However, while the statements can act as signposts for FM activities, the narrative they present is not an inherent predictor of actual FM actions nor is it necessarily representative of all stakeholder perspectives (Collins & Porras, 1996; Desmidt & Prinzie 2011; Toh & Koon, 2017). In order to dig deeper and reconcile what FMs say they do versus what they do – or, in this case, what they aspire to do – the results from the interviews were compared to the content of FM statements. That is, the primary activities of FMs, as expressed by FM organizers and FM public statements, were compared. While it would be preferable to have the input of a variety of stakeholders be part of this comparison, particularly that of customers and vendors, it is beyond the scope of this study and is suggested for future research.

To ground truth the narrative of the public statements, they were re-coded using the template that emerged from inductively coding the interview data, specifically, the coding

scheme of primary activities in which FMs engage (contained in Figure 3.2). The coding categories included 14 distinct activities FMs perform. The FM public statements were re-coded in NVivo using this deductive coding scheme and then graphically represented in Excel alongside the primary FM activities from the interviews. As the interview transcripts were 25 times longer than the statements on average (4972 and 196 words, respectively), the references for each activity were divided by the total number of activity references within both the statements and the transcripts to be able to compare the prevalence of activities between the two sources (Figure 4.1). Note that the order of activities in Figure 4.1 reflects the number of references within the FM statements from most to least prevalent. Each activity is expressed as a percent frequency of the total number of activity references within both the transcripts (n=1020) and statements (n=495). The difference between the frequencies was found by subtracting the activity frequencies in the statements by those in the interview transcripts, resulting in differences ranging from -2.3% to +3.5%. Note that these are not percentage differences but simply differences between frequencies.

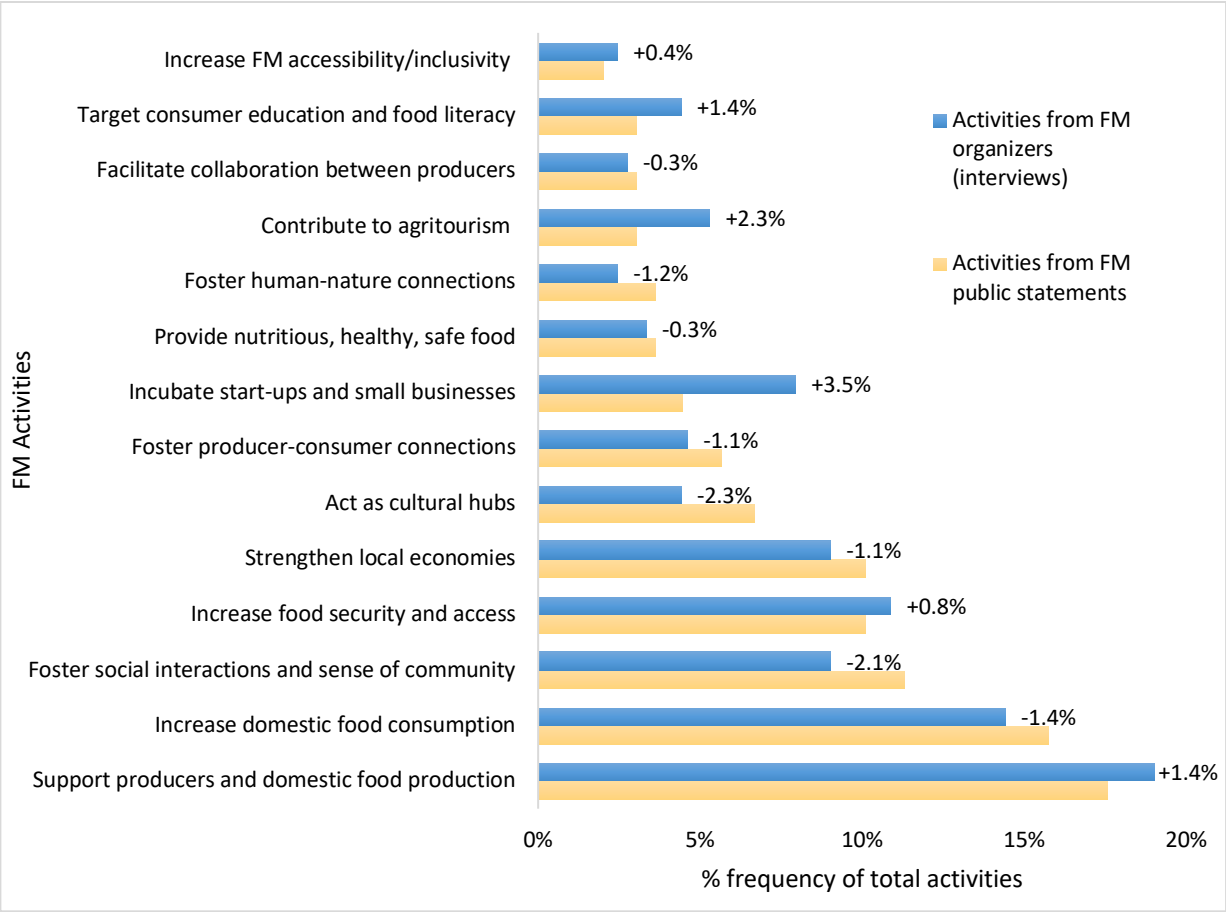

Figure 4.1 The frequencies and difference in frequencies of FM activities within the FM public statements and the interview transcripts based on the total number of references.

The statements and interviews reflect one another – somewhat – in terms of the order and frequency of activities contained in each source, but with several exceptions. The incompatibilities between participant and statement narratives are discussed below.

4.2.1 Contributions to the Start-up and Agritourism Economy

The largest discrepancy between the two sources surrounds the role of FMs as business incubators. This FM activity is more prevalent in the interview transcripts (7.9%) than the FM statements (4.4%), suggesting that FMs engage in this activity more than they communicate. While only 7 out of the 41 FMs emphasized supporting small-scale businesses and only 10 acknowledged their role as business incubators, every FM organizer interviewed could recount at least one instance of a new businesses who started at their market who was able to go on to establish a successful business (see Table 3.2). While it is expected that the definition of "successful" and "established" would differ between interview participants – no terms were

defined for the purpose of the interviews – this finding does suggest that FMs in NS do more to help small businesses than their statements would suggest.

There is also a discrepancy surrounding FMs' contributions to agritourism. While only 13 FM statements emphasize tourism, it played a role for 25 of the 28 markets represented by the interviewees; 16 reported it as very important and 9 as fairly important (see Table 3.2). Only 3 participants reported that it played no significant role at their FM. Given this information, FMs in Nova Scotia likely engage in tourism efforts more than they allude to in their statements. As previously discussed, presenting FMs as local hotspots instead of tourist destinations may be a marketing ploy in and of itself to attract tourists looking for authentic, local experiences.

4.2.2 Contributions to Consumer Education and Domestic Food Production

Other ways in which FMs aspire to do more than their statements suggest surrounds FM involvement in consumer education and food literacy. This may be due to the fact that the educational initiatives and outreach programs that participants spoke of and in which FMs engage, e.g. cooking demonstrations and programming for youth (Montgomery-Dupe, 2020), are not advertised in the FM statements, giving rise to this discrepancy. Additionally, educating consumers on local food, e.g. preparation, recipes, seasonal limitations, varietal limitations, production practices, difference in taste and price, has been found to occur at the interface between vendors and consumers (Lowitt, 2009; Smithers et al., 2008). As such, educational activities may be encapsulated by FM activity 7 in the FM statements – facilitating consumer-producer connections (see Figure 4.1), which was emphasized to a greater degree by the statements than by participants.

There is also a lack of cohesiveness between what FMs aspire to do and what they say in terms of FMs' role in supporting producers and domestic food production. The interview outcomes suggest that this role may be greater than FM statements allege as it accounts for 19% of activities in the interview transcripts versus 17.6% in the statements (see Figure 4.1). Indeed, the majority of the challenges reported by study participants were systemic issues facing NS producers and not challenges internal to FMs themselves such as lack of staff or financial support (see Figure 3.3). Additionally, interviewees specified to a greater extent the scale at which producers at their market operate. Market farmers were largely described by

participants as small-scale[5] with a high diversity of crops, organic farming practices and few employees. As such, FMs in NS may play a greater role in supporting small-scale, sustainable domestic agriculture and Nova Scotian producers than their statements suggest.

4.2.3 Role as Cultural Hubs and Spaces for Social Engagement

Compared to interviewees, FM statements emphasize more their engagement in community building/fostering social interaction and cultural activities (+2.3% more for both activities in Figure 4.1). This is likely due to the nature of the FM statements, many of which are written to appeal to potential customers, straying into the realm of PR and market advertising. Indeed, 18 FM statements describe the authentic local experience, live music and lively social atmosphere of their FM. For example:

> *"Our market is a social gathering place where you can listen to great music, eat great food, and meet friends & neighbours" (Mabou FM).*
>
> *"The atmosphere is something that can only be experienced by going to a farmers' market and seeing it for yourself" (New Ross FM).*

On the other hand, interviewees did not go into depth on the cultural and social impact of their FM. While this was a structured question posed of participants, it was asked in tandem with questions on the inclusiveness/exclusiveness of their market (see Appendix F). As such, the first part of the question on the social impact of the FM may have been overshadowed by participants' attempts to address the second part. Furthermore, one would expect the perceptions of FM organizers on to the social impact of their markets to differ and perhaps be farther removed than those of other FM stakeholders. Speaking with and observing customers and vendors would provide a better understanding of the social impact of FMs in NS.

Key takeaways

- There were several discrepancies between what FMs say they do, based on FM public statements, and what they aspire to do, based on interviews with FM organizers.

[5] Participant understanding of small-scale farming was elaborated on by several interviewees as being a few acres or employing low levels of mechanization/automation, employing under 5 employees, or using organic farming practices without being able to afford the certification.

- The greatest discrepancies surround the role of FMs as business incubators and tourist destinations, which are less prominent in the FM statements. According to the FM organizers, FMs in Nova Scotia likely contribute more to the start-up and agritourism economy than their statements claim.
- To a lesser degree, the interview results also suggest that FMs focus on consumer education/local food literacy more than FM statements allege. FMs may also play a greater role in supporting small-scale agriculture and producers than they communicate.
- The FM statements emphasize the cultural and social function of FMs to a greater degree than participant discourse. This may be due to the promotional nature of the statements and the inability of the interviews to effectively portray the social impact of FMs in NS.

4.3 Disconnections between Farmers Market Public Statements and Policy Goals

4.3.1 Action on Clean Energy and Climate Change

FM statements contain no language surrounding clean energy, including renewable/low-carbon energy, energy conservation or efficiency measures. Likewise, FM progress towards climate change mitigation and reducing emissions is absent from the statements.

There are several potential ways FMs may indirectly contribute towards clean energy and climate change goals in their communities, for example, maintaining and operating out of advanced buildings, supporting energy efficient practices among vendors, or engaging in community energy projects, climate change awareness or energy literacy initiatives (Brekelmans, 2019; Vail, 2014). According to interviewees, several of their markets do offer environmental education and programming but participants did not elude to targeting climate change awareness specifically. Two FM statements highlight their recent building renovations but did not elaborate on their purpose beyond bringing the building up to code and complying with food safety regulations. There may be greater opportunity for FMs to support energy and climate goals with the establishment of the Sustainable Communities Challenge Fund by the SDGA in 2019, which aims to spur innovation and support communities in their climate change mitigation and adaptation efforts (SDGA, 2019). As it stands, the only connection between FM

statements and policy goals for clean and efficient energy (EGSPA Goal A and SDGA Focus B), is in terms of FM accessibility by public and active transportation, which is emphasized by two FM statements. However, the intent behind these statements is likely to reach potential customers without a personal vehicle more so than encourage public or active transportation use from a climate change perspective.

4.3.2 Natural Resource Management and Biodiversity Conservation

There are few alignments with goals for natural resource management and biodiversity conservation, which feature predominately in EGSPA. Four FM statements align with these goals because of their emphasis on sustainable food production explicitly. This resonates with the findings of Garner (2019), who observed that FMs do not use ecological sustainability as a marketing approach. Instead, they found that FMs use proxies for environmental sustainability in their messaging, such as local, fresh, high quality, or organic/chemical-free (Garner, 2019).

As previously discussed, the benefits of FMs from a biophysical standpoint is contested within the literature; local, small-scale food production does not always produce ecologically favorable outcomes (Davies, 2019; James & Hendrickson, 2010; Jarosz, 2008). It is, however, associated with other low-impact production practices that contribute to overall food system sustainability (Forssell & Lankoski, 2015; Wallgren, 2006). From the interviews, the most frequently cited food production practices include pesticide-free, organic certified or operating at the organic levels without the certification, integrated pest management plans, low tillage, usage of cover crops and on-farm composting. As Goodman, Dupuis and Goodman point out, alternative food networks have real potential to be "environmentally sustainable forms of economic life" *if* they are protected from becoming local iterations of the mainstream economic system (2012, p. 194).

While the connection is not reflected in the statements, FM contributions to biodiversity conservation and natural resource management most probably lies in their role as places for sustainably produced food and other products (Vail, 2014). As opposed to the limited alignments for sustainable food production, sustainable consumption is emphasized by 16 FM statements. If the relationship between FMs and the ecologically beneficial production practices they support can be further clarified in FM messaging, then there may be greater

potential for FM alignment with biophysical goals and less contestation of their ecological benefits.

4.3.3 Inclusivity and Employment for Indigenous and African Nova Scotians

No alignments can be found between any FM statement and Ivany Goal 8, increasing the employment rate among Indigenous and African Nova Scotians. Among the 41 statements, one prioritizes employment opportunities for youth and one for adults with disabilities. At the same time, 11 statements align with SDGA Focus E, creating an inclusive economy. Aligning statements speak of striving to create a diverse marketplace, welcoming all community members, offering programming for youth, positioning the market as a space for children and seniors, and offering a variety of goods to accommodate a range of tastes, ages, and backgrounds. One FM acknowledges that their market is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People. However, no other connections can be found between the FM statements and Indigenous people.

FMs can be exclusive spaces of privilege, perpetuating racist and classist systems (Pilgeram, 2016). While FMs with majority white middleclass participants tend to prioritize ecological issues, inclusive markets heterogenous representation tend to center around social justice issues (Alkon, 2008). Creating inclusive marketplaces by balancing social and ecological justice efforts is a crucial part of FM sustainability (Alkon & McCullen, 2011; Goodman et al., 2012). The results of the content analysis indicate a need for FMs to reconcile their aim to build inclusive FMs and providing equal opportunities for underrepresented individuals at FMs, particularly for people of colour (Agyeman, 2005). Indeed, from the interviews, underrepresentation and exclusivity at FMs ranks 14th among barriers facing the sector, identified by 8 of the 30 participants (see Figure 3.3). These participants express that FMs could always be doing more to prioritize underrepresented voices in NS but that barriers exist, including lack of (paid) staff, time and other resources to progress on these issues. The issue of inclusivity among Nova Scotia's FMs is further discussed in Chapter 5, Section 5.6.

Key takeaways

- FM statements lack considerations for clean energy, climate change action, natural resource management, biodiversity conservation, and employment opportunities for Indigenous and African Nova Scotians.
- Specifying what kinds of producers or production practices FMs support in their statements may reveal potential alignments with Nova Scotia's goals on climate change, clean energy, natural resource and biodiversity conservation.
- According to both the FM statements and interviews with FM organizers, FMs in NS aim to create inclusive spaces. Yet, there is little recognition of excluded groups in the statements and exclusivity/underrepresentation is a key barrier facing the sector according to FM organizers. This discrepancy is further explored in Section 5.6.

4.4 Farmers Market Activities Unsupported by Policy Goals

Emergent inductive codes from the FM statements that do not align with any goals or focus areas in the three policies are illustrated in Figure 4.2, indicating areas of disconnect between the policies and FM activities.

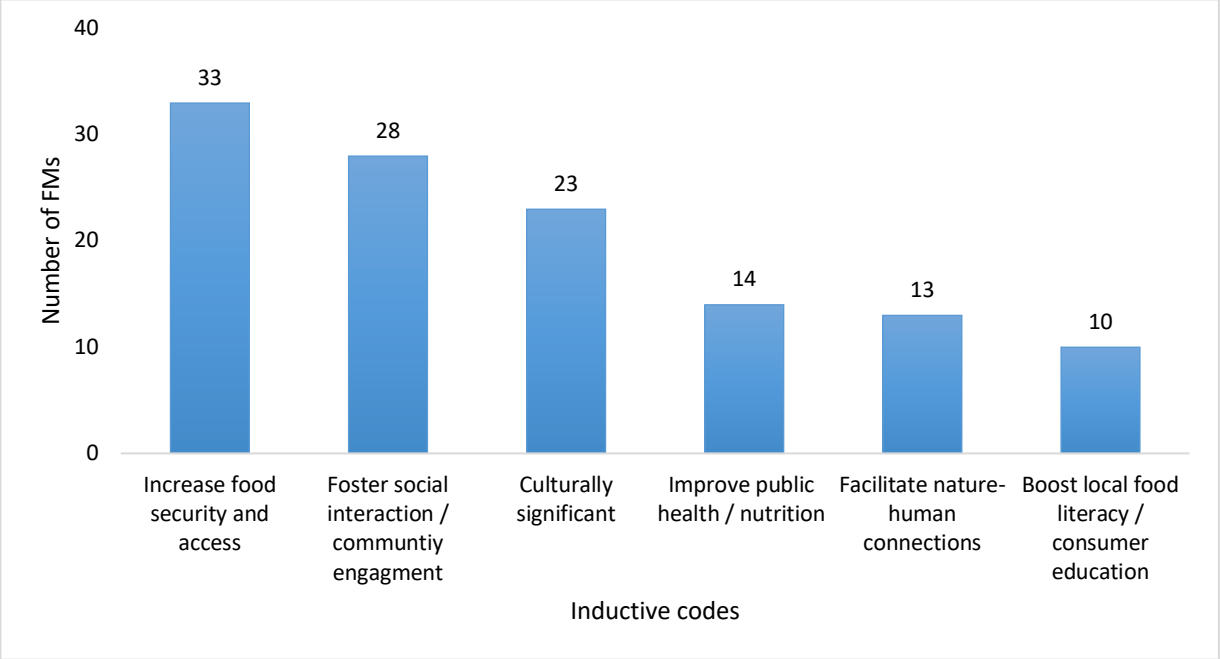

Figure 4.2 Inductively coded FM activities from FM public statements that did not align with any policy goals or focus areas, shown by number of market statements containing the code.

Among the 41 FM statements, 33 (80.5%) emphasize their contributions to food security (community and household) including improving access to local food. Twenty-eight (68.3%)

emphasize social engagement including fostering sense of community and civil participation while 23 (56.1%) note cultural activities associated with their FM. Fourteen (34.1%) emphasize improving public health including offering nutritious, healthy food, 13 (31.7%) emphasize creating socio-ecological relationships including holding open air markets and connecting people with their food, and 10 (24.4%) focus on local food literacy as a focal point for their FM. These results highlight that the SDGA, EGSPA and Ivany Report goals/focus areas do not encapsulate FM activities as they relate to social and community well-being beyond increasing economic opportunities. Indeed, the policies and their related goals/focus areas are largely concerned with the economic and environmental aspects of sustainability, which is a common critic of SD policy (Agyeman, 2005; 2013; Gupta & Vegelin, 2016).

4.4.1 Lack of Social and Cultural Considerations

Considerations for social interaction and community building are largely absent from the policy goals with perhaps the exception of the SDGA's aim for inclusive economy and the Ivany Report's call for public engagement in policy development[6]. On the other hand, 28 FMs engage in this activity according to their statements (Figure 4.2). It is also the fourth most prominent FM activity identified by FM organizers (Figure 3.2). Several FM organizers spoke of the profound social benefits to smaller, rural markets in Nova Scotia. Participants from these markets report that, even with low daily sales and limited product variety, the benefit of social interaction alone can build FM vendor and customer loyalty and justify a smaller market's existence:

> *"It's nice to be able to support the smaller markets in between as well because it gives a little bit of a different atmosphere and it's not quite as hectic…And we always get really great support from our vendors and they say how much they enjoy being there, even if they didn't sell anything, you know? Everybody's enjoyed being there and having conversations with people and just the feeling and the atmosphere, so I think that's important to promote as well" (Participant 24)*

[6] As part of Goal 18, improving municipal stability, Ivany Report did highlight the need to incite community engagement and participation (the Commission, 2014). However, this was a specific reference to the public consultation process required as part of the province-wide development plan for Goal 17.

Collective moments of joy are an important part of feeling connected, which is vital for human health and well-being, particularly in a time of increased individualism and isolation (Brown, 2017; Segal, 2017). Brown (2017) found that events like concerts, plays, and sporting events evoke collective moments of joy that connect us to others and ourselves as well as strengthen our sense of community and belonging. Enjoyment, atmosphere and bringing people together are vital to any successful FM (Lowitt, 2009; Turner & Hope, 2014). The long-term sustainability of small rural markets demonstrates the importance of FMs as a community event that allows people to gather around food, music, and conversation (O'Kane & Wijaya, 2015).

While they lack social considerations, the three provincial policies do stress that working towards sustainable prosperity is a shared/distributed responsibility for all levels of government, the private sector, and the public alike (EGSPA, 2007; the Commission, 2014; SDGA, 2019). In terms of engaging and mobilizing citizens around sustainability issues, FMs have been found to facilitate co-creation of values between farmers and community members (Foti et al., 2019), encouraging public participation in sustainable consumption and civil agriculture:

> "…with the modern displacement of food production from consumption, FMs create valuable opportunities for consumers to get in touch with the origin of their food" (Fang et al., 2013, p. 47).

Strengthening local economies is also a motivational factor among FM customers as they can rally around and show support for local products (Christensen, & Phillips, 2016; Fang et al., 2013; Pollan, 2006). This phenomenon was exemplified during the early months of the pandemic in Canada from March to May (when the interviews occurred); almost all participants reported heightened public interest in buying and supporting local in NS, particularly local food at this time. Due to supply chain issues causing higher food prices, people were keenly aware of the instabilities in the food system at this time (Killawee, 2020). Conventional food supply chains were facing interruptions; feedlots became backlogged due to virus outbreaks at large processing plants (Killawee, 2020; Palmeter, 2020b). This resulted in less of a disparity between the price of imported and locally available meat (Killawee, 2020). While fear and price may have also had a part to play in why more people turned away from crowded grocery stores and to

their local producers (local food may be perceived as safer/healthier due to less touch points), participants reported genuine concern for local businesses and desire to support them through the economic downturn, which is also noted by several news sources (Killawee, 2020; Palmeter, 2020a; Thompson, 2020a) as well as consumer survey in the summer of 2020 (Bryan, Fitting, Foster, & Ellsworth, 2020). Altogether, the effects of the COVID-19 pandemic may have heightened people's awareness and concern for local in Nova Scotia, particularly local food, and so participated in civic life by directing their attentions and funds towards local producers.

4.3.2 Lack of Considerations for Public Health and Food Access/Security

The policy goals included in this study lack considerations for public health and nutrition[7]. Though domestic food goals indirectly connect to CFS, no goals explicitly seek to address household food insecurity in Nova Scotia, which remains the highest among all Canadian provinces (Statistics Canada, 2020a). Increasing food security – both community and household – as well as improving local food access is an aim for 33 (80.5%) markets. From the interviews, increasing local food access and security is the third most commonly reported FM activity (see Figure 3.2). It raises the question of why isn't provincial policy targeting local food consumption and household food insecurity simultaneously in Nova Scotia?

Coupling FM and food assistance programs has been shown to decrease household food insecurity-related behaviours while simultaneously increasing the uptake of local food and benefitting Nova Scotian producers (Garner et al., 2020; Hecht et al., 2019; Leone at al., 2019). The Nourishing Communities Food Coupon Pilot Project, administered by FMNS, has been renewed for 2020/2021 and intends to support a greater number of markets and participants (FMNS, 2020b). In previous years, the program has been successful with reportedly high coupon redemption rate and participant satisfaction (AEC, 2020). Further, the majority of coupons were redeemed on agricultural products, which supports the notion that the program increases F/V uptake among participants. While none of the 41 FM statements studied mention

[7] In their acknowledgement of the Mi'kmaq concept of Netukulimk, EGSPA does state that "…for the self-support and well-being of the individual and the community by achieving adequate standards of community nutrition and economic well-being without jeopardizing the integrity, diversity or productivity of our environment." (EGSPA, 2007, s.3). However, this is in reference to Netukulimk and does not appear again in the document nor in the updated SDGA.

participating in the program (13 are set to take part in 2020/2021 [FMNS, 2020b]), 14 statements emphasize enhancing the health and well-being of their community:

> *"[our vision is] to better the health and vibrancy of our community (Wolfville FM). Our goals are to educate the public on the economic, social and health benefits of supporting local producers" (New Glasgow FM).*

Nine statements support the notion of providing nutritious, healthy food:

> *"Over the next three years, we will gradually move toward offering a greater percentage of healthy foods at the Farmers' Market" (Farmers' Wellness Market).*

Of note, a total of 23 statements emphasize food quality and freshness. In recent decades, there has been increased consumer interest in purchasing organic, fresh or high quality food, signifiers that are commonly associated with largely unspecified benefits e.g. safer, healthier, better tasting food, more sustainable farming practices, stronger local economies (Ball et al., 2019; Trobe, 2001; Wolf, Spittler, & Ahern, 2005). However, as is the case with local and organics, freshness and quality have not been shown to enhance the nutritional profile of foodstuffs (Dangour et al, 2010). FM messaging would do well to explicate these ostensible terms for the benefit of the public as well as from a food security and health standpoint (Lowitt, 2009).

Mental health issues are prevalent across Canada and have been greatly exacerbated by pandemic-related effects (Statistics Canada, 2020b). Yet, mental health is not acknowledged by the policies nor by the FM statements. Nonetheless, several interview participants did highlight how FMs contribute to the mental health of community members:

> *"…one thing that lots of people are finding out during this pandemic when they're forced to stay home is that mental health is a real issue and some people do their crafts and their art and everything else - maybe not to pay the bills - but some of them do. And also because they need it as a mental health thing and that should not be undervalued in any way. The mental health of our producers is every bit as important as whether we've got apples and carrots available" (Participant 16).*

Other participants discussed FM initiatives to enhance mental health and well-being among customers during the pandemic while their market was closed, such as hosting virtual

markets/workshops with live music, breakout discussion rooms and vendor panels. This speaks to the mental health benefit of FMs pre-pandemic as a result of bringing people together and fostering socio-ecological connectedness by holding open air markets, bridging urban-rural divide, and bringing people closer to their food, aligning with previous research in this area (Francis et al., 2005; Vail, 2014). Indeed, fostering human-nature connections is the 11th FM activity identified by FM organizers (Figure 3.2). Previous research also found a connection between the variety of foods children eat and the prevalence of depression and anxiety during adolescence (e.g. McMartin, Kuhle, Kirk, & Veugelers, 2012). As outlets for nutritious, fresh food varieties, FMs coupled with incentive programs are found to increase F/V intake among participants, including those most at risk of diet-related disorders (Cohen et al., 2018; Engel & Ruder, 2020). Altogether, FM activities identified by this study emphasize public health and food security to a greater degree than the three provincial policy goals.

4.4.3 Role of Farmers Markets as Advocates for Small-Scale Producers

Perhaps the greatest disconnection between FM activities and provincial policy goals is support for smaller scale farmers and agriculture. While EGSPA and the Ivany Report contain goals for enhancing local food production and consumption, they make no provisions for small-scale (or sustainable) agriculture (EGSPA, 2007; the Commission, 2014). In fact, exports and large-scale production is prominently featured throughout the Ivany Report. Further, while it may eventually form part of the regulations, food production is entirely absent from the SDGA legislation (SDGA, 2019).

On the other hand, the most common thread throughout the interviews with FM organizers is a championing voice on behalf of market vendors and small-scale farmers in Nova Scotia. This is not so much a common theme from the data but a theme underpinning almost all other themes. The interviews results show that FM organizers are astute about the issues facing producers in the province; the majority of challenges facing FMs are, in fact, systemic issues facing small-scale producers in the province (see Figure 3.3). Indeed, much of the participant narrative in Chapter 5 is dedicated to the importance and plight of market vendors and small-scale farmers in particular. The results of the content analysis of FM public statements also highlight the primary function of FMs as supporters of producers in the

province, domestic food production and consumption in NS, though FMs would do well to clarify the scale and types of agricultural practices among their vendors in their statements. Nevertheless, 17% of the FM statements studied support small-scale producers and 10% sustainable food production in particular.

The results reinforce that, at their root, FMs are created by and for farmers, and that they play an important role in enabling smaller scale agriculture in their regions (Stephenson, 2008; Gillespie et al., 2007). By providing producers an accessible and low-risk space to sell directly to customers, they make local food more accessible and increase its uptake. FMs can also act as the link between government and small-scale producers by securing funding, advocating for producers, and providing context for policy (Christensen & Phillips, 2016). Conversely, the three policies included in this study lack recognition for small-scale farmers and agriculture in NS. This brought to light a need to look at the disconnect between policy goals and FM goals more closely in Chapter 5 by further exploring the challenges facing the FM sector in Nova Scotia, further complicating the picture of the FM network in NS.

Key takeaways

- Policy goals/focus areas are not supportive of FM activities that aim to improve social well-being including community engagement and social interactions, cultural activities and expression, food security and public health.
- Another key discrepancy between FM activities and provincial goals is that the policies do not encapsulate the primary function of FMs as enablers of smaller scale producers and agriculture in Nova Scotia. Chapter 5 further investigates this disconnection.

Chapter 5. Crafting a Narrative of Farmers Markets in Nova Scotia

5.1 Introduction

The evidence presented in Chapter 4 demonstrates that primary FM activities, particularly those having to do with social well-being and small-scale agriculture, do not organically fit within existing sustainability-oriented policy in NS. This may be indicative of divergent developmental pathways between community embedded FMs and provincial sustainability objectives. The situation can be likened to the policy drift that occurred with Aramis, an experimental personal rapid transit system in Paris, whereby stakeholders had collectively agreed on an expansion strategy but, upon returning to their insular circles, what was once a collective vision became more and more disparate as the technology and budget ran amok (Latour, 1996). The results of both the content analysis and the inductive analysis indicate a need to further integrate policy goals and FM activities. This called for a new methodology to explore the disparity and provide insight on how to reintegrate government policy and FM aims in NS. With this in mind, narrative interpretation of participant discourse was used to present a cohesive story about the FM sector in NS, contextualizing the fundamental challenges FMs face, where policy went astray, and where government and FM interventions may be needed to enhance the sector's capabilities and impact.

5.2 Narrative Inquiry

Narrative Inquiry (NI) is a qualitative methodology that attempts to understand lived experience through storytelling, which can precipitate new theoretical perspectives on a particular phenomenon (Clandinin, 2006). Using narrative as both the method and phenomena of study, participant stories are captured in the field as data and then translated/analyzed by the researcher into research text (Clandinin & Connelly, 2000). This is an iterative and reflexive process and is particularly effective in expressing historically supressed voices; NI has been widely used to translate the complex experiences of people with disabilities, people of color and women (Bloom, 1998). The aim of NI is to understand and ultimately to theorize about, not just describe, people's lived experiences. It can be particularly useful in capturing what Bloom calls *nonunitary subjectivity* among people, as opposed to *unitary subjectivity*, which "denies the possibilities of changes in subjectivity…and ignores the multiple subject positions people

occupy" (Bloom, 1998, p.3). NI was chosen for this study given that local food is inseparable from the personal, lived experience (DeLind, 2011), thus NI is used with the intent of incorporating more personal, poetic, and place-based elements into the research. According to Josephsson and Alsaker (2014), when working with multiple storytellers in one narrative, as in the case of this study, researchers must strive to present the complexities across participants while preserving the integrity of the individual experience. This study marries NI and organizational studies, which uses the dynamic between multiple storytellers "to depict the unique character of a company" (Clandinin, 2006, p. 384).

Using the interview transcripts, NI was used to bring together the communal and individual experiences and expertise of FM organizers in NS. While the narrative is driven by the commonalities between participant discourse, the researcher attempted to highlight as many perspectives as possible on each of the central topics that emerged from the interviews, following the guidance of Josephson and Alsaker (2014). The collective voice of the resulting narrative was interpreted from across all 30 participants. The analytical approach involved using significant events or what Clandinin and Huber call "tensions" or "bumping places" within and between participant discourse to drive the narrative (in press). In this case, the significant events or bumping places constitute the challenges facing FMs in meeting provincial goals and growing their impact.

The title of this chapter—*Crafting a Narrative of Farmers Markets in Nova Scotia*—recognizes that there are many potential narratives on FMs in NS. This study is simply one of them. It is based on an interpretation of discourse across all 30 participants to form one collective voice. Of course, participant experiences and perceptions diverge across topics. While the narrative is driven by the commonalities between individual participant narratives, the collective narrative attempts to highlights as many perspectives as possible for each of the central topics that emerged during the discussions.

The layers of meaning presented below are not proposed as linear, objective truths universal to FMs or FM organizers in the province. Simply, they are an interpretive word picture of the evolving, nonunitary subjective narratives across participants. In terms of its structure, this chapter is broken down into 12 sections that begin with participant narrative (contained in

textboxes), followed by a discussion to ground elements in existing research and theory, followed by key takeaways for the section. Direct participant quotations are used to illustrate and introduce each piece of the narrative.

5.3 Towards a New Vision of Agriculture in Nova Scotia

5.3.1 Shifting the Dominant Government Narrative

"There's no value put on our food. There's value put on quality over quantity" (Participant 30).

Textbox 5.1 Lack of recognition and support for small-scale agriculture in Nova Scotia.

While political agendas and mandates may claim otherwise, the provincial government continues to demonstrate a distorted valorization of food that prioritizes highly centralized, intensive farming and exports. Such farms typically rely on one or two crops, which can threaten food security, and depend on outsourced labor, which is not always available as demonstrated by COVID-related border closures, labor shortages and interruptions to food supply chains[1]. When it comes to food, such a mindset consistently favors quantity over quality despite the high costs to the environment, biodiversity, and public health. Yet, large agricultural programs have become essentially embedded in the Department of Agriculture. This distorted mindset is felt and experienced by small-scale farmers. This sentiment of "falling through the cracks" is mutually felt by FMs, who are integral to local, small-scale farming. In essence, the government places nowhere near enough value on small-scale domestic food production or, by extension, on FMs.

The situation calls for a shift in political will and government leadership to reflect a more collective vision of the future of agriculture where small-scale, mixed, sustainable farming is supported and encouraged as an invaluable resource. These are the farmers who tend to sell at FM as larger operators tend not to rely on FMs. These farms tend to be the most beneficial for the air, soil, water and communities. Food is grown in smaller amounts but with greater diversity, resulting in higher quality food. As a result, these farms are also resilient—if one crop fails, another is likely to flourish, contrary to farmers who invest in one crop. With proper supports, small farms can produce and have the potential to scale up. One small farm cannot feed all of NS but, together, a large collection can feed a significant amount and surpass our 2020 goal of 20% local food consumption.

[1] Canada has come to increasingly rely on temporary foreign farm workers, with record numbers employed in 2019. COVID-19 border closures resulted in a 14% decrease of these workers in Canada's agricultural sector (Falconer, 2020).

The underlying notion in the narrative above is that participants conceptualize FM producers as environmentally sustainable in describing their practices, i.e. "mixed", "beneficial to the air, soil, water and communities". The idea that sustainable agriculture can have a positive effect on the environment is well established (Horrigan, Lawrence & Walker, 2002;

Mazzocchi & Marino, 2018; Reganold & Wachter, 2016). Most participants were knowledgeable about vendor practices, e.g. number/type of workers, pesticide use (no-spray, pesticide-free, certified organic), level of automation, use of heated/unheated greenhouses, etc., only those who were relatively new in their positions (2) reported unfamiliarity with producer practices. Several participants (7) reported conducting farm visits while some (2) did not consider monitoring vendor practices as a priority (note that this was not explicitly asked of participants). Nevertheless, empirical data is lacking on the sustainability practices among FM producers to be able to provide an accurate and comprehensive picture of these food system actors. Significant benefits for the FM sector could arise from hiring a third-party to conduct a province-wide survey of farmers and other producers selling through FMs and other direct markets in the province, collecting data on farm size (by acreage and revenues), output of products, employment practices and other conditions on farms as well as information on production, processing, transportation and marketing practices. These metrics, collected from among farmers who sell through FMs and through direct markets, which constitute only 23.6% of farmers in NS, could also be measured alongside those who sell through conventional markets (Statistics Canada, 2018). Doing so could have a profound impact on policy and public support around local food, which is arguably the ultimate aim of the narrative in Textbox 5.1.

Textbox 5.1 also speaks to the interlinked nature of FMs and small-scale farmers in NS in that the challenges faced by one are experienced by the other. According to participants, lack of government and public support for small-scale agriculture are the top barriers to grow the FM sector and expand local food consumption followed by a societal bias towards large-scale agriculture and an export-oriented economy (Figure 3.2). The narrative contends that smaller scale farming is not being taken seriously by the province even though one of its mandates is to promote local agriculture, as enumerated by Goals T and U in EGSPA and Goal 16 in the Ivany Report (EGSPA, 2014; the Commission, 2014). Regional and community planning is also a main focus of the Ivany Report yet there is little provincial policy in terms of planning for community food procurement or supporting direct markets in NS (ACT for CFS, 2014; Roberts et al., 2008). Further, how domestic food production will be incorporated into the SDGA goals has yet to be

seen. A report on the potential for increasing direct markets in NS also highlights the need to shift how the provincial government recognizes agriculture in NS (Roberts et al., 2008):

> Policies must recognize that modern agriculture includes farmers and activities that may not fit into the definition of agriculture as a production-oriented business. Policies need to be developed that encourage all levels of government to support the future development of agricultural direct-marketing opportunities in Atlantic Canada (p. ii).

Key takeaways

- Empirical data on the production practices of FM producers, measuring their sustainability compared to conventional supply chains, could positively contribute to public policy on small-scale agriculture and direct markets.
- There is a need to increase government protections and support for both small-scale producers and for direct markets on which they rely (ACT for CFS, 2014). This includes expanding subsidies and funding options for FM and small-scale farmers.
- To form a larger part of public policy, policymakers should incorporate sustainable agriculture and local food as key elements in the SDGA regulations and goals.

5.3.2 Expanding Promotion and Education for Local Food

> *"I think what's been missing is the support that's needed. These farmers are doing everything that they can do. They're grinding and they're working, and they're showing up at markets and they're selling and they're educating people that are coming. What we're struggling with specifically is increasing the customer base. The people that are supporting the market are going every week and they're loving it, but how do you reach somebody who maybe hasn't bought into the value of local food?" (Participant 15).*

Textbox 5.2 Gaps in promoting and educating consumers on local food in NS.

Government actions need to be more in line with their mandate to promote local food. There is important work being done around start-up funding and forgivable loans but there is still much work to be done in the realm of other non-financial policies. To create demand, policymakers should lead by example and source locally grown food for government events. Strategies must also target education and promotion on local food. The responsibility of education and promotion seems to currently fall to FMNS, individual FMs and farmers. It should be noted that farming and advertising are not compatible; farmers often do not have the time, energy, or often the desire to market themselves and their products.

The recent switch from the provincial buy-local campaign, Select NS, to Taste NS has left some gaps in promotion. Namely, the new campaign is overly focused on alcohol producers, chefs and restaurants who source local products. These actors are integral to the local food movement. However, primary producers are just as essential yet go underrepresented in the Taste NS campaign, which fails to connect back to FMs and farmers as Select NS did. While FMNS can fill some of these promotion gaps—they have already done a lot in this area—there is still a need to reach a greater audience. Further, the funding for Select NS is going towards Taste NS. As a provincial buy-local campaign, it has a duty to promote the primary producers underpinning the local food movement in NS.

Many people are quite willing to support local but there is a need to reach people who have misperceptions or who don't already know or care about local food. There is also the need to fight the stigma that food is inherently more expensive at FMs. Further, some people genuinely don't understand about nutrition, where food comes from, or know how to prepare healthy food. This is an educational barrier where school systems have essentially failed. People's comfort level with being able to prepare nutritious food that they buy at a market is a barrier. Above all, local food needs to be easy to prepare to take the "elite-ness" out of it. Education must also include educating consumers about the economic impacts of keeping dollars within the community and how supporting NS producers creates demand for those products so people can learn how they contribute to their own community's food security.

The narrative results in Textbox 5.2 reinforces previous calls in NS that local food to be incorporated into provincial procurement policies (ACT for CFS, 2014; Scott & MacLeod, 2007; 2010), as well as for policymakers to incentivize, mandate and/or encourage local food procurement among health care institutions, universities and schools (Linton, Keller, & Duizer, 2018; Scott & MacLeod, 2007). Indeed, provisions for local food are currently absent from government procurement policies (e.g. Government of Nova Scotia, 2016).

The results also suggest a gap in public promotion and the need to re-structure/expand the Taste Nova Scotia buy-local campaign to promote a greater amount and array of primary

producers with participants suggesting that it is overly focused on value-added products. According to the Taste of Nova Scotia website, as of October 2020, 47% of their membership consists of restaurants, 23% craft alcohol producers and wineries, 15% secondary producers and only 12% primary producers: 15 growers, 7 seafood producers, 2 dairies and 1 livestock producer (Taste Nova Scotia, 2020). The impact of the change in provincial campaigns was noted by several participants (3) who felt that a robust provincial campaign is crucial to supporting NS producer viability. Further, participants emphasized that producers, particularly primary producers, are wary of taking it upon themselves to enhance their advertising given the dissolution of Select NS. The issue is deserving of further exploration, speaking to a wider array of stakeholders to understand what impact(s) the transition has had on primary producers who are underrepresented in the Taste NS campaign.

Beyond promotion, the narrative in Textbox 5.2 contends that there is much work to be done around nutrition education and the development of food preparation skills related to locally available food in NS. Table 5.1 connects the educational barriers identified in the narrative to supporting literature.

Table 5.1 Discussion of educational barriers to growing public support for local food in Nova Scotia.

Educational barriers	Supporting literature
Lack of food preparation skills and familiarity with locally available foods.	• Canadians are cooking less and sharing less meals at home (Charlebois, Somogyi, & Kirk, 2020). • Being able to use locally available F/V needs to be more widely taught in schools and made more accessible to low-income and underserviced communities (McIsaac et al., 2015; 2019; Young et al., 2011). • FM incentive program participants face not having the time or knowledge to prepare the foods they purchase through these programs (Ball et al., 2019; Leone et al., 2019). • Smithers, Lamarche, and Joseph (2008) contest the role of FMs as key drivers of consumer education, concluding that, at FMs "knowledge is most often dispensed one food item at a time" (p. 346). • Early education is crucial to building nutrition and cooking skills and addressing what constitutes a systematic problem in Canada (McIsaac et al., 2015; 2019).

Table 5.1 (continued)

Educational barriers	Supporting literature
Lack of nutrition literacy among consumers, particularly youth/children.	• Only 25.5% of Nova Scotians meet their daily recommended intake of F/V servings per day while 36.8% of adults and 24.8% of youth are either overweight or obese (Statistics Canada, 2020e). • Ultra-processed foods constitute almost 50% of calories consumed in Canada (Desrochers & Shimzu, 2012; Moubarac, 2017). • One third of the calories consumed by Canadian children and adolescents come from food sources not recommended by the Canadian food guide, i.e. exceed thresholds for fat, sugar, and sodium content (Jessri, Nishi, & L'Abbe, 2016)
Consumer misperceptions about local food and lack of awareness among consumers about the benefits of supporting local producers	• Local food remains under 20% of food purchased by Nova Scotians (One NS, 2020; Scott & MacLeod, 2010). • Consumers commonly perceive local food and FMs as elitist and expensive (Salisbury, Curtis, Pozo, & Durward, 2018). • The cost of local foods is more often comparable or less costly than imported food (Lülfs-Baden et al., 2008; Noseworthy, 2013; Ruelas et al., 2012) • There are advantages to keeping dollars within communities from an economic and community food security standpoint (Fang et al., 2013; Kaiser, 2011; Marino et al., 2013).

As nutrition interventions, FMs can indeed be part of the solution to the educational barriers identified in Table 5.1; FM vendors can and do play a part in imparting product and price information to customers face-to-face (Lowitt, 2009; O'Kane & Wijaya, 2015), and they can offer educational activities and cooking demonstrations, partnering with youth organization or local chefs (Montgomery-Dupe, 2020). However, the narrative highlights the need for a systematic shift and the implementation of school nutrition policies to a greater degree, which is backed by the literature. This involves institutionalizing nutrition education, cooking skill development and food literacy in the curricula of schools in NS, focusing on locally available, affordable in-season foods and teaching students how to prepare easy, nutritious meals (McIsaac et al., 2015; 2019).

Key takeaways

- There exists a gap where public education and promotion must play a larger role in increasing demand for and knowledge surrounding local agriproducts in NS.

- Government procurement policies should make explicit and intentional provisions for local food to reflect their political mandates.
- The Taste Nova Scotia marketing campaign may not be delivering intended benefits to NS producers, particularly primary producers. Stakeholders should explore the need to expand the Taste Nova Scotia campaign to include a wider array of members and/or direct funding towards other provincial strategies to promote local producers.
- FM should explore offering cooking demonstrations in tandem with incentive programs, build food preparation skills among participants, and address other barriers to participating where possible.
- Education on (local) food, food preparation, and nutrition should be more widely incorporated into school curricula in NS.

5.3.3 Investing in Local Distribution Capacity and Diversifying Outlets

"Farmers markets themselves can accomplish a lot. But you put farmers markets on wheels with online technology and build food hubs and then that has even more potential" (Participant 17).

Textbox 5.3 The need to increase local distribution capacity and alternative distribution outlets in Nova Scotia.

By creating online marketplaces and distribution networks, FMs can extend their reach and capacity to deliver all the benefits of local to more people in more places. In this regard, the Wolfville FM has become a trailblazer for other markets in NS, particularly during the pandemic. Other proven ways that increase access to local food are market stores, which have all the convenience of a brick-and-mortar store, allowing people to access local food outside of FM hours, while still serving as a community hub for social connections and subscription services like CSAs. There is also potential to boost access to local food through non-market avenues. The Pan Cape Breton Food Hub also pre-dates COVID-19 as a resource for farmers and other producers to post and sell online what they have on hand as opposed to grocery stores and wholesale customers who typically require a minimum amount of product. With existing infrastructure and home delivery in place, the Food Hub was quick to partner with the Cape Breton Farmers' Market to allow their vendors to continue offering their products when many FMs closed their doors or delayed opening in the spring of 2020. These options can greatly benefit farmers and other producers, they can act as steppingstones to larger markets like grocery stores.

Distribution is widely known as a key gap to increase local food consumption. Even if there is increased demand and procurement policies in place, there is still a need to move local products, and food distribution is not cheap. It must be supported and nourished through funding and by building networks and relationships, there is a need for intentional leadership, policy and planning. There is currently a lack of options for FMs to secure funding for their alternative outlets.

The narrative in Textbox 5.3 describes the benefits of diversifying FM outlets and distribution methods, using the Wolfville FM as a notable example. Since 2018, the Wolfville FM has been delivering weekly orders placed online to ten locations across HRM and the Annapolis Valley (Thompson, 2020a). This online platform, dubbed the Wolfville Farmers' Market to Go or WFM2Go, was able to build and sustain relationships with restaurants, health centers, businesses and other customers outside of the regular market (Thompson, 2020a). When COVID-19 social distancing regulations came into effect and the physical market closed its doors, WFM2Go orders grew from under 100 per week to over 500. They increased deliveries to twice a week and were able to hire more employees all while integrating new health and safety regulations into their process (Thompson, 2020a). The narrative also contends that the Pan Cape Breton Food Hub also played a significant role in keeping local food in circulation when the pandemic hit, taking on food vendors from the Cape Breton FM, which has reportedly been a resounding success (see Sullivan, 2020). Farmers market stores are also

becoming more prevalent in NS; the Neighborhood Goods General Store sells five days a week on behalf of Halifax Brewery Market vendors and the Warehouse Market, a partnership between four NS producers, is open four days a week in North-End Halifax (Afishionado Fishmongers, 2020). Market stores are also in the works for the Wolfville and Cape Breton FM (Montgomery-Dupe, 2020).

Online ordering, delivery, food hubs, and market stores support local farmers and businesses by providing an innovative way to sell products and access new customers beyond traditional FMs. Inconvenience is one of the most frequently cited barriers to FM use, not just for customers but for vendors as well (Fang et al., 2013; Garner et al., 2020), and participants agreed local food must be made more convenient and a larger part of everyday life. As suggested by the narrative in Textbox 5.3, extending FM reach through delivery/pick-up services and market stores is a step in this direction. As the narrative points out, these models can help producers sustain their businesses and expand to larger markets like grocery stores, which also play an important role in building food security in NS. Coley (2017) found that grocery stores in NS are particularly vulnerable to food shortages given their overreliance on perishable imports, yet Nova Scotians procure 90% of the meals they eat from grocery stores (Coley, 2017). On average, these stores can run out of stock in two days (Coley, 2017). Noseworthy (2013) concluded that there could be significantly more effort in getting local food into grocery stores in NS, particularly from the standpoint of securing emergency food supplies and mitigating future interruptions to global supply chains.

Key takeaways

- There is much room to increase access to and the convenience of local food while improving the sustainability of FMs through alternative distribution channels such as FM online platforms, delivery services, and FM stores.
- When possible and practical, FMs should explore alternative distribution options, but these ventures must be met by intentional funding options.
- The narrative identifies a need to increase and diversify funding options available to FMs (as well as to food hubs) for online platforms, market stores and delivery services.

5.3.4 Gap in Processing Infrastructure for Local Products

> *"If we had our own facility [abattoir] on Cape Breton, it would reduce the financial cost to the farmer, it would reduce stress on the animal, having to be shipped quite a distance, and it would probably encourage more of them [farmers] to increase what they already raise now, and maybe other people will get involved because right now it's just cost prohibitive for them to do that" (Participant 30).*

Textbox 5.4 The lack of physical processing infrastructure for Nova Scotian producers.

Another major gap to grow small-scale food production in NS is limited processing infrastructure. To sell commercially, meat producers must have their animals slaughtered in places that meet specific regulations with onsite inspectors, both of which there are relatively few of in the province. With limited inspectors and abattoirs, it can be difficult to coordinate times when producers can bring in their animals to get them to market on schedule. Before COVID-19 took its toll on processing facilities and feedlots, it was more profitable for a famer to rear a calf in Cape Breton, ship it to a feedlot in Alberta to be raised, slaughtered and sold there. Egg grading stations, abattoirs and butchers can be few and far between in NS. As a result, the distance some farmers must transport their goods to be processed can become a large disincentive. Many producers on the South Shore take their animals to the Valley to have them slaughtered while beef farmers on Cape Breton Island must send them to the mainland. Further, only graded eggs can be sold commercially on platforms like WFM2Go, the Pan Cape Breton Food Hub, and other online markets. Non-graded or "farm fresh" eggs must be sold directly from producer to consumer, which severely limits market options for small-scale egg producers in NS. Getting eggs graded can quickly become unprofitable if the producer must travel a great distance to a grading station.

The main themes within the interpretation of participant narrative in Textbox 5.4 are linked to the need for more robust processing infrastructure in NS, echoing the findings of previous research in this area (e.g. ACT for CFS, 2014; Andrée et al., 2016; Scott & MacLeod, 2010). The narrative describes a shortage of abattoirs and egg grading stations in NS. There is one federally inspected abattoir for red meat and one for poultry remaining in Nova Scotia, animals slaughtered outside of these facilities must be sold within the province (Abattoirs in Canada, 2020). As of August 2020, there are only 12 provincially inspected red meat abattoirs and 10 provincial poultry abattoirs in NS (NSE, Environmental Health and Food Safety Division, n.d.). The only red meat abattoir in Cape Breton closed in 2018 (CBC News, 2018). Over 90% of the beef consumed in Canada is processed at a select few plants, several of which were

significantly impacted by outbreaks of COVID-19 among staff, causing interruptions at the processing level (Killawee, 2020). There are only 12 egg grading stations in NS (Government of Nova Scotia, 2017). As per NS regulations, eggs must be graded–sorted and classified–to be sellable to restaurants or (non-direct) retail establishments in NS, which includes online sales such as WFM2Go (NSE, Environmental Health and Food Safety Division, 2018). Uninspected eggs or "farm-gate" eggs must be sold to the final customer. The narrative brought these issues to the fore, identifying the need for more and better options for small-scale producers in NS, particularly livestock and egg producers.

Key takeaways

- There is a lack of processing infrastructure and marketing options for NS livestock producers, particularly in Cape Breton.
- There is a real need to build processing capacity in Nova Scotia through intentional policies backed by funding including for provincially inspected abattoirs, egg grading stations, and abattoir inspectors. Mobile meat processing could also be explored as an option (Evans-Cowley, 2011).
- Marketing options should be expanded for provincially inspected meat and farm-gate eggs.

5.3.5 Scale-inappropriate Food Regulations

> *"If you were in Europe and you were at a market and they were selling cheese, they're not going to be in fancy refrigerators and all of that—it's cheese… But here there are strict refrigeration rules. If an immigrant has come from a country where they have 'logical food markets' and people have been selling by the side of the road for 1,400 years and people don't die, they come here, and they see these rules that are just built up against them" (Participant 9).*

Textbox 5.5 Scale-inappropriate regulations faced by small-scale producers and FM vendors in Nova Scotia.

The opportunity for producers to start at FMs can be stifled by rigid red tape born out of outdated government structures and modes of thinking. While many of the regulations are sound and invaluable, some seem to have been made based on fear, not logic or lived experience. They can also be inconsistently enforced, and contradictory information disseminated by food safety officers. As a result, interpreting and understanding the regulations often falls on farmers and other FM vendors.

Prepared food vendors are required to do their prep work in a commercial kitchen[1]. However, the utility and accessibility of shared commercial community kitchens can be overrated. Beyond their rental price, which can be a barrier for producers, they have several other downfalls. As with shared farming equipment during harvest, people run the risk of needing the kitchen at the same time. There are instances of vendors who could no longer attend a market as they were unable to access the shared kitchen space. A logical solution may be for governmental agencies to take personal kitchens more seriously. Giving people the option of using their own kitchen, all while carrying out proper inspections, could encourage more prepared food vendors at FMs.

Food safety regulations can also be particularly daunting when it comes to meat, dairy and eggs. It is burdensome for producers to get their processed dairy products approved, e.g. milk, butter and cheese, which explains why there is little local dairy available in the province. Some of these rules are compounded by the lack of processing infrastructure in the province, e.g. restricting small-scale egg producers to farm-gate sales. Many regulations cause high start-up costs for producers such as purchasing all the necessary stainless-steel equipment when starting out as a dairy farmer[2]. Over-regulation of local food production and marketing also discourages value-added products and collaboration between FM vendors. A vendor selling breakfast food would be prohibited from using non-graded eggs from a fellow vendor[3].

Food safety regulations can be antagonizing to recent immigrants in Nova Scotia, who can face a harder time navigating them because of education, language or cultural barriers. Some are also coming from countries with "logical markets" in contrast to the highly regulated markets of Canada. Food safety is very important to the FM sector; however, there are regulations that could be tweaked to reflect the province's goals to increase opportunities for New Canadians, enable small-scale food production, and boost local food consumption. They could also be more reflective of public demands and desires.

[1] All food classified as potentially hazardous (meat, dairy products, cut F/V) must be prepared in an approved kitchen facility; this excludes home kitchen use (NSE, Environmental Health and Food Safety Division, 2018).
[2] Producers must ensure that all surfaces in contact with milk must be stainless steel. Start-up costs have been estimated at $500,000 for small-scale dairy farmers (Sooksom, 2013).
[3] See the guidebook for public markets in NS, p. 9, for this regulation (NSE, Environmental Health and Food Safety Division, 2018).

In calling attention to the obstacles small-scale producers face in getting their products to market, the narrative emphasizes the regulatory burden for these producers in NS,

particularly among meat, dairy, and egg producers. The results also point to the lack of accessible, low-cost kitchen spaces for prepared food and secondary/tertiary producers in NS, as has been highlighted by previous research (e.g. ACT for CFS, 2014). Finally, these findings suggest there is a need to investigate any inconsistencies in communicating and enforcing existing regulations with FM vendors and other small-scale producers in NS.

The narrative interpretation in Textbox 5.5 reinforces the notion that food safety regulations in North America are scale-insensitive and discouraging to small scale production, which echoes previous findings (e.g. Parkins & Craig, 2009; Scott & MacLeod, 2011). DeLind (2002) describes food regulations as a "surrogate for trust" (p. 200), yet the proximity between producers and consumers at FMs has been found to drive accountability and motivate social responsibility within the food system, as opposed to the depersonalized nature of the industrial food system (which incited the need for regulation in the first place) (Knezevic, 2016; Ruzek, 2015). FMs and other bottom-up initiatives can be likened to desire paths in a park or on a University campus in that they represent the everyday ways users respond to the existing architecture. Soubry, Sherren, and Thornton (2019) use this metaphor to describe the efficacy of bottom-up endogenous agriculture in the Maritimes, including FMs, for mitigating and adapting to climate change, describing them as "manifestations of the common will" (p. 431). This metaphor is also applied to the informal food economy that takes place outside the regulated economy while continuously informing it (e.g. hunting, foraging, bartering) in that "…some eaters see food safety policy as inadequate, they simply create their own pathways across and around the official blueprint" (Knezevic, 2016, p. 411, 413). The design of the regulatory environment should be continuously improved and responsive to everyday social practices as, "Only through a mixture of policies (formal economy) and economic freedom can the [farmers markets] help promote localism, create jobs and benefit the community" (Ruzek, 2015, p.28).

Key takeaways

- There is a need for scale-appropriate, reflexive food safety regulations to remove regulatory barriers for small-scale producers.

- The utility and cost of shared kitchen spaces should be reevaluated with the aim to increase the viability of small businesses (this may include revising regulations to permit personal kitchen use).
- Food safety regulations may require clarifications and increased communication with producers on their meaning and implementation so there is less room for interpretation.

5.3.6 Crossroad Concerns: Threats to Agricultural Land in Nova Scotia

> *"It's really quite disconcerting to see this rampant development by people flocking back here to buy inexpensive farmland… it removes that land from a farmer and so what we have is farmers taking down entire forests so that they can plant crops to feed their millions of chickens because they can't find an affordable cornfield to grow corn" (Participant 23).*

Textbox 5.6 Farmland insecurity and the threat of development to agriculture in Nova Scotia.

When it comes to small-scale food production, two crossroad issues are: 1) encroaching development; and 2) farmland insecurity. There is a known shortage of land in NS with much tied up in private ownership and much land lying unproductive. The farming generation is also aging and adopting more manageable home gardens. Despite the shortage, land is relatively inexpensive in NS, encouraging investors to purchase and convert farmable land to non-farm use such as retirement homes and other developments, decreasing the total amount of productive land in NS. The government also seems to have taken a real interest in mineral exploration, issuing significantly more mineral leases in recent years. These actions run counter to what political platforms promise citizens. Nevertheless, mineral exploration proceeds without public input; only when a mine location is chosen can the public express their concerns as part of the environmental assessment process. Property rights are just as precarious. The province has ultimate authority over mineral rights and can lease privately-owned land to mining companies[1]. Farmers and other producers don't have the energy or time to protest mines, development, or fight for their land rights. The crux is that they should not have to. Instead of more resource exploration and development, the provincial government should be conserving farmland and investing in sustainable, long-term ways to feed Nova Scotians.

[1] As set out by the *Mineral Resources Act*, The Crown holds mineral rights and can grant mineral exploration leases while landowners are limited to land surface rights (Department of Natural Resources, 1986).

The narrative echoes previous calls for comprehensive land use planning strategies to strengthen farm owner rights and preserve agricultural land for future generations (Nova Scotia

Federation of Agriculture, 2020). Approximately 70% of land is privately owned in NS, one of the highest rates in Canada, while only 30% is designated agricultural land (Devanney & Maynard, 2008; NSE, 2017b). The number of farms has also decreased since 2011, mainly due to the globalized economy threatening local farm profitability (Nova Scotia Land Committee, 2010). Productive land in NS also faces the threats of resource, urban and other non-farm development in addition to land subsidence, hurricanes, and sea level rise (Nova Scotia Land Review Committee, 2010). There has been much concern raised by community activist groups in response to the proposed and existing expansion of gold mining in the province, e.g. near Tatamagouche on the French River watershed (SuNN, n.d.) and in Sherbrooke near the St. Mary's River (Prentiss, 2019). Investigating the potential impact of gold mining on farms in the province is not within the scope of this study; however, it was a concern raised by several participants (3) and is a real potential barrier in expanding the sector and meeting provincial local food goals.

Key takeaways

- The participant narrative highlights the need for greater provincial action to conserve and protect agricultural land, including from natural resource and urban development. This may involve rethinking its position on gold mining, exploring its potential sector-level impacts on agricultural land and watersheds such as conducting a strategic environmental assessment.

5.4 Addressing Vendor Barriers to Participation at Farmers Markets

5.4.1 Challenges among Market Vendors and Farmers

> *"…[vending] is hard work. It's hard work. You've got to get up really early and you've got to work hard, and then you got to get up and do it again. So, it's just whether people have the fortitude" (Participant 22).*

Textbox 5.7 Hardships of vending and farming in Nova Scotia.

Being a market vendor is difficult and demanding, it requires physical stamina. It is also difficult to make it financially worthwhile and many vendors must supplement their endeavour with other income sources. New vendors can get discouraged; it takes time and effort to build a customer base. The average age of market vendors is on the rise, but it's also described as a "a young person's game". Younger people can be particularly dissuaded by the hardships of farming – the high start-up costs, the lack of government and public support. Farming is especially time-consuming, difficult, and expensive. Input costs can fluctuate dramatically and, while food prices should reflect this, people are reluctant to pay more (consumers still expect to pay $2.50 for a quart of strawberries but they should theoretically be $6 in NS), preventing market farmers from expanding. There are unsaturated markets and opportunities for farmers to expand, diversify, try different types of food like winter or storage crops, expand to value-added products like jams and kombucha, but just keeping up with daily responsibilities proves challenging for farmers. It is also difficult for them to take advantage of FMNS training opportunities, strengthen their marketing and invest in new projects. Farmers are also constantly at the mercy of weather and a changing climate; the 2020 season brought many droughts with crop-killing frosts into late spring[1]. The COVID-19 pandemic also presents new realities for vendors and farmers. Many rely on "selling with the eyes" (think glistening pastries); amid the pandemic they are having to work harder for a fraction of what they would typically make. It has also been difficult for some vendors to adapt to online sales; there are learning curves, not just in using the software, but farmers have to estimate a week in advance what will be ready for harvest to post it online for pre-sales. Not wanting to short-change customers, they tend towards underestimates and thus forgo the sale of anything they harvest above that amount. On the other hand, producers are no longer leaving the farm with unsold products. It is also less energy intensive to drop off or distribute pre-sales to customers versus the commitment of attending and actively marketing at a physical FM.

[1] Intense heat waves left many farmers struggling to find irrigation for their crops and feed for their livestock in 2020 (Palmeter, 2020a), while Environment Canada issued frost advisories into mid-May (Quon, 2020).

The narrative highlights the hardships of being a market vendor and farmer in NS, the physical toll, the effort involved, and the difficulty of becoming economically sustainable, which often leads vendors and farmers to supplement their income with other sources. Galt (2013) found that the prevalence of "self-exploitation" and financial hardship in alternative food networks among producers can be attributed to altruistic values that downplay the need for economic success, placing morality above monetary concerns. Zellweger et al. (2013) found that it was common for family-owned and operated organizations to pursue nonfinancial goals in the name of upholding their business reputation. Many FM vendors rely on other income

sources and 44.7% of farmers in NS seek off-farm work (Statistics Canada, 2018). These economic realities are reinforced throughout the participant narrative in Textbox 5.7.

At the same time, studies continue to find a financial benefit to FMs with many vendors using FMs to improve long-term farm viability, incubate their new business or sustain a part-time venture (Brown & Miller, 2008; De Bernardi, 2019; Feenstra et al., 2003; Vail 2014). Participants reported greater instances of businesses who were able to establish themselves through urban market (see Figure 5.1), hinting at an advantage over rural markets in terms of business incubation. However, several participants noted that it can be difficult for new producers to get their foot in the door at large, well-established markets with existing vendor loyalties. Small, out-of-the-way markets can increase access for these new producers. While participants ranked the economic impact of FMs as their 4th primary activity (see Figure 3.2), they also noted that sales can vary widely between vendors and markets, which is supported by the literature (Brown & Miller, 2008; Experience Market Solutions, 2009; Vail, 2014).

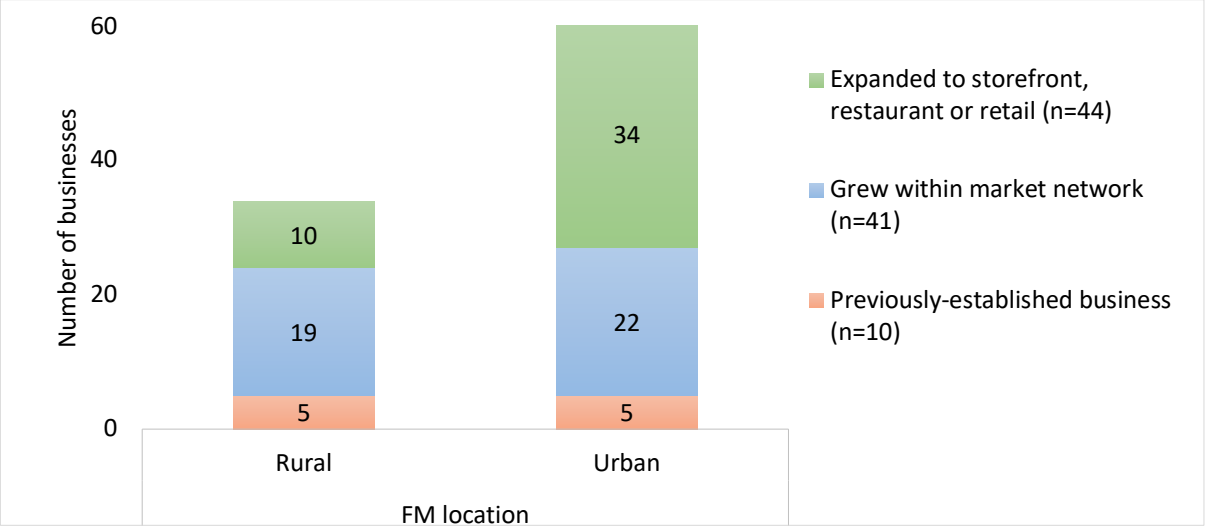

Figure 5.1 Pathways to expanding and establishing among businesses who began at a FM based on case-specific examples given by participants

Participant narrative in Textbox 5.7 also shows that FM organizers are keenly aware of other challenges facing the agricultural sector in NS. As the narrative highlights, NS has a declining and ageing population of farmers who face unprecedented struggles brought on by COVID-19, a declining rural population spread over many small communities, changing weather patterns and prices determined by economies of scale, which can prevent producers from establishing and expanding. In 2016, NS farm operators were the oldest on average in Canada

at 56.5 years, up from the previous census, with only 6.9% under the age of 35 (Statistics Canada, 2018). Moreover, only 5.2% of farm operators in NS had a succession plan in place (Statistics Canada, 2018). The narrative suggests that alleviating the difficulties among vendors and farmers is paramount for FMs and that NS must invest in and build producer capacity, e.g. establish producers' co-operatives, financial assistance and direct subsidies to increase the viability of farming and encourage younger people to enter the field (Scott & MacLeod, 2011).

Key takeaways

- While it can be an economically worthwhile endeavor, vending and farming are difficult livelihoods in NS and require stronger supports from both government and FMs to alleviate challenges where possible and to attract younger farmers and vendors.
- The province needs to explore ways to consolidate efforts among small-scale farmers to increase their capacity, e.g. establish a producer's cooperative and/or provide financial assistance in the off-season.
- Specific FM supports should be directed towards sustaining vendors at smaller, rural markets.

5.4.2 Inter-market Competition for Primary Producers

> *"It's the farmers who bring in the regulars and establish the market—locals aren't going to come every week to buy a painting. The more primary producers you have, the more a market can grow" (Participant 12, from interview notes).*

Textbox 5.8 Shortage of primary producers among FMs in Nova Scotia.

In some areas of Nova Scotia, the competition is not for FM customers but for farmers. This becomes more pronounced away from the Annapolis Valley and in Cape Breton where communities face harsh growing conditions, limited access to FMs, internet, processing infrastructure, farming and gardening supplies. Primary producers are often quoted as the "big draw" at FMs, particularly for locals. Because attending just one market is such a large commitment, farmers are more likely to participate in FMs where they can make the most in sales. This disadvantages smaller, rural markets who cannot compete with larger, established markets for primary producers. Yet, there are many small markets cropping up across NS, leading some in-demand vendors to attend three or four different FMs per week.

There could be more and better coordination within the FM network so that vendors are not stretched so thin. FMNS could step in to coordinate market and vendor distribution throughout the province. Coordinating the smaller markets, either with each other or with larger markets in the area, consolidating their vendors into an online platform while sharing the costs may amount to a greater impact and more customers in the long run. In addition, smaller markets often cannot support full-time, paid positions and are often volunteer-run. A novel idea may be to share staff between smaller markets in order to create full-time job opportunities. Another way to reduce the burden on primary producers is to allow them to drop their products off at FMs they cannot attend and have either volunteers, staff, or other vendors sell it on their behalf. This already occurs informally at a select few FMs in NS, but others have regulations that stipulate only a small percentage of secondary sales or prohibit reselling altogether. While these regulations are necessary to preserve the integrity of FMs and vendor-customer connections, some could be more reflexive to allow for farmers to drop off in-demand produce without it constituting reselling. A primary FM goal, after all, is to able to offer more variety of product while requiring less effort and investment from vendors.

When discussing with participants how to expand the impacts of the FM sector, the following question frequently surfaced: is the answer in having more markets? According to participants, the answer in the short-term tends towards "no" given the current competition for vendors and customers, highlighted by participant narrative in Textbox 5.8. NS already has the highest number of FMs per capita in Canada (FMNS, 2019b) while the number of farmers and farms is decreasing (Statistics Canada, 2018; 2020h). Indeed, 11 of the participants expressed the desire for more produce vendors at their FM (note this was not explicitly asked of participants), but also that these in-demand vendors are struggling to attend multiple markets. The transition to online market sales in the 2020 season was made possible by funding procured by FMNS from the Department of Culture, Communities and Heritage (FMNS, 2019a).

However, a greater proportion of large and urban markets were able to remain open and offer centralized ordering and distribution to customers as can be seen in Figure 5.2. Doing so was arguably more accessible for these markets, who had existing infrastructure, staff and resources (e.g. Sullivan, 2020; Thompson, 2020). Many smaller rural markets were not equipped to offer this option, relying on volunteers and "shoe-string" budgets. This put vendors at smaller rural markets at a disadvantage in continuing to market their goods through the pandemic.

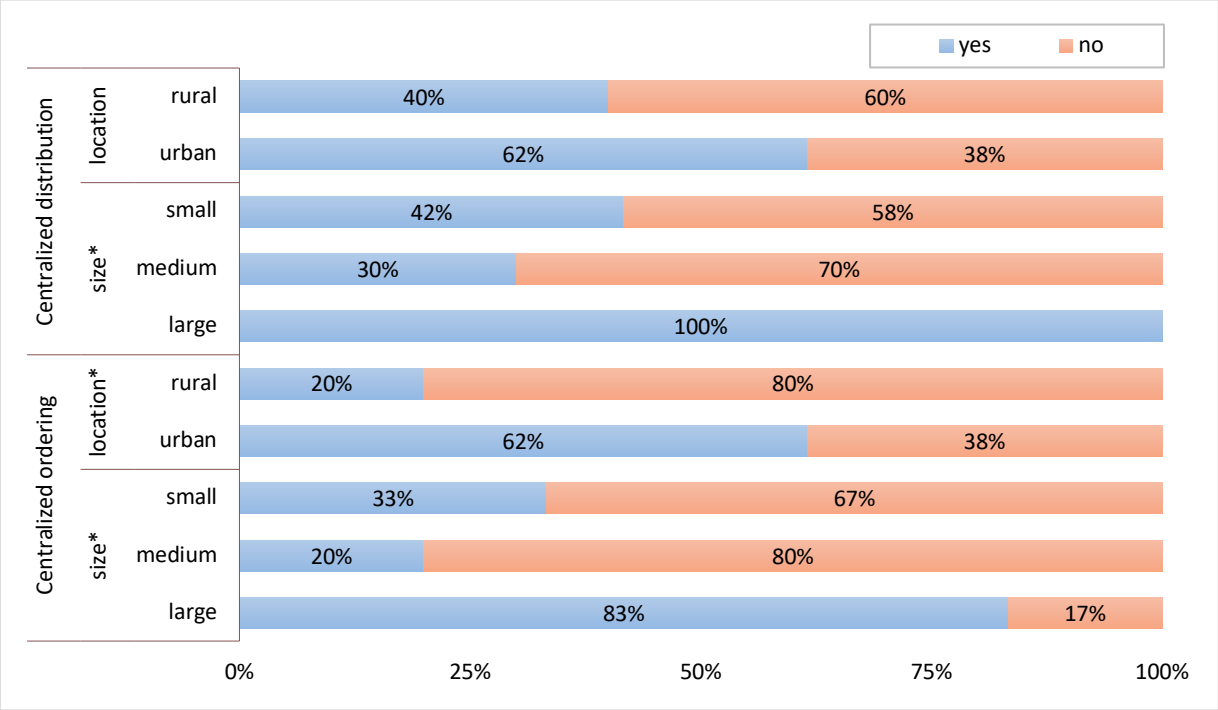

*Figure 5.2 Relative proportion of markets operating in some capacity during the summer of 2020 / not on hold or cancelled due to COVID-19 who offer centralized online ordering and centralized distribution (either delivery or pick-up from a central location). *Statistically significant difference found between 0.01 and 0.05 based on Pearson Chi-Square Test and Fisher's Exact Test when more than 25% of cells had counts less than the expected minimum count.*

The narrative in Textbox 5.8 stresses that FMs and FMNS need to continue to look at ways to alleviate the difficulties for vendors to participate at markets. This includes greater collaboration between smaller, rural markets in order to build capacity and resilience in providing for their vendors. Consolidating vendors from multiple neighboring markets into one online platform and/or distribution space while sharing the costs may amount to a greater impact and more customers in the long run. According to the narrative, another way to reduce the burden on primary producers is to allow them to drop their products off at a FM they

cannot attend and have either volunteers, staff, or other vendors sell it on their behalf, though these individuals should still be knowledgeable about the products to maintain the integrity of the FM and accountability to customers.

Key takeaways

- Participants stressed that the role of FMs is to eliminate barriers and constantly find ways to make it easier for producers and other vendors to participate at FMs.
- FMs should continue to explore options to further collaborate and consolidate efforts between markets, particularly smaller markets, e.g. sharing staff, consolidate online platforms and delivery services, creating full-time staff positions where possible.

5.4.3 Vendor Saturation and Intra-market Competition

> *"Markets should not limit competition between vendors. Having many vendors selling tomatoes gives customers options at markets" (Participant 12, from interview notes).*

Textbox 5.9 Vendor saturation and intra-market competition at FMs in Nova Scotia.

There are many instances of competition between vendors for market space, for example, Annapolis Royal. FM decision makers can and often do place limits on the number of vendors of a particular product type. This is particularly true among artists, craftspeople and secondary vendors such as baked goods or fermentation businesses. FMs can deny vendor applications for this reason, only accepting vendors who sell products that are not already available at their market. This can be discouraging to new and amateur producers in the area. While limiting competition does protect veteran vendors, it also limits options for FM customers. When there are more than one or two vendors selling tomatoes, it becomes a place where people know they can go and buy tomatoes, where they have options. A beneficial idea may be for producers to coordinate with other growers so that they can specialize or invest in products that others don't have time or space for. This kind of collaboration and delegation of work between producers would increase the variety of products at FMs.

As the narrative stresses, many FMs don't have the physical space, facilities or customers to sign on more vendors. This was the 9th most referenced barrier to increase sector impacts according to participants (Figure 3.3). While many markets could benefit from more primary producers, elsewhere the narrative suggests that any increase in vendors must be met with increased government supports and public demand for local. Participants spoke of the need to balance the variety and quantity of vendors at FMs with the customer base in order to grow individual FM sustainably. At the same time, several participants also denounced the

tendency for FMs to inhibit healthy vendor competition. In any case, FMs should be reflexive to their customers and public demand (O'Kane & Wijaya, 2015).

In terms of growing existing FMs, the narrative suggests that it may be more beneficial to grow the network of producers to be able to deliver greater variety and quality of local foods through FMs. Several participants identified the fact that producers are rather insulated and collaborating on projects is an underexplored area. Lowitt (2009) identified the need to research the role of FM as an opportunity to bring together and grow the community of producers in NS.

Key takeaways

- Many FMs in NS do not have the space or clientele to support more vendors. To grow individual FMs, stakeholders should focus on boosting public demand as well as on product diversification.
- There is a balance between having healthy vendor competition at FMs, providing customers with options, and having the clientele to sustain the number of vendors.
- There is potential for vendor collaboration through distributing responsibilities in order to diversify local products and tap into new market opportunities. These efforts should be encouraged and facilitated by FMs and governments at all levels.

5.5 Food Security and Farmers Markets: Re-examining the Cost of Local

> *"The premium pricing should be on the stuff that is questionable, that is genetically super modified and unknown. The stuff that should be what we consider regular price, is our known stuff like the chickens who had the happy life, the carrots that are raised without pesticides and not wrapped in three layers of plastic to get to us" (Participant 9).*

Textbox 5.10 The impact of FMs on community and household food security in Nova Scotia.

The pandemic brought to the fore that subsidizing people a basic living wage is key to achieving food security. This would be more proactive than investing in food security programs like food banks and nutrition assistance programs, which, though impactful, are roundabout solutions. If supply chains are interrupted, as the pandemic illustrated, FMs may be one of the last ones left standing if all else were to shut down. If they are not essential services now, then they certainly would be then.

Prices at FMs are more reflective of the true cost to produce in Nova Scotia and can be more expensive[1]. On some items, vendors can match or outdo grocery store prices, but small-scale farmers cannot currently compete with the industrial food system. However, eating healthy food is more expensive no matter where it is sold. Cheap and unhealthy food brings long-term, unseen costs to public health, environment, and taxes; it should not be more expensive or an elite experience to eat healthy and local. At the same time, we need to realize that paying full cost for food is a privilege—those that can do it should—while FM vendors should try to relieve price wherever possible and markets should expand their nutritional assistance programs for low-income people. Food assistance programs need to move from supporting people to the end of the program to form collaborative, mutually beneficial, ongoing relationships with participants.

Local food needs support to scale up and compete. It requires government intervention in the form of subsidies, infrastructure assistance, and through establishing supportive organizations like a producers' cooperative. It needs innovative ways to consolidate transportation, processing, and storages as well as incentives for private companies to invest and build relationships with producers.

[1] Several studies found local food at FMs was more often competitive with conventionally produced food than it was more expensive (Lülfs-Baden et al., 2008; Ruelas et al., 2012).

The narrative stresses the fact that low-income and poverty, not food access, is the real root of food insecurity, which is "indicative of a state of material hardship that goes beyond problems of food access" (Tarasuk, 2017 p. 6). The narrative highlights the importance of a basic income to achieve food security. In their analysis, Tarasuk (2017) concluded that a basic income would be an effective strategy to address household food security in Ontario. In Nova Scotia, a basic living wage was found to range from $21.80 per hour in Halifax to $16.80 in Bridgewater (Driscoll & Saulnier, 2020). As of December 2020, the minimum wage is $12.55 across the province (Province of Nova Scotia, 2020). Food insecurity is as symptom of a wider, systemic problem that must be addressed through redistributing wealth, raising incomes and welfare programs while food banks, community food organizations, and food assistance

programs, including FM incentive programs, are emergency services to alleviate immediate need among individuals (Evans-Cooley, 2011; Riches, 1999; Voices for Food Security, 2017).

The narrative emphasizes the need to protect domestic food in NS, yet, the support required to increase producer viability contradicts immediate CFS goals:

> At a practical level, advocates of CFS should recognize that some of the short-term strategies that need to be adopted to support the livelihood goals of primary producers as they try to (re)build sustainable food systems may not meet the immediate needs of the whole population, at least not without further policy interventions (Andrée et al., 2016, p. 480).

This means that a suite of government interventions is necessary to meet the variety of needs within the food system in the short-term, including making food more affordable *while* ensuring local producers' livelihoods. The former contributes to CFS while the latter builds community self-reliance, which can contribute to CFS in the long-term (Andrée et al., 2016).

Finally, in terms of meeting the immediate needs of community members, the narrative contends that the role of FMs is to strive to make local food as accessible and affordable as possible; offering high quality products at premium prices does not support this goal (Andrée et al., 2016; DeLind, 2011). Indeed, cost is one of the most frequently cited barriers to purchasing fresh local F/V (Deller et al., 2017; Leone et al., 2019). For FMs to be successful, they must be connected to community members' needs (DeLind, 2011; Thompson, 2020b). This means providing access to basic, fresh food at affordable prices, particularly when located in neighbourhoods most affected by food insecurity (Young et al., 2011). Additionally, coupling FM purchasing with food assistance programs has been shown to increase F/V intake and household food security while benefitting local producers (Fang et al., 2013; Hecht et al., 2019; Savoie-Roskos et al., 2016). To grow FM contributions to household food security, several (3) participants highlighted that the Nourishing Communities Food Coupon Program should aim to build reciprocal relationships with program participants beyond the length of the program, which is supported by both the narrative and the findings of previous research (e.g. Garner et al., 2020; Leone et al., 2019; Schlosser et al., 2019). However, the narrative reminds us that it is important to understand the limitations of FMs and other local food initiatives in terms of

addressing food insecurity; while LFNs and FMs build community capacity and self-reliance – protecting against global interruptions to food supply chains, as the narratives speaks to – we must remember that they form a piece of the larger picture of CFS in NS (Andrée et al., 2016; Kulick, 2019).

Key Takeaways

- Food insecurity cannot be effectively addressed through roundabout, community capacity building efforts, including FMs (Williams et al., 2006). Social transfers and incomes must be increased in order to address food insecurity in NS (Andrée et al., 2016; Driscoll & Saulnier, 2020; Voices for Food Insecurity in NS, 2017).
- FMs contribute to community capacity and self-reliance by supporting domestic farming; they contribute to household food security by increasing access and affordability of local food, including through FM incentive programs.
- FMs in NS should aim for long-term, reciprocal relationships with participants of the Nourishing Communities Food Coupon Program.

5.6 Towards more Inclusive and Socially Just Spaces

5.6.1 Exclusion and Underrepresentation at Farmers Markets in Nova Scotia

> *"I wouldn't say that it's 100% representative of the community, at all. There's lots of people who would walk in and not feel like they're being represented. Unfortunately, that's like most spaces [in Nova Scotia]" (Participant 5).*

Textbox 5.11 Lack of inclusivity among FMs in Nova Scotia.

There are many issues of diversity and community representation at markets in NS. FMs could always be doing more to prioritize other voices. Markets in Nova Scotia can be particularly exclusionary for low-income people, Indigenous Peoples (Mi'kmaq), African Canadians and other racialized people. This is true of most spaces in Nova Scotia where racism is a systemic issue. There needs to be more community effort to address this problem. Markets should continue to look at authentic ways to diversify their spaces to be more meaningful, accessible spaces for marginalized groups. This could involve creating and maintaining relationships with other food access groups, communicating with food insecure communities, and creating programs that can better support low-income people and families in the long-term. Ideally, markets would be located accessible distances to underserviced communities and on public transportation routes where possible. Among some markets, there needs to be greater engagement of youth and children via outreach and educational programming, partnerships with community organizations, and by fostering spaces where families and children can learn and develop skills together while creating memories.

The narrative contends that Nova Scotia's systematic social issues play out at FMs in the province. Indeed, FM organizers identify exclusivity and underrepresentation at FMs as the 14th challenge inhibiting the FMs from enhancing their impact (see Figure 3.3). People of color are underrepresented as vendors, customers, as well as in the institutional foundations of FMs in North America (Agyeman, 2013; Freedman et al., 2016). The narrative demonstrates that this holds true in Nova Scotia, where the majority of FM decision-makers in the sector are cis-gendered settlers of European descent (FMNS, 2019b; Lowitt, 2009). A main focus area of the *Sustainable Development Goals Act* is inclusivity and building an inclusive economy (SDGA, 2019). In line with this goal, FM stakeholders must work to create more accessible and welcoming spaces for marginalized groups, low-income individuals and youth. As suggested in the narrative, this could include reaching out to and building mutual relationships with local community organizations such as social justice and food access groups as well as fostering the community element of markets, attending to the needs of local actors and exploring innovative ways to continue connecting people during COVID-19 protocols. In essence, balancing environmental and social justice efforts at FMs in NS (Alkon, 2008; Aygeman, 2013).

Key takeaways

- The narrative contends that FMs in NS can be exclusionary spaces for people of color, immigrants, low-income individuals, youth and international students.

- FMs in NS should continuously strive to be more inclusive, representative, and accessible spaces for their community members, e.g. creating relationships with social justice and food access groups, diversifying the ways they engage the public and connect them with producers.
- To address accessibility barriers among New Canadians, policymakers should revisit onerous food safety regulations that may be marginalizing people who have immigrated to NS (see Section 5.5.3).

5.6.2 Farmers Markets and Temporary Foreign Workers in Nova Scotia

"I see farmers markets, in terms of temporary and foreign workers, our role might be more in carrying some of the specialty products that they would like to have available that aren't carried and represented by the larger stores so that they can make the foods and things that they are used to from their homelands. And maybe that also involves some delivery to the farm because they get very little time off… I think in terms of farmers markets, that might be more of our role then it would be actually needing those workers for our producers" (Participant 16).

Textbox 5.12 Connection between FMs and migrant workers in Nova Scotia.

Temporary foreign worker programs can be a complex and controversial topic in NS. They are often critiqued as lowering wages among the local work force. Another common perception is that they are replacing local people and farmers who could be doing more to recruit inside the province. However, farm labor is difficult; it requires specialized skills, physical aptitude and endurance. Nova Scotians may be less familiar with or less inclined to do this kind of work. While migrant workers are only here for months at a time, students and local workers can be more temporary than migrant workers who frequently return to the same farm season after season. It can also be problematic to ask farmers to pay these workers more, because then their costs go up and their profit margins go down – many farmers are food insecure themselves[1]. Migrant workers reportedly have varied relationships with their employers in Nova Scotia; they are here temporarily and are occupied with work so there is little effort or incentive from either side to integrate with the community[2]. This ties back to the exclusion of minorities in spaces across Nova Scotia. In this regard, FMs could be of benefit to migrant workers by making culturally appropriate foods more accessible.

There are few connections between FMs and migrant workers in Nova Scotia. Market farmers in NS tend not to operate at big enough scales to employ seasonal migrant workers as farm operators need to have a minimum amount of work to offer their employees. Market farmers often rely on family members, a small number of employees, WWOOFers and other volunteers. In NS, migrant workers are reportedly more common among large-scale producers with time-sensitive monocrops as well as within the seafood sector. However, some relatively larger FM producers are the exception, such as dairy and fruit farmers who attend larger FMs. Some markets may also be connected to migrant workers through their secondary sales e.g. the table grapes at an FM may have been picked by a migrant worker as some markets allow a certain percentage of secondary (domestic) product.

[1] See Voices for Food Security in NS, 2017, p. 10.
[2] The social isolation of migrant workers and lack of off-farm ties within the communities in which they work is a prevalent issue in NS, even after becoming permanent residents (Horgan & Liinamaa, 2012).

The narrative in Textbox 5.12 speaks to the prevalence yet misperceptions surrounding migrant farm workers in NS. At least in North America, FMs have become institutions maintained by white settlers who reinforce a white farmer imaginary thereby they erase the impacts of colonization and the contributions of migrant seasonal farm workers (Alkon & McCullen, 2011; DeLind, 2002; Pilgeram, 2012). There is a known worker shortage in Canada's agricultural sectors; in 2018, 45% of producers were unable to recruit a sufficient number of workers (Canadian Agricultural Human Resources Council, 2020). To compound matters, Canada's demand for farm labour is projected to grow 0.6% per year between 2018 and 2029.

In 2019, almost 2,000 migrant workers came to NS, 75% to work on farms and 18% in seafood processing (Falconer, 2020). These workers have become essential members of our communities and food system yet their temporary migration status places them in a vulnerable position and leads to power imbalances between them and their employers. Allegations surfaced summer of 2020 concerning poor living and working conditions among migrant workers in NS as well as allegations of Canadian employers unlawfully controlling their movements amid the pandemic (Grant & Baum, 2020; Noushin, 2020). As migrant workers are already less able to exercise their rights compared to other workers in Canada, they face disproportionate COVID-19-related impacts (Grant & Baum, 2020); they face increased exposure rates, employer surveillance and isolation from other community members while being less able to access health care and COVID-19 economic relief (AUBANS et al., 2020).

FMs in NS have a responsibility towards temporary foreign workers as institutions for fair, sustainable food procurement (Wilkins, 1995). Among the 30 participants, 22 (73%) reported that their FM had no connection to a producer who employed temporary foreign workers, 3 (10%) spoke of a current connection, 2 (7%) were aware of a previous connection and 3 (10%) were uncertain. Based on these results, it can be said that FMs in NS do rely on migrant workers to some extent. Given the stigma, assumptions and general lack of public knowledge on the topic in province, there is much to be done around boosting awareness and public discourse about migrant workers in NS – the roles they play in our food system and their experiences in NS. Further, the connection between FMs and foreign labour in NS is deserving of further exploration to break down assumptions around LFNS and recognize that they are still embedded in and shaped by a global economy. Researchers at Dalhousie have already identified and are working to fill this gap (Bryan, Fitting, & Foster, 2020). FMs can play a role in increasing awareness and knowledge around migrant workers in NS, particularly among FMs who rely on these actors. FMs can also exert their privilege as established public institutions to advocate for migrant workers' rights and protections in NS.

Key takeaways

- Migrant workers are embedded in Nova Scotia's communities and agricultural sector.

- While few and far between, several FM vendors in NS do rely on foreign labor. There is a need to gather information from FM vendors and the migrant workers on which they rely to further understand and explore these connections and their experiences in NS, as well as how COVID-19 has impacted their mobility, welfare and participation in foreign worker programs.
- FMs in NS can play a role as advocates for fair, sustainable agriculture and lobby for increased migrant worker rights and protections in NS.

5.7 Recommendations for Government and Farmers Market Interventions

The objective of using NI was to express a collective storyline for the FM sector while incorporating the range of different voices and perspectives heard in the interviews. The resulting narrative interpretation explored and analyzed key gaps and challenges for FMs in meeting existing provincial goals. It also shed light on the need to (re)align FM and government mandates identified by Chapter 4. The narrative identified areas where SD policy in NS could reflect FM sector aims more closely. It identified opportunities for government to enable FMs to meet provincial goals, inform new ones and increase the benefits of the sector. In line with this goal, recommendations were developed for the following actors:

1. Policymakers in NS, particularly provincial government departments e.g. Department of Agriculture (see Table 5.2), and;
2. FM decision makers, including managers, staff and board members as well as the FMNS cooperative, comprising of core staff and board members (see Table 5.3).

Table 5.2 Recommendations for government interventions.

Focus area	Recommendations
1. Enable sustainable small-scale food production	1.1 Strengthen provincial support and investments for small-scale food production in Nova Scotia including through direct subsidization. 1.2 Incorporate ambitious goals for sustainable, small-scale domestic agriculture in the regulations under the *Sustainable Development Goals Act, 2019.* 1.3 Make explicit provisions for local food in government procurement policies including mandating that food at government functions be locally sourced.

Table 5.2 (continued)

Focus area	Recommendations
	1.4 Support and incentivize provisions of local food in the procurement policies of health care institutions, institutions of higher education, public and private schools. 1.5 Increase protections for farmland owners and agricultural land in Nova Scotia, including from resource, urban and non-farm development.
2. Enhance education and promotion of local food	2.1 Explore the need to re-structure or expand the Taste NS campaign for primary producers in Nova Scotia. 2.2 Direct funding towards provincial strategies for promoting primary producers in Nova Scotia. 2.3 Institutionalize education on local food literacy and (in-season) food preparation in the curricula of schools in Nova Scotia.
3. Expand distribution and processing infrastructure for local food markets.	3.1 Increase available funding options for FMs (and food hubs) including for online marketplaces, market stores, and FM delivery services. 3.2 Create intentional policies and funds to build processing capacity in Nova Scotia including provincially inspected abattoirs, egg grading stations, and low-cost commercial kitchens. 3.3 Increase capacity of provincial inspectors particularly for abattoirs. 3.4 Support and incentivize greater uptake of locally produced food in Nova Scotia grocery stores. 3.5 Explore other ways to increase capacity among small-scale farmers and enable consolidation efforts e.g. establishing a producer's cooperative, provide financial assistance in the off-season.
4. Revise food safety regulations	4.1 Clarify food safety regulations so there is less room for interpretation and enhance communication with stakeholders on their meaning. 4.2 Investigate and eliminate inconsistencies in enforcing food safety regulations at public markets. 4.3 Explore the impact of existing vendor and food safety regulations on new Canadians, removing barriers where possible. 4.4 Explore and expand options for prepared food vendors including revisiting the possibility of using personal kitchens. 4.5 Create scale-appropriate food safety regulation with the aim of expanding market options for small-scale meat, dairy, and egg producers.

From the narrative interpretation, recommendations also emerged for the FM sector. While many FMs may already engage in some (or all) of the activities in Table 5.3, the narrative identified a need for the sector to come together as a whole around these initiatives. Given that

FMNS unifies over 75% of markets in NS, the cooperative is uniquely positioned to act as the advocate for the individual FMs who, in turn, advocate for small-scale producers. Indeed, the cooperative already plays a critical role in strengthening and growing the sector through promotion, securing funding, educating consumers and conducting research. The recommendations in Table 5.3 are as much directed at FMNS as they are to individual markets.

Table 5.3 Recommendations for FM sector interventions.

Focus area	Recommendations
1. Further support vendors / lessen the burden on vendors to participate in FMs	1.1 Explore options to further collaborate and consolidate efforts and resources between markets, including coordinating vendor distribution efforts, creating full-time positions where possible, e.g. sharing staff, consolidate online platforms and delivery services. 1.2 Consider expanding options for vendors to deliver/drop off in-demand products at FMs they cannot attend, following a market store model. 1.3 Encourage collaboration between growers to distribute efforts/responsibilities, decrease competition, and increase variety of products at FMs. 1.4 When FMs are at vendor capacity or if vendor categories are full, aid prospective vendors in applying to other FMs and exploring untapped markets in their area.
2. Promotion of small-scale producers and education on local food	2.1 Lobby the government to boost policy, security and promotion of small-scale producers in Nova Scotia 2.2 Fill gaps in provincial promotional campaigns by enhancing FM multimedia promotion of small-scale producers. 2.3 Advocate and lobby for processing and distribution infrastructure for local products and small-scale producers in Nova Scotia. 2.4 Expand education initiatives beyond market visitors specifically targeting food preparation skills, shopping skills, the economic impacts of buying local, and assumptions about local food prices.
3. Increase community connections, FM accessibility and representation	3.1 Increase public awareness and advocate for migrant worker rights and protections in Nova Scotia, particularly among FMs with vendors who rely on them. 3.2 Create more accessible and welcoming spaces for marginalized groups, people of color, low income individuals and young people.

Table 5.3 (continued)

Focus area	Recommendations
	3.3 Build mutual relationships with community organization, e.g. food access, social justice groups and continue partnering with community and charitable organizations to deliver food assistance / FM incentive programs. 3.4 Build reciprocal and long-term relationships with Nourishing Communities program participants beyond the length of the program. 3.5 Continue fostering the community element of markets; explore innovative ways to continue connecting people during COVID-19 protocols.
4. Sustain and strengthen the FM network	4.1 When possible and practical, explore alternative distribution options, e.g. online sales, delivery services, and market stores. 4.2 Balance variety and quantity of products, as well as vendor competition, with demand/customer base to grow individual FMs.

Chapter 6. Conclusion

6.1 Study Limitations and Recommendations for Future Research

6.1.1 Limitations to the Analysis of Alignments

This study relied on FM public statements to assess how FM activities align with provincial policy goals. As previously noted, organizations do not always articulate what they do in a mission statement, nor do they always do as they articulate (Desmidt & Prinzie 2011; Toh & Koon, 2017). Though they are widely used in organizational performance research (Babnik et al., 2014; Klemm et al., 1991; Shen, 2019), the efficacy of mission statements as a proxy for organizational outcomes has been the subject of substantive criticism (Collins & Porras, 1996; Toh & Koon, 2017). Alignment with organization outcomes largely depends on the spirit in which statements are developed, implemented, and perceived by stakeholders, particularly among organizational leadership (Braun et al., 2012; Toh & Koon, 2017). Future research should explore the disparity between what FMs say they do in their statements, what FM stakeholders aspire to do, and, ideally, what FMs are actually able to achieve. Such research calls for ethnographic interviews, in-depth case studies or focus groups among individual FMs. Of course, it would be also worthwhile to explore this disparity in a wider sense, looking at the discrepancies between the statements of cooperatives, non-profits and other social enterprises (Braun et al., 2012; Toh & Koon, 2017). Moreover, the majority of the FM statements included in this study were not official mission statements – several were incomplete, and some were only slightly more than advertising. Further studies might look at, when available, FM reports, strategic plans, or, in absence of these, official statements from FM representatives.

This study developed a coding scheme to apply to FM statements based on inductively coding the goals/focus areas of three provincial policies. Deducing the coding categories from these high-level policies resulted in a fairly broad deductive coding template (see Appendix B). Such a top-down approach likely resulted in a mismatch between the coding template and the more localized FM statements, increasing the generality of results. It is recommended that future studies analysing FM statements use an inductive coding technique such as line by line open coding (Corbin & Strauss, 1990). Furthermore, only the goals/focus areas of the provincial policy documents were included in the analysis of FM-policy alignments. Future studies might

code the entirety of the documents to reveal other textual alignments with FMs activities. Finally, future studies should look at greater array of policies for alignment with FM activities, particularly regional or community development plans as localized goals may be more congruent with FM activities.

6.1.2 Limitations to the Analysis of Interview Data

The context in which recruitment and interviews took place, as well as the interview structure itself, is thought to have affected data quality and completeness. Participant recruitment occurred from late April to Mid-June 2020, when many potential study participants were preoccupied launching online FMs, implementing provincial COVID-19 health regulations, securing emergency funding as well as liaising with vendors, board members, and government officials. Daycares and schools were also closed at this time, leaving participants with children responsible for their care and schooling. Many potential participants were also FM vendors struggling to keep their business afloat during the pandemic. To mitigate the time and energy required of participants during the challenging and unprecedented time, interviews were designed to take on average 30-minutes and no more than 1-hour. However, the information sought from interviewees in order to address the research questions was fairly broad in scope. It is likely that these factors impacted data generality and completeness. It is recommended that future studies building off this research strive for more thorough interviews – or focus groups – with fewer participants or limit the scope of information required from participants.

Additionally, there may have been a response bias in that the interviews may not have captured the perspectives of less vocal FM organizers with neutral feelings on FM contributions to sustainability goals. Furthermore, prior to the interviews, no attempt was made to define contested concepts such local, food security/insecurity, sustainable development, or "established" business. These definitions were thus inferred by participants based on their own understanding of the concepts and was not factored into the analysis. When using an inductive approach, specifying these potentially important terms is beneficial as "it permits researchers to measure constructs more accurately" (Eisenhardt, 1989, p. 536). Future research in this area would do well to ensure that people have a common understanding of key study concepts before data collection takes place.

It was beyond the scope of this study to engage with each of the topics that emerged from the interviews to any great length. Participants touched on many dimensions affecting FMs in NS from the ecological and social sustainability of small-scale agriculture, to gaps in food and nutrition literacy, to the impact of mineral resource exploration on landowners in Nova Scotia. In terms of furthering the research on FMs in Nova Scotia, the research revealed the following topics merit further investigation: empirical data related to FM vendor practices, particularly among market farmers; effective ways to consolidate efforts among smaller FMs and vendors who attend multiple markets; the connection between FMs and migrant workers in NS, including how markets could strengthen supports and protections for these workers; social justice efforts at FMs in NS, including efforts to de-colonize markets; and how market farmers are impacted by land security, development and resource exploration issues in Nova Scotia.

There are several limitations as a result of using NI in this study. Combining the narratives of multiple actors, as is presented, generalizes findings into a "typical" narrative, which inevitably sacrifices some of the richness of individual experience (Clandinin, 2006). Additionally, the researcher chose NI as a method after the interview data was collected. This restricts the resulting interpretation largely to a description of participant experiences rather than an exploration of their experiences, which is the ultimate aim of NI (Clandinin & Connelly, 2000). Narrative inquirers must also strive to elicit storied data with "thick descriptions" from extended conversations with participants (Clandinin, 2006; Geertz, 1973). The output of this work falls somewhat short of this aim; while many participants did share rich data and elaborate experiences, as previously mentioned, the depth of these discussions was limited by the data collection parameters and the breadth of information sought. Naturally, the resulting narrative interpretation process was influenced by the interpreter's subjectivity given that "we disclose meaning in text in light of our own background and experiences" (Blair, 2015; Golden-Biddle & Locke, 1993, p. 576). Meaning is derived through the reading and interpretation process, which was, in this case, subject to the research's positionality as a frequent FM goer, CSA subscriber and supporter. As suggested by Charmaz (2000), the research biases were constantly examined and minimized, the coding process repeatedly reviewed and refined.

Nevertheless, there will always be a certain degree of asymmetry between the resulting narrative and the original author's intent when using NI or other inductive approaches (Clandinin, 2006; Golden-Biddle & Locke, 1993). On the other hand, natural research bias can also be advantageous as it brings insider knowledge/awareness to analysis (Blair, 2015). In this case, the researcher recruited participants, conducted the interviews, transcribed and analyzed the transcripts. As such, it was possible to be reflexive to underlying subtleties within participant discourse, and to mediate and bring forth hidden meaning behind participant expressions and mannerisms (Marton, 1993). However, multiple interpreters are recommended when using NI as a methodology to allow for multiple different interpretations and triangulation of results (Eisenhardt, 1989; Josephsson & Alsaker, 2014). It is recommended that future research using NI to study FMs follow a more contextual analysis approach and aim for more thorough interviews (or focus groups), richer storied data from participants, and multiple interpreters.

6.2 Thesis Summary

The first aim of this research was to identify and explore alignments between FM activities and SD-oriented policy in Nova Scotia, and thus better understand the part they play in advancing SD in the province. To accomplish this, the goals and focus areas of three provincial policies were compared to FM statements using a semi-deductive approach modeled after Shen (2019). The results show strong alignment with domestic/local food and economic goals and moderate alignment with goals for building a circular economy, decreasing the provincial disposal rate, and improving municipal stability. However, there are no alignments with climate change action and emissions reduction goals and few with natural assets and biodiversity conservation goals, which account for half of all goals/focus areas studied. This study recommends that FMs in NS further develop and articulate their mission statements, clarifying their definition of local and the production methods they support, thus revealing potential alignments with environmentally oriented goals. FMs also likely contribute more to tourism and business incubation more than their statements claim. Finally, it was found that the policies do not adequately reflect FM activities in regard to improving social well-being including enhancing community engagement, cultural activities, public health and food security.

It was also found that small-scale, sustainable agriculture is not reinforced in the policies, yet it is identified as a primary focus among FMs in Nova Scotia.

The second aim of this study was to explore the challenges facing FMs in NS to advance provincial goals and enhance the impact of the sector. To this effect, interviews were held with FM organizers representing 28 markets in Nova Scotia. An inductive coding approach was used to identify primary FM challenges and narrative inquiry was used to unpack participant discourse surrounding these challenges. The resulting interpretation of participant narrative further highlights the disconnect between government and FM mandates in terms of supporting small-scale producers in NS. The narrative centers around the need to increase government recognition of domestic, small-scale agriculture though: 1) financial and non-financial mechanisms; 2) enhancing provincial promotion and public education around local food; 3) enhancing processing and distribution capacity within local markets; 4) removing scale-inappropriate regulatory burdens; and 5) increasing protections for agricultural land in NS. The narrative also stresses the hardships among vendors and farmers to participate in FMs. It suggests the need to consolidate and coordinate efforts among vendors and smaller FMs, facilitate vendor collaboration, and explore alternative distribution models to increase local food access and convenience. To grow the impact of FMs in Nova Scotia, including their capacity to meet provincial sustainability goals, recommendations emerged for government and FM interventions.

6.3 Significance and Conclusion

A thorough review of available literature and available information revealed that this is only the second study after Vail (2014) connecting FM activities to official policy goals; the first one to do so in North America. It fills a gap in existing literature on the sustainability contributions of FMs as it is formally linked to SD policy. The results hold significance for FM stakeholders and decision-makers, particularly in Nova Scotia, in terms of potential opportunities to grow/strengthen the FM sector. There are also specific implications for NS policymakers, particularly officials within provincial departments, as it speaks to the capacity of FMs to advance provincial goals, as well as to the potential for government to play a larger role in enabling FMs to extend their impact in the province.

This research generates new knowledge connecting the activities of FMs to high-level policy objectives for Nova Scotia. It furthers our understanding of their sustainability contributions and limitations, as well as their potential to nurture "sustainable forms of economic life" (Goodman et al., 2012, p. 194). It identified several discrepancies between government and FM objectives and potential ways to realign them. Above all, this research emphasizes the role of FMs as enabling, supportive voices for smaller scale producers in Nova Scotia, in addition to their potential to cultivate social well-being:

> *"I think farmers markets can be leveraged so much, there's just so much potential. Farmers markets have existing organizations, they have existing loyalty, they have networks of trust. Because markets do both; they feed people and they take care of people, and they build resilient communities. They build local economies. They build local health" (Participant 17).*

Appendices

Appendix A. Estimating the Share of Food Dollars Returning to Farmers in Nova Scotia

Supplemental Table 1. Percentage of food dollars spent by Nova Scotians returning to farmers in the province.

Year	Number of Households[1]	Average Annual Household Spending on Food[3]	Total Annual Food Spending ($)[4]	Total Annual Farm Cash Receipts (x $1,000)[5]	% of food dollars returning to NS farmers[6]
1997	348,410	5,013	1,746,579,330	298,403	17.1
1998	351,710	5,206	1,831,002,260	293,612	16.0
1999	355,850	5,163	1,837,253,550	310,295	16.9
2000	359,470	5,423	1,949,405,810	325,384	16.7
2001	362,640	5,534	2,006,849,760	326,775	16.3
2002	366,610	5,633	2,065,114,130	318,693	15.4
2003	370,590	5,912	2,190,928,080	326,704	14.9
2004	373,980	6,037	2,257,717,260	335,824	14.9
2005	376,980	6,243	2,353,486,140	341,070	14.5
2006	379,610	6,210	2,357,378,100	348,684	14.8
2007	382,900	6,640	2,542,456,000	342,295	13.5
2008	387,870	6,827	2,647,988,490	350,829	13.2
2009	392,450	6,682	2,622,350,900	342,668	13.1
2010	392,000[2]	7,059	2,767,128,000	342,598	12.4
2011	391,248	7,536	2,948,444,928	287,359	9.7
2012	393,409	7,191	2,829,004,119	310,804	11.0
2013	394,321	6,999	2,759,852,679	320,041	11.6
2014	397,699	7,527	2,993,480,373	343,297	11.5
2015	400,460	7,477	2,994,239,420	351,365	11.7
2016	402,808	8,118	3,269,995,344	348,796	10.7
2017	405,367	7,694	3,118,893,698	358,672	11.5

[1] Source for 1997 to 2009: Statistics Canada (2020d).
Source for 2011 to 2017: Statistics Canada (2012-2018).
[2] The number of households for 2010 is a coarser estimate from the Survey of Labour and Income Dynamics as the SHS estimate is not publicly available (Statistics Canada, 2012).
[3] Statistics Canada (2020d). Includes food purchased in both restaurants and stores.
[4] Derived by multiplying Column B and Column C.
[5] Statistics Canada (2020f). Includes all food items from crops and livestock and excludes all non-food item categories such as furs, Christmas trees, floriculture and nursery products. Farm cash receipts also do take into account locally supplied shellfish nor the percentage of domestic products that were exported as these figures are unavailable.
[6] Found by dividing Column D by Column E.

Appendix B. Analysis of Alignments between Farmers Market Statements and Provincial Policy Goals/Focus Areas

Supplemental Table 2. Alignments between FM public statements and provincial policy goals/focus areas.

1. Environmental Goals and Sustainable Prosperity Act[1]		**Codes and number of references in statements**	**No. of Markets**	**Associated FM activity**
1. Clean energy	1. A) Transition to cleaner sources and sustainable uses of energy by supporting and enabling (i) energy efficiency and conservation, (ii) sustainable transportation options, (iii) increased renewable energy, (iv) enhanced use of natural gas, and (v) enhanced innovation.	Clean energy (0) Renewable energy (0) Energy efficiency (0) Sustainable transportation (3) Energy R&D (0) Affordable energy (0)	3	FM is centrally located and accessible by public transport (emphasis on public transportation use)
	1. B) (i) 18.5% of electricity comes from renewable energy sources by 2013, (ii) 25% by 2015, and (iii) 40% by 2020.	Clean energy (0) Renewable energy (0)	0	N/A
2. Climate change goals	2. F) Greenhouse gas emissions are, by 2020, at least 10 per cent below the 1990 levels	Emissions reductions (0)	0	N/A
3. Healthy air and water goals	3. G) Emissions of nitrogen oxides are reduced 20% by 2009, 28% by 2015, and 44 % by 2020.	Emissions reductions (0) Pollution abatement (0)	0	N/A
	3. H) Sulphur dioxide emissions are reduced 50% by 2010, 58% by 2015, and 75% by 2020.		0	N/A
	3. I) Mercury emissions are reduced to no more than 110kg by 2010, 100kg by 2011, 85kg by 2013, 65kg by 2014, and 35kg by 2020.		0	N/A
	3. L) Municipal public drinking-water supplies meet the province's 2012 treatment standards by 2020.	Clean water (0) Access to clean water (0)	0	N/A
	3. N) Wastewater treatment facility discharges undergo at least primary treatment by 2020.	Clean water (0) Wastewater management (0)	0	N/A

Supplemental Table 2. (continued)

1. Environmental Goals and Sustainable Prosperity Act[1]		Codes and number of references in statements	No. of Markets	Associated FM activity
4. Leadership in Sustainable Practices	4. O) The solid-waste disposal rate is no greater than 300 kilograms per person per year by 2015 through measures that include the development of new programs and product stewardship regulations.	Solid waste management (2) Sustainable consumption and procurement (16)	16	Promotes waste reduction and sustainable consumption
	4. S) The province develops a strategy by 2014 to advance the growth of the green economy and implements the strategy accordingly.	Sustainable economic growth (27) Sustainable consumption and procurement (16)	30	Promotes sustainable consumption and growth of local economies
	4. T) Local food consumption is supported and encouraged with 20% of the money spent on food by Nova Scotians being spent on locally produced food by 2020.	Domestic/local food consumption (41)	41	Supports and promotes local food consumption
	4. U) Local food production is supported and encouraged with the goal of increasing the number of local farms by 5% by 2020.	Domestic/local food production (41)	41	Supports and promotes local food production
The Ivany Report				
2. The Ivany Report, 2014-2024[2]		**Codes and number of references in statements**	**No. of Markets**	**Associated FM activity**
1. Population goals	1. Inter-provincial migration	Population renewal (0) Employment and entrepreneurship (10)	10	Emphasizes employment opportunities and support for entrepreneurs
	2. International immigration		10	
	3. Retention of international students		10	
2. Economic development goals	4. Business start-ups	Employment and entrepreneurship (10) Small-scale enterprises (7)	13	Emphasizes employment opportunities, support for entrepreneurs and small-scale producers and businesses
	5. Value of exports	Export markets (0) Large-scale production (5)	5	Supports producers expanding beyond the FM to large-scale
	6. Firms participating in export trade		5	
	7. Labour force participation	Employment and entrepreneurship (10)	10	Emphasizes employment opportunities and support for entrepreneurs
	8. Employment rate for Indigenous and African Nova Scotians	Employment opportunities for POC (0)	0	N/A

Supplemental Table 2. (continued)

2. The Ivany Report, 2014-2024[2]		Codes and number of references in statements	No. of Markets	Associated FM activity
	9. Youth employment	Employment opportunities for youth (1)	1	Provides employment opportunities for youth
	10. Post-secondary education and training	Support for post-secondary studies (1)	1	Provides funds for post-secondary studies
	11. Post-secondary R&D	Economic resources for post-secondary R&D (0)	0	N/A
	12. R&D partnerships with post-secondary institutions	Partnerships with post-secondary institutions (0)	0	N/A
	13. Venture capital	Economic investments in businesses (2)	2	Invests in technology and firms that connect producers with consumers
	14. Tourism expansion	Tourism (13) Export markets (0)	13	Focused on attracting tourists/visitors to the FM
	15. Grow fisheries and aquaculture exports	Export markets (0) Large-scale food production (5)	5	Promotes vendors transitioning to large-scale production
	16. Domestic markets for agricultural products	Domestic/local food production (41) Domestic/local food consumption (41)	41	Supports and promotes local producers and local food consumption
3. Governance and fiscal goals	18. Municipal stability	Efficiency of services (2) Regional planning and development (6) Tax and regulation restructuring (1) Economic resources (12)	16	Recognizes the threat of food safety regulations Focused on eliminating inefficiencies in the food distribution system Provides economic resources for vendors (venue, marketing, customers)
	19. Fiscal health	Sustainable economic growth (27) Population renewal (0)	27	FM promotes sustainable growth of local economies

Supplemental Table 2. (continued)

3. Sustainable Development Goals Act, 2019[3]		Codes and number of references in statements	No. of Market	Associated FM activity
Section 6. Focus areas for goals	(a) the demonstration of leadership in sustainable prosperity	Sustainable consumption and procurement (16) Sustainable production practices (4) Waste management (2) Equal opportunities and inclusion (11)	22	Support sustainable food production Promotes waste reduction and sustainable consumption

Supplemental Table 2. (continued)

3. Sustainable Development Goals Act, 2019[3]		Codes and number of references in statements	No. of Market	Associated FM activity
	(b) The support of the transition to cleaner energy, more sustainable sources for electricity generation, improved energy efficiency and cleaner transportation	Clean energy production (0) Energy efficiency (0) Sustainable transportation (3)	3	FM is accessible by public transport Promotes public transport to FM
	(c) climate change mitigation and adaptation	Climate change action (0)	0	N/A
	(d) the creation of conditions supporting a circular economy	Waste management (2) Sustainable consumption and procurement (16)	16	Promotes waste reduction and sustainable consumption
	(e) the creation of conditions supporting an inclusive economy	Equal opportunities and inclusion (11)	11	Promotes an inclusive and diverse marketplace Promotes opportunities for underrepresented groups e.g. youth, people with disabilities
	(f) conservation and sustainable use of natural assets and support for biodiversity	Natural resource management (0) Biodiversity conservation (0) Sustainable use of resources (4)	4	Supports sustainable food production

[1] (EGSPA, 2007, s. 4[2])
[2] (The Commission, 2014, pp. 47-50)
[3] (SDGA, 2019, s. 6)

Appendix C. Deriving Interview Questions from Policy Goals and Themes

Supplemental Table 3. How the interview questions were derived from policy goals/focus areas themes.

Policy Goals		FM Connecting Themes	Interview Questions
Ivany Report[1]	*Goal 4. The NS economy will generate 465 new business start-ups per year*	• Impact of FM to new businesses • FM impact to economic development	1. Do you see FM as business incubators or as contributing to the start-up economy (how/why)? 2. Can you describe any instances of businesses who started in your market but eventually expanded outside of it? 3. How can FM further support new local businesses?
	Goal 14. Gross tourism revenues will reach $4B	• FM impact on agritourism economy • Impact of tourism on FM	1. What is the importance of tourism (and/or summer residents) to your farmers market? 2. Did the number of tourists change during the past season (how/why)? 3. What types of vendors are attracting tourists in particular?
	Goal 16. The value of agricultural products produced and consumed within NS will reach $1.84B	• FM impact on local food consumption • FM impact on food security	1. How can farmers markets further increase local food consumption in NS? 1.1 What do you think is missing to increase the amount of local food we produce and consume in NS? 2. Do you think FM have a role to play in increasing food security and resiliency in the province (how)?
EGSPA[2]	*Goal T. 20% of food consumed in NS will be produced domestically*		
	Goal U. The number of farms in NS will increase by 5%	• Relationship between FM and farmers/producers • FM connection to sustainable agriculture	1. What is the importance of primary producers at your farmers market? 1.1. How many are certified organic and or use other sustainable or alternative agricultural practices? 1.2. Is the farmer/producer the vendor at your market? 2. Is there potential for FM to increase the number of local farms or further support local farmers in NS?
SDGA[3]	*Focus D. Create conditions for supporting an inclusive economy*	• Inclusivity at FMs • FM relations with the surrounding community	1. What is the social impact of your market? 2. Is your market representative of the local community? 3. What is your market's relationship with foreign farm workers?

[1] (The Commission, 2014, pp. 47-50)
[2] (EGSPA, 2007, s. 4[2])
[3] (SDGA, 2019, s. 6)

Appendix D. Interview Recruitment Email

Subject: Farmers Markets Study – Interview Invitation
Study title: The elephant in the market: Unearthing provincial policy alignments and perceived challenges to grow the impact of the farmers market sector in Nova Scotia, Canada

Dear [potential participant name/market representative],

I hope this email finds you well. I received your email from among FMNS's contact list. I am contacting farmers market stakeholders including market managers, staff, and board members to participate in an approximately 30-minute interview over the phone. The research explores how Nova Scotia's farmers markets contribute to sustainable development policy in NS and is for my master's thesis in Environmental Studies at Dalhousie. During the interview I will be asking about the on-the-ground FM actions that increase sustainable development in Nova Scotia as well as challenges to advancing provincial goals.

Your participating in the research is completely voluntary. Any information you offer cannot be attributed back you; **under no circumstances will your name or affiliation(s) be included in the study results**. Only your market type (rural or non-rural) and size (small, medium, or large, depending on number of vendors), if applicable, will be included with your information. You have the option of having the interview audio-recorded and of being directly quoted or not. I've attached a consent form, which gives more information on the study, what to expect in the interview, the consent process, how your identity and information will be protected, and how you can withdraw your participation.

If you have any questions, or if you fit the eligibility criteria and would like to set up an interview time, please reach out to me using the contact information below. You can also contact my supervisor, Dr. Michelle Adams, Michelle.Adams@dal.ca, with any questions. Thank you for considering taking part in the research.

If possible, I ask that you forward along this email to other market organizers, including market managers, staff, and volunteers, if applicable.

Many thanks,

Emily Bibeau
Master of Environmental Studies (Candidate)
School for Resource and Environmental Studies
Dalhousie University, Halifax, Nova Scotia, Canada
Emily.Bibeau@dal.ca

[Attachment: Consent form and oral consent script as one PDF file, see Appendix E]

DALHOUSIE UNIVERSITY

Appendix E. Interview Consent Form

Project Title:	**The elephant in the market: Unearthing provincial policy alignments and perceived challenges to grow the impact of the farmers market sector in Nova Scotia, Canada**
Lead Researcher:	Emily Bibeau Master of Environmental Studies (Candidate) School for Resource and Environmental Studies Dalhousie University, Halifax, Nova Scotia, Canada Emily.Bibeau@dal.ca, (902) XXX-XXXX
Supervisor:	Dr. Michelle Adams School for Resource and Environmental Studies Dalhousie University, Halifax, Nova Scotia, Canada Michelle.Adams@dal.ca, (902) XXX-XXXX

About the Study

In recent decades, there has been a resurgence of farmers markets across Canada and Nova Scotia as a hub for local food, craft, and other wares. Nevertheless, their potential to meet sustainability goals and decrease food insecurity remains an emergent field of research. This study examines the role of Nova Scotia's farmers markets in helping meet high-level provincial goals and objectives outlined in sustainable development policy, including the Nova Scotia *Sustainable Development Goals Act*, *Environmental Goals and Sustainable Development Goals Act,* the One Nova Scotia (Ivany) Report, and. This research is being conducting through Dalhousie University. **Your participation in this research is completely voluntary.**

Eligibility

Study participants must fulfill the following criteria:

1. be a farmers market stakeholder such as a market manager, staff, or board member
2. be over 18 years of age.

What you will be asked to do

We invite you to take part in an approximately 30-minute phone interview to get your input on how farmers markets contribute to meeting sustainable development goals, including how this may be affected by the COVID-19 pandemic. Below are some examples of questions that will be asked during the interview:

1. Have you observed or do you think there may be renewed interest in local food as a result of the pandemic?
2. What is the importance of tourism (or summer residents) to your market?
3. Is there potential for farmers markets / your market to further increase local food consumption in Nova Scotia?

The lead researcher will be conducting the interviews. They will be taking notes by hand throughout and you have the option of having the interview recorded or not. You also have the option of being directly quoted or not in the write-up of the results. You can request to review your interview transcript and/or interview notes before they are analyzed, making modifications as you see fit.

Consent Process

You are welcome to send any questions you have to the lead researcher or their supervisor before and after your interview. At the time of your interview, you will be able to ask any questions before the lead researcher walks you through the oral consent script (see page 4 for the script). An audio recorder will be turned on at this time to document your consent to participate, including your consent to having it recorded and of being directly quoted or not. If you do not consent to the interview being recorded, the recorder will be turned off. You may decline from discussing any and all questions that will be asked during the interview. After the interview, please use the contact information on this form if you have any questions about your participation and wish to follow-up with the research team.

Participant Confidentiality

Your participation in this research is confidential and only de-identified and anonymized information will be included in the reporting of results. You will be given a pseudonym (participant 1, 2, 3, etc.) at the time of data collection. You will only be referenced in the study using this pseudonym or aggregated with other participants as a famers' market stakeholder. In this study, this includes market managers, staff, and board members. Under no circumstances will participants be identified as belonging to into any of these categories; your role, title, and organizational affiliation will be kept confidential. If you are a market manager, staff, or board member, only secondary characteristics of your market will be attached to your information including market type (rural/urban) and market size as either small (under 19 vendors), medium (20-49 vendors), or large (50+ vendors). It will not be included in the study publications/presentations if a participant is not affiliated with a particular market. Any identifiers that could reasonably be expected to identify an individual or their market/organization, whether alone, or in combination with other data, will be removed from your interview transcript and/or notes before data analysis. If you consent to being directly quoted, no identifiable direct quotes will be used.

Compensation and Benefits to Participating

There is no compensation or direct benefit from participating in this study. Indirect benefits include contributing to new knowledge about the farmers market sector in Nova Scotia, uncovering the part they play in advancing sustainable development and decreasing food insecurity.

Potential Risks and Discomforts

The risk to participating in this study is low given that your data will be de-identified and only the lead researcher and supervisor will know of your participation and be able to access the data. Potential discomforts include fatigue and/or boredom, which will be minimized by ensuring that interviews do not exceed 1 hour. Pressure to answer questions that do not resonate with you is also a potential risk so please feel free to decline to answer any and/or all such questions during the interview.

DALHOUSIE UNIVERSITY

Participant Withdrawal
You may withdraw your participation and data at any time before, during or after the interview until June 30th, 2020, by contacting the lead researcher.

How will the data be used?
Data gathered from the interviews will be coded inductively for emergent themes. The resulting themes will be used to understand the connection between farmers markets activities and provincial goals, as well as the key challenges facing FMs in terms of meeting provincial goals contained in the three policies. Alongside available literature, prevalent themes will be discussed based on how the themes connect to the three sustainability policies. This research will form part of a Master's thesis and related publications such as an article in an academic journal.

How will my information be protected?
All study data, including audio files, will be stored on a password protected external hard drive and backed-up on Dalhousie's cloud-based server, which is also password protected. Only the researcher and supervisor will have access to the data throughout the study period. The interview transcripts and notes will be destroyed August 31st, 2020. All other data including the anonymized interview transcripts, anonymized interview notes, and audio files documenting participants' oral consent will be deleted November 30th, 2020.

Provision of Results
The lead researcher will send you a summary of the research findings as soon as they become available.

Questions
If you have any questions, please contact the lead researcher, Emily Bibeau, at (902) XXX-XXXX, Emily.Bibeau@dal.ca or the supervisor for this research, Michelle Adams, (902) XXX-XXXX, Michelle.Adams@dal.ca. If you have any ethical concerns about your participation in this research, you are invited to contact the Research Ethics Board (REB), Dalhousie University at (902) 494-1462, or email ethics@dal.ca and reference REB file #2020-5076.

DALHOUSIE UNIVERSITY

Oral Consent Script

[The lead researcher will read the following script to participants over the phone immediately before the interview begins with the interviewee indicating YES or NO to each statement to confirm their consent]

I understand the explanation of this study. I was given an opportunity to ask questions and my questions have been answered to my satisfaction. I understand that I have been asked to take part in one interview and that I have the option of being directly quoted and of the interview being audio recorded. I agree to take part in this study and for the information to be used in reports and related materials without it being attributed back to me. I understand that I will be given a pseudonym and that only this pseudonym and, if applicable, my affiliated market type (rural/urban) and size category (small, medium, large) will be attached to my information. I understand that I am free to withdraw from the study at any time before June 30th, 2020.
YES / NO

I consent to have the interview audio recorded.
YES / NO

I consent to being directly quoted in this study's written components.
YES / NO

I would like to review the transcript and/or notes from my interview.
YES / NO

Preferred email to receive direct quotes, study results,
and interview transcripts/notes (if applicable): _____

Participant pseudonym (to be completed by the researcher): _____

Appendix F. Interview Questions for Farmers Market Organizers

1. What challenges / changes is your market undergoing due to COVID-19? Is there anything you want policy makers to know right now? Have you observed or do you think there may be renewed interest in local food as a result of the pandemic?
2. NS has set a goal to grow tourism revenue - what is the importance of tourism (or summer residents) to your market under usual circumstances? Did the number of tourists change during the past season? Are there any types of vendors that are attracting tourists in particular?
3. NS has set a goal to increase the number of business start-ups – do you see farmers markets as business incubators? Have you experienced any instances of businesses who started in your market but eventually expanded outside of it?
4. NS has a goal to increase local food consumption to 20% of what we eat – do you think there's potential for farmer's markets / your market to further this goal?
5. NS has a goal to increase the number of farms in the province – what is the importance of primary producers at your market? Is there room for farmers markets / your market to further this goal or further support local farmers?
6. What is the social impact of your market – is it accessible? Is it representative of the community? How can farmers markets / your market support temporary and foreign farm workers in NS?

References

Abattoirs in Canada. (2020). Google Maps. Retrieved from https://www.google.com/maps/d/viewer?ie=UTF8&hl=en&msa=0&ll=45.16577976141016%2C-62.99404768945132&spn=26.670098%2C79.013672&t=h&z=8&mid=1iKhPvGLSogF3qGel_v5tjw1deB8

Acadia Entrepreneurship Centre (AEC). (2020). *Eating healthy. Buying local. Building community. An evaluative summary of the nourishing communities: Food coupon pilot program. Farmers' Markets of Nova Scotia Cooperative.* Retrieved from https://farmersmarketsnovascotia.ca/wp-content/uploads/2020/05/FMNS-Food-Bucks-Final-Report-Amended-May-25-2020.pdf

Activating Change Together for Community Food Security (ACT for CFS). (2014). *Making food matter: Strategies for activating change together.* Halifax, NS: Food Action Research Centre (FoodARC), Mount Saint Vincent University.

Afishionado Fishmongers. (2020). *The Warehouse Market.* Retrieved from https://afishionado.ca/market-warehouse/

African United Baptist Association of Nova Scotia (AUBANS), Alternatives to Violence – Atlantic, Antigonish Women's Resource Centre, Atlantic Regional Solidarity Network, Canadian Federation of Students - Nova Scotia, Colleen Coffey, Regional Executive Vice-President – PSAC Atlantic, … YWCA Halifax. (2020). *Open letter to NS government on migrant rights.* Retrieved from https://drive.google.com/file/d/1v6XC8j7S1EybTzC4Z-MOZOMLgyO27Fjo/view?fbclid=IwAR39rV_Hz9scVqdFv9JW802JkFGhyEDGgqfbE2LanGI3O-M-RtFiGaZzK-s

Agyeman, J. (2005). *Sustainable communities and the challenge of environmental justice.* NYU Press.

Agyeman, J. (2013). *Introducing just sustainabilities: Policy, planning, and practice*. Zed Books Ltd.

Alkon, A. (2008). Paradise or pavement: The social constructions of the environment in two urban farmers' markets and their implications for environmental justice and sustainability. *Local Environment, 13*(3), 271-289.

Alkon, A. H., & McCullen, C. G. (2011). Whiteness and farmers markets: Performances, perpetuations… contestations? *Antipode, 43*(4), 937-959.

Andrée, P., Langille, L., Clement, C., Williams, P., & Norgang, E. (2016). Structural constraints and enablers to community food security in Nova Scotia, Canada. *Journal of Hunger & Environmental Nutrition*, *11*(4), 456-490.

Babnik, K., Breznik, K., Dermol, V., & Širca, N. T. (2014). The mission statement: Organisational culture perspective. *Industrial Management & Data Systems*, 114(4), 612-627.

Ball, K. L. (2014). *A community-based participatory research approach to implementing a farmers' market targeting WIC farmers market nutrition program participants* [Dissertation]. The University of North Carolina at Greensboro.

Ball, L., Andrews, J., Gruber, K., & Dharod, J. (2019). Implementation of a WIC clinic farmers market improves accessibility and consumption of fresh fruits and vegetables among WIC farmers market nutrition program participants. *Journal of Hunger & Environmental Nutrition, 14*(6), 838-849.

Ballingall, J., & Winchester, N. (2010). Food miles: Starving the poor? *The World Economy, 33*(10), 1201-1217.

Baumgartner, R. J. (2014). Managing corporate sustainability and CSR: A conceptual framework combining values, strategies and instruments contributing to sustainable development. *Corporate Social Responsibility and Environmental Management*, *21*(5), 258-271.

Beaton, S. (2019, October 30). Sadie Beaton on Bill 213 at Law Amendments: Centre the wisdom and authority of Mi'kmaw laws*. The Nova Scotia Advocate*. Retrieved from https://nsadvocate.org/2019/10/30/sadie-beaton-on-bill-213-at-law-amendments-centre-the-wisdom-and-authority-of-mikmaw-laws/

Beckie, M. A., Kennedy, E. H., & Wittman, H. (2012). Scaling up alternative food networks: Farmers' markets and the role of clustering in western Canada. *Agriculture and Human Values*, *29*(3), 333-345.

Bencherki, N. (2017). Actor–network theory. *The International Encyclopedia of Organizational Communication*, 1-13.

Benis, K., & Ferrão, P. (2017). Potential mitigation of the environmental impacts of food systems through urban and peri-urban agriculture (UPA) - a life cycle assessment approach. *Journal of Cleaner Production, 140,* 784-795

Bentley, S. & Barker, R. (2005). *Fighting global warming at the Farmers' Market: The role of local food systems in reducing greenhouse gas emissions.* Toronto: Foodshare.

Berry, W. (1987). A defense of the family farm. In G. Comstock (Ed.) *Is there a moral obligation to save the family farm?*, 347–360. Ames: Iowa State University Press.

Blair, E. (2015). A reflexive exploration of two qualitative data coding techniques. *Journal of Methods and Measurement in the Social Sciences*, *6*(1), 14-29.

Bloom, L. R. (1998). *Under the sign of hope: Feminist methodology and narrative interpretation.* Suny Press.

Born, B., & Purcell, M. (2006). Avoiding the local trap: Scale and food systems in planning research. *Journal of planning education and research*, *26*(2), 195-207.

Braun, S., Wesche, J., Frey, D., & Weisweiler, S. (2012). Effectiveness of mission statements in organizations: A review. *Journal of Management & Organization, 18*(4), 430-444.

Brekelmans, N. (2019). *Seaport farmers' market and green roof*. Canadian urban strategies. Retrieved from https://www.canadianurbanstrategies.com/copy-of-fundy-gateway-ns

Bronson, K., Knezevic, I., & Clement, C. (2019). The Canadian family farm, in literature and in practice. *Journal of Rural Studies, 66*, 104-111.

Brown, A. (2002). Farmers market research 1940–2000: An inventory and review. *American Journal of Alternative Agriculture, 17*(4), 167-176.

Brown, C., & Miller, S. (2008). The impacts of local markets: A review of research on farmers markets and Community Supported Agriculture (CSA). *American Journal of Agricultural Economics, 90*(5), 1298-1302.

Brundtland, G. H., Khalid, M., Agnelli, S., Al-Athel, S., & Chidzero, B. (1987). *Our common future.* New York: Oxford University Press.

Bryan, C., Fitting, E., & Foster, K. (2020). *Mobilities and externalities in Nova Scotia's local food movement.* Mobile lives forum. Retrieved from https://en.forumviesmobiles.org/project/2020/01/24/mobilities-and-externalities-nova-scotias-local-food-movement-13182#toc-item-2

Bryan, C., Fitting, E., Foster, F., & Ellsworth, J. (2020). *Farmers' markets, community supported agriculture & the local food system in Nova Scotia: A snapshot of consumer habits & perceptions.* Dalhousie University. Retrieved from https://rfrc.ca/sites/default/files/2020-10/NS%20Local%20Food%20Survey%20Report%2010.8.pdf

Callon, M. (1984). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. *The Sociological Review, 32*(1), 196-233.

Canadian Agricultural Human Resources Council. (2020). *How labour challenges will shape the future of the 'grain and oilseed' industry: Agriculture forecast to 2029.* Retrieved from https://cahrc-ccrha.ca/sites/default/files/GO_Eng_reduced%20size.pdf

CBC News. (2018, September 24). Cape Breton loses its only licensed red meat abattoir. *CBC News.* Retrieved from https://www.cbc.ca/news/canada/nova-scotia/lambscape-farms-has-voluntarily-withdrawn-from-licence-inspection-1.4834830

Chapman, A. M., & Perkins, H. A. (2019). Malign and benign neglect: A local food system and the myth of sustainable redevelopment in Appalachia Ohio. *Agriculture and Human Values,* 1-15.

Charlebois, S., Somogyi, S., & Kirk, S. F. (2020). Fragmented food habits and the disintegration of traditional meal patterns: A challenge to public health nutrition in Canada? *Journal of International Food & Agribusiness Marketing*, *32*(1), 69-78.

Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N. Denzin & Y. Lincoln (Eds.) *Handbook of qualitative research*, (2nd ed.). Thousand Oaks, CA: Sage Publications.

Christensen, B., & Phillips, R. (2016). Local food systems and community economic development through the lens of theory. *Community Development, 47*(5), 638-651.

Cicatiello, C. (2020). Alternative food shoppers and the "quantity dilemma": A study on the determinants of their purchases at alternative markets. *Agricultural and Food Economics*, *8*, 1-13.

Clandinin, D. J. (Ed.). (2006). *Handbook of narrative inquiry: Mapping a methodology*. Sage Publications.

Clandinin, D. J., & Huber, J. (in press). Narrative inquiry. In B. McGaw, E. Baker, & P. Peterson (Eds.), *International encyclopedia of education* (3rd ed.). New York, NY: Elsevier.

Clandinin, J. D., & Connelly, M. F. (2000). *Narrative inquiry.* San Francisco, CA: John Wiley & Sons.

Cohen, A. J., Lachance, L. L., Richardson, C. R., Mahmoudi, E., Buxbaum, J. D., Noonan, G. K., ... & Zick, S. M. (2018). "Doubling Up" on produce at Detroit farmers markets: Patterns and correlates of use of a healthy food incentive. *American journal of preventive medicine*, *54*(2), 181-189.

Cole, R. J. (2012). Transitioning from green to regenerative design. *Building Research & Information, 40*(1), 39-53.

Coley, A. (2017). *Estimating food capacity in Nova Scotia* [Dissertation]. Dalhousie University. Retrieved from Dalhousie Thesis Repository.

Collins, J. C., & Porras, J. I. (1996). Building your company's vision. *Harvard business review*, *74*(5), 65.

Colton, J. W., & Bissix, G. (2005). Developing agritourism in Nova Scotia: Issues and challenges. *Journal of sustainable agriculture*, *27*(1), 91-112.

Cone, C. A., & Myhre, A. (2000). Community-supported agriculture: A sustainable alternative to industrial agriculture? *Human Organization 59*(2), 187–97.

Conner, D., Colasanti, K., Ross, R. B., & Smalley, S. B. (2010). Locally grown foods and farmers markets: Consumer attitudes and behaviors. *Sustainability, 2*(3), 742-756.

Connolly, J. M., & Keutner, T. (Eds.). (1988). *Hermeneutics Versus Science?: Three German Views*. University of Notre Dame Press.

Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, *13*(1), 3-21.

Crabtree, B. & Miller, W. (1992). *Doing qualitative research.* Newbury Park: Sage Publications.

Dahlberg, K. (1993). Regenerative food systems: Broadening the scope and agenda of sustainability. In P. Allen (Ed.), *Food for the future*, 75–102. New York: Wiley.

Daly, H. E. (1996). *Beyond growth: The economics of sustainable development*. Boston: Beacon Press.

Dangour A. D., Lock, K., Hayter, A., Aikenhead, A., Allen, E., & Uauy, R. (2010). Nutrition-related health effects of organic foods: A systematic review. *The American journal of clinical nutrition*, *92*(1), 203-210.

David, M. E., & David, F. R., & David F. (2014). Mission statement theory and practice: A content analysis and new direction. *International Journal of Business, Marketing, & Decision Science*, *7*(1).

Davies, E. (2017, October 1). N.S. farmers markets mostly using 'honour system' to oversee product origin. *CBC News*. Retrieved from https://www.cbc.ca/news/canada/nova-scotia/farmers-markets-local-products-honour-system-1.4314785

Davies, M. (2019). *Are we out to lunch? Are the dietary strategies we share on social media effective in mitigating climate change?* [Dissertation]. Retrieved from Dalhousie Thesis Repository.

Davis, A., Matthews, Z., Szabo, S., & Fogstad, H. (2015). Measuring the SDGs: A two-track solution. *Lancet, 386*(9990), 221-2.

De Bernardi, P., Bertello, A., & Venuti, F. (2019). Online and on-site interactions within alternative food networks: Sustainability impact of knowledge-sharing practices. *Sustainability, 11*(5), 1457.

De Boer, J., Hoogland, C. T., & Boersema, J. J. (2007). Towards more sustainable food choices: Value priorities and motivational orientations. *Food Quality and Preference, 18*(7), 985-996.

DeLind, L. B. (2002). Place, work, and civic agriculture: Common fields for cultivation. *Agriculture and Human Values, 19*(3), 217–224.

DeLind, L. B. (2002). Transforming organic agriculture into industrial organic products: Reconsidering national organic standards. *Human Organization, 59*(2), 198–208.

DeLind, L. B. (2011). Are local food and the local food movement taking us where we want to go? Or are we hitching our wagons to the wrong stars? *Agriculture and human values, 28*(2), 273-283.

DeLind, L. B., & Bingen, J. (2008). Place and civic culture: Re-thinking the context for local agriculture. *Journal of Agricultural and Environmental Ethics, 21*(2), 127-151.

Deller, S. C., Lamie, D., & Stickel, M. (2017). Local foods systems and community economic development. *Community Development, 48*(5), 612-638.

Denne, L. & Foxcraft, T. (2017, September 29). 'People are being duped': CBC exposes homegrown lies at farmers markets. *CBC Marketplace.* Retrieved from https://www.cbc.ca/news/business/farmers-markets-lies-marketplace-1.4306231

Desmidt, S., & Prinzie, A. A. (2011). The organization's mission statement: Give up hope or resuscitate? A search for evidence-based recommendations. In *Organization Development in Healthcare: Conversations on Research and Strategies*. Emerald Group Publishing Limited.

Desmidt, S., Prinzie, A., & Decramer, A. (2011). Looking for the value of mission statements: A meta-analysis of 20 years of research. *Management Decision, 49*(3), 468-483

DesRivières, C. P., Chuenpagdee, R., & Mather, C. (2017). Reconnecting people, place, and nature: Examining alternative food networks in Newfoundland's fisheries. *Agriculture & Food Security, 6*(1), 1-11.

Desrochers, P., & Shimzu, H. (2012). *The locavore's dilemma: In praise of the 10,000-mile diet* (First ed.). Philadelphia, PA: PublicAffairs.

Devanney, M., & Maynard, M. (2008). *A review of initiatives intended to conserve agricultural land.* Nova Scotia Department of Agriculture. Retrieved from https://novascotia.ca/agri/documents/business-research/LandUseReview.pdf

Dodds, R., & Holmes, M. R. (2017). Local versus visitor perceptions of farmers' markets. *Journal of Food Products Marketing,* 23(2), 167-185.

Drengson, A. (1995). The deep ecology movement. *The Trumpeter*, *12*(3).

Driscoll, C., & Saulnier, C. (2020). *Living wage in Nova Scotia and New Brunswick 2020*. Canadian Centre for Policy Alternatives. Retrieved from https://www.policyalternatives.ca/publications/reports/living-wages-nova-scotia-and-new-brunswick-2020

DuPuis, E. M. & Goodman, D. (2005). Should we go "home" to eat?: Toward a reflexive politics of localism. *Journal of Rural Studies, 21*(3), 359-371.

Eckersley, R. (2004). *The green state: Rethinking democracy and sovereignty*. MIT Press.

Ecology Action Centre. (2019, September 27). *Thirteen goals to advance the environmental and economic wellbeing of Nova Scotia.* Retrieved from https://ecologyaction.ca/sites/default/files/images-documents/EACSubmission.EGSPA_.September.27.2019.docx_.pdf

Engel, K., & Ruder, E. H. (2020). Fruit and vegetable incentive programs for Supplemental Nutrition Assistance Program (SNAP) participants: A scoping review of program structure. *Nutrients*, *12*(6), 1676.

Environment Act. SNS 1994-95, c. 1, s. 1.

Environment and Climate Change Canada. (2019). *Achieving a sustainable future: A federal sustainable development strategy for Canada, 2019 to 2022*. Retrieved from http://www.fsds-sfdd.ca/downloads/FSDS_2019-2022.pdf

Environmental Goals and Sustainable Prosperity Act (EGSPA). SNS 2007, c. 7, s. 1.

Evans-Cowley, J. (2011). Evaluating food systems in comprehensive planning: Is the Mississippi gulf coast planning for food? *Journal of Agriculture, Food Systems, and Community Development, 2*(1), 1-22.

Experience Renewal Solutions Inc. (2009). *National farmers market impact study 2009 report. Farmers Markets Canada.* Retrieved from https://www.unbc.ca/sites/default/files/sections/david-connell/farmers-markets/nationalfarmersmarketimpactstudy2009.pdf

Falconer, R. (2020). *Grown locally, harvested globally: The role of temporary foreign workers in Canadian agriculture*. The School of Public Policy Publications. Retrieved from https://www.policyschool.ca/wp-content/uploads/2020/07/Grown-Locally-Falconer.pdf

Fang, M., Buttenheim, A. M., Havassy, J., & Gollust, S. E. (2013). "It's not an 'if you build it they will come' type of scenario": Stakeholder perspectives on farmers' markets as a policy solution to food access in low-income neighborhoods*. Journal of hunger and environmental nutrition, 8*(1), 39-60.

Farmers Markets of Nova Scotia Cooperative (FMNS). (2019a). *2019 annual report.* Retrieved from https://farmersmarketsnovascotia.ca/wp-content/uploads/2019/12/Annual-Report-1.pdf

Farmers' Markets of Nova Scotia Cooperative (FMNS). (2019b). *Homepage.* Retrieved from http://farmersmarketsnovascotia.ca/

Farmers Markets of Nova Scotia Cooperative (FMNS). (2020a, March 18). *Farmers markets moving online: Taking innovative measures to continue to safely serve Nova Scotians*. Retrieved from https://farmersmarketsnovascotia.ca/wp-content/uploads/2020/03/Mar-18-2020-FMNS-COVID-19-statement.pdf

Farmers' Markets of Nova Scotia Cooperative (FMNS). (2020b, October 5). *Press release: Farmers' market "food bucks" program important now more than ever.* Retrieved from https://farmersmarketsnovascotia.ca/2020/10/05/press-release-farmers-market-food-bucks-program-important-now-more-than-ever/

Federal Sustainable Development Act. S.C. 2008, c. 33.

Feenstra, G. W. (1997). Local food systems and sustainable communities. *American journal of alternative agriculture,* 28-36.

Feenstra, G. W., Lewis, C. C., Hinrichs, C. C., Gillespie, G. W., & Hilchey, D. (2003). Entrepreneurial outcomes and enterprise size in US retail farmers' markets. *American Journal of Alternative Agriculture, 18*(1), 46-55.

Ferguson, H., Kijas, J., Wessell, A., & Northern Rivers Landed Histories Research Group. (2017). Towards reflexive localism: Exploring the diverse co-creators of alternative food across time in the Northern Rivers of New South Wales, Australia. *Journal of Historical Geography, 56,* 14-21.

Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management accounting research*, *20*(4), 263-282.

Flournoy, R. (2011). *Healthy food, healthy communities.* Policylink. Retrieved from https://www.policylink.org/sites/default/files/HFHC_FULL_FINAL_20120110.PDF

Food and Agriculture Organization (FAO), Statistics Division. (2017). *Defining small scale food producers to monitor target 2.3. of the 2030 Agenda for Sustainable Development.* Retrieved from http://www.fao.org/3/a-i6858e.pdf

Food and Agriculture Organization (FAO). (1996). *World food summit: Rome declaration on world food security and world food summit plan of action*. Rome: FAO.

Food and Agriculture Organization (FAO). (2015). *The state of food insecurity in the world 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress.* Rome: FAO.

Food and Agriculture Organization (FAO). (2020a). *COVID-19 global economic recession: Avoiding hunger must be at the center of the economic stimulus.* Rome: FAO.

Food and Agriculture Organization (FAO). (2020b). *Economic and social development stream glossary.* Retrieved from http://www.fao.org/economic

Food and Agriculture Organization (FAO). (2020c). *The state of food security and nutrition in the world. Transforming food systems for affordable healthy diets.* Rome: FAO.

Forssell, S., & Lankoski, L. (2015). The sustainability promise of alternative food networks: An examination through "alternative" characteristics. *Agriculture and human values*, *32*(1), 63-75.

Foti, V. T., Scuderi, A., Stella, G., & Timpanaro, G. (2019). Consumer purchasing behavior for "biodiversity-friendly" vegetable products: Increasing importance of informal relationships. *Agricultural Economics, 65*(9), 404-414.

Francis, C., Lieblein, G., Steinsholt, H., Breland, T. A., Helenius, J., Sriskandarajah, N., & Salomonsson, L. (2005). Food systems and environment: Building positive rural-urban linkages. *Human Ecology Review*, 60-71.

Freedman, D. A., Vaudrin, N., Schneider, C., Trapl, E., Ohri-Vachaspati, P., Taggart, M., ... & Flocke, S. (2016). Systematic review of factors influencing farmers' market use overall and among low-income populations*. Journal of the Academy of Nutrition and Dietetics, 116*(7), 1136-1155.

Galt, R. E. (2013). The moral economy is a double-edged sword: Explaining farmers' earnings and self-exploitation in community-supported agriculture. *Economic Geography, 89*(4), 341-365.

Gantla, S., & Lev, L. (2015). Farmers' market or farmers market? Examining how market ownership influences conduct and performance. *Journal of Agriculture, Food Systems, and Community Development, 6*(1), 49-63.

Garner, B. (2019). Sustainability marketing at the farmers' market: An ethnographic analysis of ambiguous communication. *International journal of consumer studies, 43*(1), 14-22.

Garner, J. A., Coombs, C., Savoie-Roskos, M. R., Durward, C., & Seguin-Fowler, R. A. (2020). A qualitative evaluation of Double Up Food Bucks Farmers' Market Incentive Program access. *Journal of Nutrition Education and Behavior, 52*(7), 705-712

Gasteyer, S., Hultine, S. A., Cooperband, L. R., & Curry, M. P. (2008). Produce sections, town squares, and farm stands: Comparing local food systems in community context. *Journal of Rural Social Sciences, 23*(1), 3.

Geertz, C. (1973). Thick description: Toward an interpretive theory of culture. *Turning points in qualitative research: Tying knots in a handkerchief*, *3*, 143-168.

Gibbons, L. V. (2020). Regenerative—the new sustainable? *Sustainability, 12*(13), 5483.

Gibbs, G. R. (2007). Thematic coding and categorizing. *Analyzing qualitative data*, *703*, 38-56.

Gillespie, G., Hilchey, D. L., Hinrichs, C. C., & Feenstra, G. (2007). Farmers markets as keystones in rebuilding local and regional food systems. *Remaking the North American food system: Strategies for sustainability*, 65-83.

Glaser, B. (2002). *Constructivist grounded theory?* Forum Qualitative Sozial Forschung/Forum: Qualitative Social Research, 3.

Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory.* Chicago: Aldine.

Golden-Biddle, K., & Locke, K. (1993). Appealing work: An investigation of how ethnographic texts convince. *Organization science*, *4*(4), 595-616.

Goodman, D., DuPuis, E. M., & Goodman, M. K. (2012). *Alternative food networks: Knowledge, practice, and politics*. Routledge.

Government of Canada. (2017). *Shell egg stations registered for export*. Retrieved from https://www.inspection.gc.ca/exporting-food-plants-or-animals/food-exports/registers-and-lists/shell-egg-stations/eng/1391029540171/1391029591047?gf#a7

Government of Canada. (2019). *What we heard: Public consultations on the draft 2019 to 2022 Federal Sustainable Development Strategy*. Retrieved from https://www.canada.ca/en/environment-climate-change/services/sustainable-development/consultations-draft-federal-strategy-2019-2022/what-we-heard.html

Government of Canada. (2020a). *Canada's food guide*. Retrieved from https://food-guide.canada.ca/en/

Government of Canada. (2020b). *The food policy*. Retrieved from https://www.canada.ca/en/campaign/food-policy/thefoodpolicy.html

Government of Nova Scotia. (2016). Sustainable procurement policy. In *Nova Scotia procurement Manual: A collection of procurement protocols.* Retrieved from https://www.novascotia.ca/treasuryboard/manuals/PDF/300/30301-02.pdf

Grant, T. (2020, April 2). Nova Scotia puts climate change consultation of hold because of COVID-19. *CBC News*. Retrieved from https://www.cbc.ca/news/canada/nova-scotia/climate-change-consultation-on-hold-because-of-covid-19-1.5518257

Grant, T., & Baum, K. B. (2020, August 3). Migrant workers on farms across Canada are being told they can't leave, raising rights concerns. *The Globe and Mail.* Retrieved from https://www.theglobeandmail.com/business/article-migrant-workers-on-farms-across-canada-are-being-told-they-cant-leave/?fbclid=IwAR0C4NEFsd0mFPobAxVyS0KaCut_DuSgbT26A5fGOaiRQyWiy7wbjO8iPhg

Greenbank, P. (2003). The role of values in educational research: The case for reflexivity. *British Education Research Journal*, 29, 791-801.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, *18*(1), 59-82.

Gupta, J., & Vegelin, C. (2016). Sustainable development goals and inclusive development. *International environmental agreements: Politics, law and economics, 16*(3), 433-448.

Hák, T., Janoušková, S., & Moldan, B. (2016). Sustainable Development Goals: A need for relevant indicators. *Ecological Indicators, 60*, 565-573.

Hardesty, S., Christensen, L. O., McGuire, E., Feenstra, G., Ingels, C., Muck, J., Boorinakis-Harper, J., Fake, C., & Oneto, S. (2016). Economic impact of local food producers in the Sacramento region. UC Davis. Retrieved from http://sfp.ucdavis.edu/files/238053.pdf

Harrison, H. L., & Loring, P. A. (2016). Urban harvests: Food security and local fish and shellfish in Southcentral Alaska. *Agriculture & Food Security, 5*(1), 1-12.

Hawken, P., Lovins, A. B., & Lovins, L. H. (1999). *Natural capitalism: The next industrial revolution*. Routledge.

Health Canada. (2007). *Canadian Community Health Survey, Cycle 2.2, Nutrition (2004): Income-Related Household Food Security in Canada*. 4696. Retrieved from https://www.canada.ca/en/health-canada

Hecht, A. A., Misiaszek, C., Headrick, G., Brosius, S., Crone, A., & Surkan, P. J. (2019). Manager perspectives on implementation of a farmers' market incentive program in Maryland. *Journal of nutrition education and behavior, 51*(8), 926-935.

Hedberg II, R. C., & Zimmerer, K. S. (2020). What's the market got to do with it? Social-ecological embeddedness and environmental practices in a local food system initiative. *Geoforum*, *110*, 35-45.

Hoffman, J. (2019, May 1). N.S. needs boost to reach local food consumption goal — 20% by 2020. *CBC News.* Retrieved from https://www.cbc.ca/news/canada/nova-scotia/nova-scotia-local-food-goal-groceries-1.5112095

Hofmann, C., Dennis, J. H., & Marshall, M. I. (2008). *An Evaluation of Market Characteristics of Indiana Farmers' Markets*. 2008 Annual Meeting, Southern Agricultural Economics Association, Dallas, TX.

Horgan, M., & Liinamaa, S. (2012). *Double precarity: Experiences of former seasonal agricultural workers who settle in rural Nova Scotia*. Atlantic Metropolis Centre.

Horrigan, L., Lawrence, R. S., & Walker, P. (2002). How sustainable agriculture can address the environmental and human health harms of industrial agriculture. *Environmental health perspectives, 110*(5), 445-456.

Ilieva, R. T. (2017). Urban food systems strategies: A promising tool for implementing the SDGs in practice. *Sustainability, 9*(10), 1707.

Ireland, R. D., & Hirc, M. A. (1992). Mission statements: Importance, challenge, and recommendations for development. *Business Horizons*, *35*(3), 34-42.

James, H., & Hendrickson, M. K. (2010). Are farmers of the middle distinctively "good stewards"? Evidence from the Missouri Farm Poll, 2006. *Journal of Agricultural and Environmental Ethics 23*(6), 571-590.

Jarosz, L. (2008). The city in the country: Growing alternative food networks in Metropolitan areas. *Journal of rural studies*, *24*(3), 231-244.

Jessri, M., Nishi, S. K., & L'Abbe, M. R. (2016). Assessing the nutritional quality of diets of Canadian children and adolescents using the 2014 Health Canada Surveillance Tool Tier System. *BMC Public Health*, *16*(1), 381.

Jolliffe, L. (2008). Connecting farmers' markets and tourists in New Brunswick, Canada. *Food and wine festivals and events around the world: Development, management and markets*, 232-248.

Jones, P., & Comfort, D. (2020). A commentary on the localisation of the sustainable development goals. *Journal of Public Affairs, 20*(1), e1943.

Josephsson, S., & Alsaker, S. (2014). Narrative methodology: A tool to access unfolding and situated meaning in occupation. In *Qualitative research methodologies for occupational science and therapy* (pp. 86-99). Routledge.

Kaiser, M. L. (2011). Food security: An ecological–social analysis to promote social development. *Journal of Community Practice, 19*(1), 62-79.

Khouryieh, M., Khouryieh, H., Daday, J. K., & Shen, C. (2019). Consumers' perceptions of the safety of fresh produce sold at farmers' markets. *Food Control, 103*, 242-247.

Killawee, N. (2020, August 18). Feeding a nation under lockdown. *Dalhousie News*. Retrieved from https://www.dal.ca/news

Kirwan, J. (2006). The interpersonal world of direct marketing: Examining conventions of quality at UK farmers' markets. *Journal of Rural Studies, 22*(3), 301-312.

Klemm, M., Sanderson, S., & Luffman, G. (1991). Mission statements: Selling corporate values to employees. *Long range planning*, *24*(3), 73-78.

Knezevic, I. (2016). Illicit food: Canadian food safety regulation and informal food economy. *Critical Policy Studies*, *10*(4), 410-425.

Knight, A. J. (2013). Evaluating local food programs: The case of Select Nova Scotia. *Evaluation and program planning*, *36*(1), 29-39.

Koff, H. (in press). Why serve soup with a fork?: How policy coherence for development can link environmental impact assessment with the 2030 Agenda for Sustainable development. *Environmental Impact Assessment Review*, *86*.

Korhonen, J., Nuur, C., Feldmann, A., & Birkie, S. E. (2018). Circular economy as an essentially contested concept. *Journal of Cleaner Production*, *175*, 544-552.

Kulick, R. (2019). More time in the kitchen, less time on the streets: The micropolitics of cultivating an ethic of care in alternative food networks. *Local Environment*, *24*(1), 37-51.

Kunstler, J. H. (1994). *Geography of nowhere: The rise and decline of America's man-made landscape.* Simon and Schuster.

Latour, B. (2011). Network theory, societies, spheres: Reflections of an actor-network theorist. *International journal of communication, 5*, 15.

Latour, B., & Porter, C. (1996). *Aramis, or, the love of technology* (Vol. 1996). Cambridge, MA: Harvard University Press.

Latour, B. (1992). Where are the missing masses? The sociology of a few mundane artifacts. In Bijker & Law (eds.) *Shaping Technology/Building Society: Studies in Sociotechnical Change.* Cambridge: MIT Press.

Law, J. (1992). Notes on the theory of the actor-network: Ordering, strategy, and heterogeneity. *Systems practice, 5*(4), 379-393.

Leone, L. A., Tripicchio, G. L., Haynes-Maslow, L., McGuirt, J., Smith, J. S. G., Armstrong-Brown, J., ... & Ammerman, A. S. (2019). A cluster-randomized trial of a mobile produce market program in 12 communities in North Carolina: Program development, methods, and baseline characteristics. *Journal of the Academy of Nutrition and Dietetics, 119*(1), 57-68.

Leventon, J., & Laudan, J. (2017). Local food sovereignty for global food security? Highlighting interplay challenges. *Geoforum, 85*, 23-26.

Linton, E., Keller, H., & Duizer, L. (2018). Ingredients for success: Strategies to support local food use in health care institutions. *Canadian Journal of Dietetic Practice and Research*, *79*(3), 113-117.

Lowitt, K. (2009). Exploring connections between people, places and food in three Nova Scotia farmers' markets. *Cuizine: The Journal of Canadian Food Cultures/Cuizine: Revue des Cultures Culinaires au Canada, 2*(1).

Lülfs-Baden F., Spiller A., Zühlsdorf A., & Mellin M. (2008). Customer satisfaction in farmer-to-consumer direct marketing. *International Food Agribus Management Review, 11*(2), 49-72.

Marino, D., Mastronardi, L., Franco, S., De Gregorio, D., Cicatiello, C., & Pancino, B. (2013). *Farmers markets, producer and consumer behaviour: Analysis of interactions with the metrics of sustainability* (No. 1021-2016-81792, pp. 325-343).

Martin, S., & Horst, M. (2017). Recipe for resiliency: There's more to community food systems than farmers markets. *Planning, 83*(8), 34-38.

Marton, F. (1993). Our experiences of the physical world. *Cognition and Instruction, 10*, 227-237.

Mauthner, N., & Doucet, A. (2003). Reflexive accounts and accounts of reflexivity in qualitative data analysis. *Sociology, 37*, 413-431.

Mazzocchi, G., & Marino, D. (2018). *The value of Farmers' Markets for the territory and the community: The case of Campi Aperti Alternative Food Network (Italy).* Third international conference: Agriculture and food in an urbanizing society. Porto Alegre, Brazil.

McIsaac, J. L. D., Shearer, C. L., Veugelers, P. J., & Kirk, S. F. (2015). Moving forward with school nutrition policies: A case study of policy adherence in Nova Scotia. *Canadian Journal of Dietetic Practice and Research*, *76*(4), 172-177.

McIsaac, J. L. D., Spencer, R., Stewart, M., Penney, T., Brushett, S., & Kirk, S. F. (2019). Understanding system-level intervention points to support school food and nutrition policy implementation in Nova Scotia, Canada. *International journal of environmental research and public health*, *16*(5), 712.

McMartin, S. E., Kuhle, S., Colman, I., Kirk, S. F., & Veugelers, P. J. (2012). Diet quality and mental health in subsequent years among Canadian youth. *Public health nutrition*, *15*(12), 2253-2258.

Millichamp, A., & Gallegos, D. (2013). Comparing the availability, price, variety and quality of fruits and vegetables across retail outlets and by area-level socio-economic position. *Public health nutrition, 16*(1), 171-178.

Mobile Food Market (n.d.). *Homepage.* Retrieved from http://www.mobilefoodmarket.ca/.

Mol, A. P., & Spaargaren, G. (2000). Ecological modernization theory in debate: A review. *Environmental politics, 9*(1), 17-49.

Montgomery-Dupe, S. (2020, July 9). More in store for Cape Breton Farmers' Market. *The Cape Breton Post*. Retrieved from https://www.capebretonpost.com/news/local/more-in-store-for-cape-breton-farmers-market-471072/

Montgomery-Dupe, S. (2020, May 18). Chef helps Cape Breton Farmers' Market raise money with weekly meals. *The Cape Breton Post*. Retrieved from https://www.capebretonpost.com/news/local/chef-helps-cape-breton-farmers-market-raise-money-with-weekly-meals-451107/

Moubarac, J. C. (2017). *Ultra-processed foods in Canada: Consumption, impact on diet quality and policy implications.* Montréal: TRANSNUT, University of Montreal.

Nicholson, G. (1984). *Seeing and reading*. Atlantic Highlands, NJ: Humanities Press Inc.

Nikkel, L. (2019). *Avoidable Crisis of Food Waste: The Roadmap*. Canadian Electronic Library.

Noll, S. (2014). Liberalism and the two directions of the local food movement. Journal of *Agricultural and Environmental Ethics, 27*(2), 211-224.

Noseworthy, B. (2013). *Buying local at grocery stores in Nova Scotia: Implications for food security and healthy eating* [Dissertation]. Mount Saint Vincent University.

Noushin, Z. (2020, August 5). Nova Scotia group call for action on migrant worker rights. *The Chronicle Herald.* Retrieved from https://www.thechronicleherald.ca/news/provincial/nova-scotia-groups-call-for-action-on-migrant-worker-rights-481720/

Nova Scotia Department of Natural Resources. (1986). *Mineral rights, landowners, and mineral exploration*. Nova Scotia Department of Natural Resources, Mineral Resources Branch, Information Circular ME 2. Retrieved from https://novascotia.ca/natr/meb/pdf/ic02.asp

Nova Scotia Environment (NSE), Environmental Health and Food Safety Division. (n.d.). *Abattoirs under provincial inspection.* Retrieved from https://novascotia.ca/agri/documents/food-safety/abbattoir-listing.pdf

Nova Scotia Environment (NSE), Environmental Health and Food Safety division. (2018). *Food safety guidelines for public markets*. Retrieved from https://novascotia.ca/agri/documents/food-safety/publicmarketguide.pdf

Nova Scotia Environment (NSE). (2017a). *Environmental Goals and Sustainable Prosperity Act 2015–17 progress report.* Retrieved from https://novascotia.ca/nse/egspa/docs/EGSPA-2015-17-Progress-Report.pdf

Nova Scotia Environment (NSE). (2017b). *Private land conservation*. Retrieved from https://novascotia.ca/nse/protectedareas/privateconservation.asp

Nova Scotia Federation of Agriculture. (2020). Agricultural land. Retrieved from https://nsfa-fane.ca/about/nsfa-policy/agricultural-land/

O'Kane, G., & Wijaya, S. Y. (2015). Contribution of farmers' markets to more socially sustainable food systems: A pilot study of a farmers' market in the Australian capital territory (ACT), Australia. *Agroecology and Sustainable Food Systems, 39*(10), 1124-1153.

Office of the High Commissioner on Human Rights. (2020). *Internal covenant on economic, cultural and social rights*. Retrieved from https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx

One Nova Scotia. (2020). *Homepage*. Retrieved from https://www.onens.ca/

Palmeter, P. (2020a, August 19). Annapolis Valley farmers scrambling for water during dry summer. *CBC News.* Retrieved from https://www.cbc.ca/news/canada/nova-scotia/annapolis-valley-farmers-drought-heat-crops-livestock-1.5691704

Palmeter, P. (2020b, April 13). N.S. farmer says producers have obligation to provide food amid COVID-19. *CBC News.* Retrieved from https://www.cbc.ca/news/canada/nova-scotia/farmer-says-producers-have-obligation-to-provide-food-for-nova-scotians-1.5530848

Parkins, W., & Craig, G. (2009). Culture and the politics of alternative food networks. *Food, Culture & Society*, *12*(1), 77-103.

Patterson, M. E., & Williams, D. R. (2002). Hermeneutic paradigm. *In Collecting and analyzing qualitative data: Hermeneutic principles, methods and case examples* (pp. 11-30). Champaign, IL: Sagamore Publishing.

Pilgeram, R. (2012). Social sustainability and the white, nuclear family: Constructions of gender, race, and class at a Northwest farmers' market. *Race, Gender & Class*, 37-60.

Pollan, M. (2006). Voting with your fork. *The New York Times*. Retrieved from https://michaelpollan.com/articles-archive/voting-with-your-fork/

Portland Farmers Market (2010, December 07). *EverGreening the market*. Retrieved from https://www.portlandfarmersmarket.org/evergreening-the-market/

Pothukuchi, K. (2012). Building sustainable food systems in a single bottom-line context: Lessons from SEED Wayne, Wayne State University. *Journal of Agriculture, Food Systems, and Community Development, 2*(3), 103-119.

Prentiss, M. (2019, April 5). Eastern Shore community rallies against proposed gold mine. *CBC News*. Retrieved from https://www.cbc.ca/news/canada/nova-scotia/eastern-shore-community-rallies-against-proposed-gold-mine-1.5085615

Province of Nova Scotia Open Data Portal (2020). *Municipal solid waste disposal totals.* Retrieved from https://data.novascotia.ca

Province of Nova Scotia. (2020). *Minimum wage.* Retrieved from https://novascotia.ca/lae/employmentrights/minimumwage.asp

Pyle, J. (1971). Farmers' markets in the United States: Functional anachronisms. *Geographical Review*, 167-197.

Quon, A. (2020, May 16). Long weekend frost advisory issued for all of Nova Scotia. *Global News.* Retrieved from https://globalnews.ca/news/6952436/frost-advisory-nova-scotia/

Reganold, J. P., & Wachter, J. M. (2016). Organic agriculture in the twenty-first century. *Nature plants, 2*(2), 1-8.

Reynolds, C. J., Buckley, J. D., Weinstein, P., & Boland, J. (2017). Sustainability challenges, human diet and environmental concerns. In R. Bhat (Ed.), *Sustainability in the agrofood sector* (First ed., pp. 49-78). New York: John Wiley & Sons, Incorporated.

Riches, G. (1999). Advancing the human right to food in Canada: Social policy and the politics of hunger, welfare, and food security. *Agriculture and Human Values, 16*(2), 203-211.

Riches, G., & Tarasuk, V. (2014). Canada: Thirty years of food charity and public policy neglect. In *First world hunger revisited* (pp. 42-56). Palgrave Macmillan, London.

Richter, A., Bruce, N., Ng, K. T., Chowdhury, A., & Vu, H. L. (2017). Comparison between Canadian and Nova Scotian waste management and diversion models—A canadian case study. *Sustainable Cities and Society, 30*, 139-149.

Rigby, D., & Bilodeau, B. (2011). Management tools & trends 2013. *London: Bain & Company*.

Roberts, B., Morton, G., McGuire, T., Robert R. (2008). *Direct Marketing of agri-food in Atlantic Canada: Situation and outlook.* Council of Atlantic Premiers. Retrieved from https://www.gov.nl.ca/ffa/files/agrifoods-stats-pdf-direct-marketing.pdf

Rosling, H. (2019). *Factfulness.* New York: Flatiron Books.

Ruelas, V., Iverson, E., Kiekel, P., & Peters, A. (2012). The role of farmers' markets in two low income, urban communities. *Journal of Community Health, 37*(3), 554-562.

Ruzek, W. (2015). The informal economy as a catalyst for sustainability. *Sustainability*, *7*(1), 23-34.

Sage, C. (2003). Social embeddedness and relations of regard: Alternative 'good food' networks in south-west Ireland. *Journal of Rural Studies 19*, 47-60.

Salisbury, K., Curtis, K., Pozo, V., & Durward, C. (2018). Is local produce really more expensive? A comparison of direct market and conventional grocery produce pricing. *Journal of Food Distribution Research*, *49*, 13-21.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., ... & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & quantity*, *52*(4), 1893-1907.

Savoie-Roskos, M., Durward, C., Jeweks, M., & LeBlanc, H. (2016). Reducing food insecurity and improving fruit and vegetable intake among farmers market incentive program participants. *Journal of nutrition education and behavior, 48(*1), 70-76.

Schlosser, A. V., Joshi, K., Smith, S., Thornton, A., Bolen, S. D., & Trapl, E. S. (2019). "The coupons and stuff just made it possible": Economic constraints and patient experiences of a produce prescription program. *Translational Behavioral Medicine*, *9*(5), 875-883.

Schnaiberg, A. (1980). *The environment: From surplus to scarcity: The enduring conflict.* New York: Oxford University Press.

Scott, J., & Macleod, M. (2007). *Local food procurement policies: A literature review*. Ecology Action Centre. Retrieved from https://ecologyaction.ca/files/images-documents/file/Food/LocalFoodProcurementPolicies.pdf

Scott, J., & MacLeod, M. (2010). *The food-miles project: Is Nova Scotia eating local? And if not…Where is our food coming from?* The Ecology Action Centre. Retrieved from https://foodsecurecanada.org/

Segal, L. (2017). *Radical happiness: Moments of collective joy*. Verso Books.

Shen, Y. (2019). *Role of co-operatives in facilitating the implementation of the sustainable development goals: an experience from Nova Scotia, Canada.* [Dissertation]. Retrieved from Dalhousie Thesis Repository.

Siegner, A., Sowerwine, J., & Acey, C. (2018). Does urban agriculture improve food security? Examining the nexus of food access and distribution of urban produced foods in the United States: A systematic review. *Sustainability, 10*(9), 2988.

Silkes, C. A. (2012). Farmers' markets: A case for culinary tourism. *Journal of Culinary Science & Technology, 10*(4), 326-336.

Smithers, J., Lamarche, J., & Joseph, A. E. (2008). Unpacking the terms of engagement with local food at the farmers' market: Insights from Ontario. *Journal of Rural Studies, 24*(3), 337-350.

Sooksom, R. (2013). *Getting started in small scale dairy production in Nova Scotia.* Nova Scotia Department of Agriculture. Retrieved from https://novascotia.ca/thinkfarm/documents/getting-started-in-small-scale-dairy-production.pdf

Spaargaren, G., & Mol, A. P. (1992). Sociology, environment, and modernity: Ecological modernization as a theory of social change. *Society & natural resources, 5*(4), 323-344.

Speth, J. G., & Zinn, D. (2008). *The bridge at the end of the world: Capitalism, the environment, and crossing from crisis to sustainability.* New Haven, CT: Yale University Press.

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., ... & O'Connell, D. (2017). Integration: The key to implementing the Sustainable Development Goals. *Sustainability Science, 12*(6), 911-919.

Stafford, (2017). *Big Shoes to fill: An investigation of the Halifax food footprint* [Dissertation]. Retrieved from Dalhousie Thesis repository.

Statistics Canada (2012). Survey of Labour and Income Dynamics (SLID) – 2010 survey overview. Retrieved from https://www150.statcan.gc.ca/n1/pub/75f0011x/75f0011x2012001-eng.htm

Statistics Canada. (2012-2018). *Household spending research paper series: Statistics Canada's annual Guide for the Survey of Household Spending (SHS), Appendix G (2017, 2016, 2015), Appendix H (2014), Appendix IX Text Table 1 (2013, 2012, 2011).* Retrieved from https://www150.statcan.gc.ca/n1/en/catalogue/62F0026M

Statistics Canada. (2015). *Low income definitions*. Retrieved from https://www150.statcan.gc.ca/n1/pub/75f0011x/2012001/notes/low-faible-eng.htm#a5

Statistics Canada. (2017). *Population centres and rural area classification 2016.* Retrieved from https://www.statcan.gc.ca/eng/subjects/standard/pcrac/2016/introduction

Statistics Canada. (2018). *Farm and farm operator data: Nova Scotia leads Canada in corn and apple area.* Retrieved from https://www150.statcan.gc.ca/n1/pub/95-640-x/2016001/article/14802-eng.htm

Statistics Canada. (2019). *Health fact sheets: Fruit and vegetable consumption, 2017.* Retrieved from https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00004-eng.htm

Statistics Canada. (2020a). *Canadian Community Health Survey, 2017-2018. Table 13-10-0385-01 Household food security by living arrangement*. Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1310038501#timefr

Statistics Canada. (2020b). *Canadian's mental health during the COVID-19 pandemic.* Retrieved from https://www150.statcan.gc.ca/n1/daily-quotidien/200527/dq200527b-eng.htm

Statistics Canada. (2020c). *Food insecurity during the COVID-19 pandemic, May 2020*. Retrieved from https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00039-eng.htm

Statistics Canada. (2020d). *Table 11-10-0197-01. Survey of household spending (SHS), household spending, summary-level categories, by province, territory and selected metropolitan areas.* Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110019701.

Statistics Canada. (2020e). *Table 13-10-0096-01. Health characteristics, annual estimates.* Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009601

Statistics Canada. (2020f). *Table 32-10-0045-01. Farm cash receipts, annual (x 1,000).* Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210004501

Statistics Canada. (2020g). *Table 32-10-0041-01. Number of households in the farm population classified by major source of income and income class.* Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3210004101

Statistics Canada. (2020h). *Table 32-10-0152-01. Number and area of farms and farmland area by tenure, historical data.* Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210015201&pickMembers%5B0%5D=1.4

Steiniger, S., Wagemann, E., de la Barrera, F., Molinos-Senante, M., Villegas, R., de la Fuente, H., ... & Pastén, P. A. (2020). Localising urban sustainability indicators: The CEDEUS indicator set, and lessons from an expert-driven process. *Cities*, *101*, 102683.

Stephenson, G. (2008). *Farmers' markets: Success, failure, and management ecology.* Amherst, Massachusetts: Cambria Press.

Stewart, J. (1983). Interpretive listening: An alternative to empathy. *Communication education*, *32*(4), 379-391.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research*, (2nd ed.). Thousand Oakes, CA: Sage Publications.

Sullivan, N. (2020, March 20). Cape Breton Farmers' Market selling online thanks to food hub partnership. *Cape Breton Post*. Retrieved from https://www.capebretonpost.com/news/local

Sustainable Development Goals Act (SDGA), SNS 2019, c. 26.

Sustainable Northern Nova Scotia (SuNNS). (n.d.). *Homepage.* Retrieved from https://sunns.org/

Tan, D. T., Siri, J. G., Gong, Y., Ong, B., Lim, S. C., MacGillivray, B. H., & Marsden, T. (2019). Systems approaches for localising the SDGs: Co-production of place-based case studies. *Globalization and Health*, *15*(1), 85.

Tarasuk, V. (2017). *Implications of a basic income guarantee for household food insecurity.* Thunder Bay, Canada: Northern Policy Institute.

Tarasuk, V., Mitchell, A., & Dachner, N. (2016). *Household food insecurity in Canada, 2014. Toronto: Research to identify policy options to reduce food insecurity (PROOF).* Retrieved from http://proof.utoronto.ca

Taste of Nova Scotia. (2020). *Our members.* Retrieved from Retrieved from https://tasteofnovascotia.com/members/

Tavernier, E. M., & Tolomeo, V. (2004). Farm typology and sustainable agriculture: Does size matter? *Journal of sustainable agriculture*, *24*(2), 33-46.

The Nova Scotia Commission on Building our New Economy (the Commission). (2014). *Now or never: The report of the Nova Scotia Commission on Building our New Economy.* Retrieved from http://www.valleyren.ca/wp-content/uploads/2016/08/Now-or-Never-The-Report-of-the-Nova-Scotia-Commission-on-Building-Our-New-Economy-2014.pdf

Thompson, A. (2020a, June 12). Use of Wolfville Farmers' Market's online ordering skyrocketed during COVID-19. *The Chronicle Herald.* Retrieved from https://www.thechronicleherald.ca/news

Thompson, M. (2020b). Farmers' markets and tourism: Identifying tensions that arise from balancing dual roles as community events and tourist attractions. *Journal of Hospitality and Tourism Management*, *45*, 1-9.

Toh, S. Y., & Koon, V. Y. (2017). Determining mission statement effectiveness from a fit perspective. *Studies in Business and Economics*, *12*(2), 220-240.

Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of rural studies*, *27*(4), 419-430.

Trobe, H. L. (2001). Farmers' markets: Consuming local rural produce. *International journal of consumer studies*, *25*(3), 181-192.

Tsai, B. K. (2019). Determinants of consumers' retention and subjective well-being: A Sustainable farmers' market perspective. *Sustainability, 11*(22), 6412.

Tsai, B. K., Lee, K. Y., Hsieh, C. M., & Somsong, P. (2019). Determinants of actual purchase behavior in farmers' markets. *Sustainability*, *11*(19), 5480.

Turner, B., & Hope, C. (2014). Ecological connections: Reimagining the role of farmers' markets. *Rural Society, 23*(2), 175-187.

UN General Assembly. (2015, October 15). *Transforming our world: The 2030 Agenda for Sustainable Development, A/RES/70/1.* Retrieved from https://www.refworld.org/docid/57b6e3e44.html

Vail, J. V. (2014). The geography of somewhere: The farmers' market and sustainability in Brno, Czech Republic. *Environmental Values, 23*(1), 51-74.

Vermeulen, S. J., Campbell, B. M., & Ingram, J. S. (2012). Climate change and food systems. *Annual review of environment and resources, 37,* 195-222.

Vittersø, G., Torjusen, H., Laitala, K., Tocco, B., Biasini, B., Csillag, P., ... & Malak-Rawlikowska, A. (2019). Short food supply chains and their Contributions to sustainability: Participants' views and perceptions from 12 European cases. *Sustainability, 11*(17), 4800.

Voices for Food Security in Nova Scotia. (2017). *Can Nova Scotians afford to eat healthy? Report on 2015 participatory food costing.* Halifax, NS: Food Action Research Centre (FoodARC), Mount Saint Vincent University.

Wallgren, C. (2006). Local or global food markets: A comparison of energy use for transport. *Local Environment*, *11*(02), 233-251.

Walton, V. (2020, February 22). Local products made more recognizable in Nova Scotia stores. *Halifax Today*. Retrieved from https://www.halifaxtoday.ca/local-news/local-products-made-more-recognizable-in-nova-scotia-stores-2111815

Watts, D. C., Ilbery, B., & Maye, D. (2005). Making reconnections in agro-food geography: alternative systems of food provision. *Progress in Human Geography, 29*(1), 22-40.

Wilkins, J. L. (1995). Seasonal and local diets: Consumers' role in achieving a sustainable food system. *Research in rural sociology and development, 6,* 149-166.

Williams, P., & the Policy Working Group of the Nova Scotia Participatory Food Security Projects. (2006). *Thought about food? Understanding the relationship between public policy and food security in Nova Scotia.* Retrieved from https://foodarc.ca/wp-content/uploads/2013/05/PolicyBackgrounderLens.pdf

Withrow Park Farmers' Market (2018). *A zero waste market.* Retrieved from https://withrowmarket.ca/community/zero-waste-initiative/

Wittman, H., Beckie, M., & Hergesheimer, C. (2012). Linking local food systems and the social economy? Future roles for farmers markets in Alberta and British Columbia. *Rural Sociology, 77*(1), 36-61.

Wolf, M. M., Spittler, A., & Ahern, J. (2005). A profile of farmers' market consumers and the perceived advantages of produce sold at farmers' markets. *Journal of Food Distribution Research*, *36*, 192-201.

Wolfville Farmers' Market. (2019, May 14). *Wolfville Farmers' Market's Zero Waste Commitment.* Retrieved from https://static1.squarespace.com/static/587f8bdabf629aa34c880f3f/t/5da5fa29e06a651004e5d06e/1571158569610/WFM%27s+Zero+Waste+Commitment.pdf

Young, C., Karpyn, A., Uy, N., Wich, K., & Glyn, J. (2011). Farmers markets in low income communities: Impact of community environment, food programs and public policy. *Community Development, 42*(2), 208-220.

Zafiriou, M. (2005, May). *Food retailing in Canada: Trends, dynamics and consequences.* Agriculture and Agrifood Canada. Retrieved from https://www.pecc.org/resources/foodagriculture-1/396-food-retailing-in-canada-trends-dynamics-and-consequences/file

Zellweger, T. M., Nason, R. S., Nordqvist, M., & Brush, C. G. (2013). Why do family firms strive for nonfinancial goals? An organizational identity perspective. *Entrepreneurship Theory and practice*, *37*(2), 229-248.