"We Should Never Be a Hindsight"

Food Justice in North End Halifax (K'jipuktuk)

by

Donelle Fraser

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Supervisor: Dr. Karen Beazley

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AUTHOR: Donelle Fraser

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Abstract

North End Halifax is often informally referred to as a "food desert," meaning an area with limited access to healthy and affordable food. This study examines food insecurity in North End Halifax as an environmental justice issue. I aim to address a disconnect between the food security literature – which has largely ignored issues of class and race – and the environmental racism literature – which has traditionally ignored food security issues. This study uses a mixed methods design, beginning with a GIS-based spatial analysis that provides context and scope, followed by personal interviews that probe the lived experiences and opinions of residents of the North End. My findings suggest that North End Halifax is indeed a food desert; however, the complexity of the problem extends beyond the lack of grocery stores in the area. Socioeconomic marginalization, political exclusion, gentrification, and the continuing legacies of racism all contribute to peoples' inability to access healthy, affordable, and sufficient food. Initiatives already exist within the community to address these issues and improve food security. Recommendations include addressing the political exclusion of community members, increasing wages and income support, and putting in place policies to protect against gentrification. Solutions must prioritize the voices of community members.

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Land Acknowledgement

Given that this study has an environmental justice focus, it seems especially important to acknowledge that most of the process work for this study – including interviews, spatial analysis, and writing – took place on the unceded Mi'kmaq territory of K'jipuktuk. Further, this is a land with a violent history of displacement and enslavement of African Nova Scotians. In studying food systems, it is essential that we not forget our often-troubled relationship with the land and each other. I, as a white settler studying in unceded Indigenous territory, benefit unfairly from ongoing colonialism and racism in the lands we call Halifax and Nova Scotia. Thus, it is my responsibility to seek to understand the privileges I hold and work to dismantle the systems that uphold white settler supremacy. This project but is one small piece of that work and through it I hope to give platform to some of those who are marginalized in our current food system. However, I understand that the work is never done and all I can promise is to keep listening, learning, and engaging. We are all treaty people.

The Principles of Environmental Justice

WE THE PEOPLE OF COLOR, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to insure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice:

Environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction;

Environmental justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias;

Environmental justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things;

Environmental justice calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food;

Environmental justice affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples;

Environmental justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production;

Environmental justice demands the right to participate as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement and evaluation;

Environmental justice affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards;

Environmental justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care;

Environmental justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide;

Environmental justice must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination;

Environmental justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to the full range of resources;

Environmental justice calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color;

Environmental justice opposes the destructive operations of multi-national corporations;

Environmental justice opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms;

Environmental justice calls for the education of present and future generations, which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives;

Environmental justice requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to insure the health of the natural world for present and future generations.

Adopted October 27, 1991, in Washington, D.C. (The People of Colour, 1991).

Chapter 1: Introduction

A recent study indicated that Halifax has one of the highest rates of food insecurity of 27 Canadian cities studied, at 15.1% (Tarasuk, Mitchell, & Dachner, 2016, pg. 18). Food insecurity is a recognized problem in Halifax's North End, and the area has been referred to as a "food desert" in the grey literature, due to the relative lack of access to healthy and affordable food (Beaumont, 2012, para. 9; Erwin, 2016; Ward, 2016). Despite widespread awareness, the North End food desert has not been well studied. The purpose of this study is to examine food insecurity in North End Halifax as an environmental and social justice issue.

Research Questions

The central question that this study aims to address is: to what extent is environmental racism present in Halifax's North End, with respect to food sovereignty?

Several sub-questions are embedded within this central question:

1. Are people living in food desert areas in Halifax's North End more likely to belong to a vulnerable group (such as First Nations, African Nova Scotians, new immigrants, single parent families, women, queer and trans people, elderly single people, people with disabilities, and people living on minimum wage or income assistance) than those living in well-serviced areas of the North End?

2. What is the lived experience of residents of a food desert, and how do they cope with the challenges of food insecurity?

3. What do they see as causes and solutions to this issue?

Definitions

Food Deserts

The Food Empowerment Project defines food deserts as "geographic areas where residents'

access to affordable, healthy food options (especially fresh fruits and vegetables) is restricted

or non-existent due to the absence of grocery stores within convenient travelling distance."

Food deserts are also described as being "commonly found in communities of colour and

low-income areas" (2015, para. 1). My literature search revealed that the term "food desert"

is gaining prominence not only within the environmental justice field, but also within

public health and community health research and activism. A range of organizations

working at the community, regional, national, and international levels have official

definitions for food deserts, including the American Nutrition Association (2011) and the

Canadian Environmental Health Atlas (2013). The key commonality of all these

definitions is the lack of healthy and affordable foods within a given geographic area.

However, most – though not all – definitions of food deserts also acknowledge that this

lack of access typically goes hand-in-hand with some form of socioeconomic distress. In

other words, it is generally recognized people living in conditions of food insecurity are

likely to belong to vulnerable groups (Larsen & Gilliland, 2008).

Food Security/Sovereignty

Food security has traditionally been defined quite narrowly as the simple existence of enough food produce to feed a given geographic area (Weiler et al., 2015). Although definitions are broadening to recognize the multiple social and environmental dimensions of accessing food, I consider the term "Food *Sovereignty*" to be a more comprehensive and therefore useful concept, and thus will conduct my research and analysis within the framework of food sovereignty. Food sovereignty is defined as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (La Via Campesina, 1996, para. 8). According to Weiler and colleagues, food sovereignty offers a "broader vision than food security, asserting communities' power to democratically manage productive food system resources... and to engage in trade on their own terms" (2015, pg. 1079). It follows that research through the lens of food sovereignty must be more attentive to political processes and systemic issues than traditional food security-based research, which tends to focus on individual health outcomes (Weiler, et al., 2015). This is consistent with the environmental justice approach to health research, which demands that the researcher prioritize local knowledge and recognize the structures of privilege and oppression that serve to create conditions of injustice (Masuda, Poland, & Baxter, 2010).

Environmental Racism

Environmental racism can be defined as the inequitable distribution of environmental burdens and benefits across communities that are socially privileged, and communities that

are vulnerable, especially communities of colour or low-income communities (Hilmers, Hilmers, and Dave, 2012, pg. 1644; Ornelas, 2010, pg. 4). It also refers to the lack of agency that these communities hold in ensuring that their environment remains healthy and livable (The ENRICH Project, 2015). Research on environmental racism in Nova Scotia and elsewhere has typically been concerned with the disproportionate siting of environmental hazards, such as landfills and mining sites, near socially and economically disadvantaged populations, such as African Nova Scotian and Canadian First Nations communities (Waldron, 2015b; Deacon & Baxter, 2013). For example, the Environmental Noxiousness, Racial Inequities and Community Health (ENRICH) project was launched in 2012 to address the health effects of the disproportionate siting of landfills and toxic waste facilities near Mi'kmaw and African Nova Scotian communities, such as Membertou and Lincolnville (Waldron, 2015b). While such research is important, there is a need to build understanding of more subtle ways in which environmental injustice manifests itself, especially in urban settings. Recent research by Hilmers, Hilmers, and Dave identifies "limited access to healthy foods" as a critical component of environmental justice (2012, pg. 1644). Masuda, Poland, and Baxter similarly acknowledge, "human-produced environmental risks result from both exposures to hazards and limitations on access to environmental opportunities" (2010, pg. 453).

Environmental Justice

If environmental racism is the inequitable siting of environmental benefits and burdens, then environmental justice is the movement and theoretical framework that works to

examine and ultimately reverse this trend, by linking "environmental research to debates around rights, human dignity and social equity" (Masuda, Poland, & Baxter, 2010, pg. 456). The concept of environmental justice is not new, and the principle of "justice among all beings of Creation" is recognized in the teachings of many First Nations groups in Canada (McGregor, 2009, pg. 27). Grassroots struggle against racist environmental policy and practice has existed for just as long. However, "environmental justice" as a unified movement and field of study did not emerge until the 1980s, when a number of high-profile cases of toxics dumping in the Southern United States garnered national media attention. One of the most significant cases occurred in North Carolina in 1982 (Bullard, 2001). Protests against dumping of polychlorinated biphenyl (PCB) waste in the rural and predominantly African-American community of Warren County led to a number of landmark studies by the US General Accounting Office, the Commission for Racial Justice, and others, confirming the link between race, class, and exposure to toxic industries (Bullard, 2001; Taylor, 2011). In 1991, the first National People of Color Environmental Leadership Summit adopted the 17 "Principles of Environmental Justice," which were brought forward and cited by many environmental groups at the 1992 Rio Earth Summit (Bullard, 2001, pg. 152). This document was important not only as a symbolic action that solidified commitments to environmental justice, but also because it broadened the scope of the environmental justice movement beyond a focus on anti-toxics to include diverse issues including public health, land use, access to resources, and community empowerment (Bullard, 2001).

Delimitations and Limitations

Many parts of Halifax Regional Municipality and Nova Scotia have been identified as lacking food security. However, given limitations of time and resources, I have chosen to focus my research on North End Halifax. After completing a Geographic Information System (GIS) -based spatial analysis, I further focus my study by selecting a geographic area within the North End, in which the food desert issue is most severe. Although my geographic scope is fairly small, I use an in-depth research methodology that could potentially be applied in other geographic contexts. I have also placed delimitations on my methodology. For example, I believe that a more thorough GIS analysis could be very useful and informative, by allowing for comparison between different areas in Halifax Regional Municipality based on access to food and demographic indicators such as income levels or age ranges. However, in this study I use GIS primarily to narrow the geographic scope and to give some preliminary insight into the connection between food insecurity and social vulnerability. Keeping the GIS analysis brief allows me to focus on gathering qualitative data through interviews.

Significance of the Study

As mentioned earlier, the lack of access to healthy and affordable food is a recognized issue in Halifax's North End. There has been a considerable grassroots effort to address this issue – represented by initiatives such as Hope Blooms, the North End Community Action Committee, the Community Carrot Coop, and the Mobile Food Market – however, there is a need to build academic knowledge and understanding about the scope and severity of

the North End food desert, the underlying systemic issues that keep the area a food desert, and the effectiveness of grassroots interventions ("Community Carrot," 2013; Walsh, 2014; Erwin, 2016; Ward, 2016; Neigh, 2017). Increasing the knowledge base will in turn help to inform and strengthen grassroots efforts to address food insecurity in this area. My study is significant because it contributes to this knowledge in several different yet complementary ways. By conducting a GIS-based analysis of the locations of food retailers as spatially correlated with neighborhood-level demographic data, I am able to identify where food insecurity is most severe and contribute to the discourse surrounding the connection between food insecurity and social vulnerability, which is a key issue within environmental justice and community health research.

The bulk of my research, however, focuses on qualitative data. Based on the results of my GIS analysis, I hone in on an area of the North End in which food insecurity appears to be most severe. Personal interviews with residents of this area provide a better understanding of the lived experience and perspectives of residents of a food desert. Although there has been a considerable amount of research done to assess food insecurity in Nova Scotia – through initiatives such as the Food Action Research Centre at Mount Saint Vincent University, which has led both quantitative and qualitative studies on food security in communities across Nova Scotia – there has not yet been any formal research conducted specifically on food security in the North End of Halifax (Community University Research Alliance, 2015). Furthermore, there have not to my knowledge been any studies conducted in Nova Scotia that examine food security from an environmental justice perspective, despite class and race being recognized as important factors in food

security in Canada (Tarasuk, Mitchell, & Dachner, 2016). Meanwhile, research on environmental racism in Nova Scotia has been mainly focused on the siting of toxic industries, leaving the justice and race issues embedded in Nova Scotia's food system largely unexamined, at least from an academic perspective. This is a gap I am aiming to address in my research. Through my qualitative research I aim to open up space for conversation and problem solving surrounding the goals of community food sovereignty by elevating the voices of those who are most marginalized in our food system.

Although this is a case study focused on food justice in the North End of Halifax, it is also meant to contribute to the broader scholarly literature on food security and environmental justice. The issue of food security has not often been examined as an environmental justice issue – and vice versa – in the Global North (Weiler et al., 2014). It is my hope that this study will inspire researchers in both disciplines to question how the issues of food insecurity and environmental racism overlap. Furthermore, as more research emerges examining the intersections of food and justice – be it in the form of case studies, theoretical papers, or literature reviews – broader trends and patterns may become apparent, which will in turn contribute to strengthening grassroots initiatives in communities across Canada and beyond.

This thesis is structured in traditional monograph format, with seven chapters plus appendices. The second chapter consists of a broad overview of the literature on topics related to the research question, including food deserts; environmental justice; food security/sovereignty; and the national, regional, and local context of food-related research. Chapter three outlines the quantitative and qualitative methods used in this study, while

chapter four presents the results of the research. The fifth chapter is an in-depth discussion of these results, including a comparison to the literature and recommendations for change. The sixth and final chapter offers a summary of the project, with some concluding remarks.

Chapter 2: Literature Review

My study seeks to examine, from an environmental justice perspective, the availability and accessibility of healthy, affordable foods in the North End of Halifax (Figure 3.1). North End Halifax is frequently referred to as a food desert in the grey literature (Beaumont, 2012; "Community Carrot," 2013; Erwin, 2016; Ward, 2016); however, there has been very little scholarly research assessing the extent of food insecurity in the area. In order to properly assess the scope and severity of the North End food desert, it is necessary to examine the body of literature surrounding food desert research. This is important for three reasons. Firstly, it allows me to situate my research within the broader methodological and theoretical context of scholarship on food deserts, community health, and environmental justice. Secondly, it provides valuable insight into national, regional, and local attempts to address urban food issues. This may include government initiatives, activism by non-profit organizations, and informal community action. Thirdly, it situates my research in Halifax's North End within the context of what is already known about food sovereignty in that geographical and cultural situation.

Food Deserts and Community Health

Food deserts are typically defined in the literature as urban areas that lack access to affordable and healthy foods (American Nutrition Association, 2011; Canadian Environmental Health Atlas, 2013; Food Empowerment Project, 2015; Larsen & Gilliland, 2008). In the literature, the threshold distance for accessibility to the grocery store is

estimated to be between 500 and 1,000 metres (Larsen & Gilliland, 2008, pg. 4). Most definitions of food deserts acknowledge that these areas tend to be highly populated by vulnerable groups, such as ethnic minorities, low-income populations, and single-parent families (American Nutrition Association, 2011; Food Empowerment Project, 2015; Larsen & Gilliland, 2008). Thus, there are many studies investigating the link between food insecurity and socioeconomic distress. For example, Larsen and Gilliland compared supermarket access in London, Ontario with a composite index of socioeconomic distress, and found that those lacking social and economic advantages were indeed more likely to live in a food desert (2008). Hilmers, Hilmers, and Dave conducted a literature review examining the link between high concentrations of convenience stores and fast-food outlets – a recognized indicator of a food desert – and indicators of neighbourhood deprivation. Fourteen of eighteen studies they reviewed confirmed that economically or socially disadvantaged communities were very likely to have a high prevalence of low-quality food retailers (2012). Another key genre of research on food deserts has been focused on establishing the epidemiological link between food access and various undesirable health outcomes. For example, McLaughlin and colleagues found that adolescents living in food insecure households in the US were more likely to suffer from mental illness than their food-secure peers (2012). A study of two low-income neighbourhoods in Philadelphia conducted by Ghosh-Dastidar and colleagues found that obesity was positively correlated with the distance to the grocery store (2014).

Environmental Justice Perspectives

As outlined above, the issue of urban food deserts has traditionally been examined from either a human geography perspective, exemplified by those studies seeking to establish links between food security and socioeconomic status, or from a public health perspective, which seeks to establish links between both food security and socioeconomic status, and health outcomes. However, food insecurity is increasingly being recognized as an environmental justice issue. As Hilmers, Hilmers, and Dave assert, "the concept of environmental justice, which has its roots in the fight against toxic landfills in economically distressed areas, can be similarly applied to the inequitable distribution of unhealthy food sources across socioeconomic and ethnic strata" (2012, pg. 1644).

Examining food security, or other types of health inequality, from an environmental justice perspective is groundbreaking because it entails several significant implications for researchers. Firstly, this approach takes the focus off establishing direct links between low socioeconomic status, food insecurity, and poor health outcomes. Instead, environmental justice researchers recognize that "poor health status need not be causally linked to degraded physical environments because they are both impacts in their own right" (Wakefield & Baxter, 2010, pg. 97). Wakefield and Baxter refer to this phenomenon as "compounded disadvantage" (pg. 97) while Masuda and colleagues reference the "double burden" borne by marginalized populations (Masuda, Poland, & Baxter, 2010, pg. 254). In fact there are many burdens of environmental degradation borne by marginalized populations beyond the narrow, medical definition of disease (Wakefield & Baxter, 2010). Exposure to polluting facilities decreases quality of life, and perpetual

worry about the health risks of exposure has been shown to have potentially serious impacts on mental health and wellbeing. Material deprivation, such as lack of access to healthy foods or to adequate public services, has also been shown to have considerable psychosocial effects on health. Furthermore, research has found that racism and discrimination in and of themselves are linked to various undesirable health outcomes including high blood pressure and reduced mental health (Wakefield & Baxter, 2010). For these reasons, the notion that environmental degradation must have proven negative health outcomes in order to merit intervention – especially when "health" is narrowly defined as simply the absence of disease – is rejected by environmental justice researchers. Instead, the theory of environmental justice recognizes that impacts of a degraded environment or a poorly serviced community on its inhabitants can often be more nuanced and difficult to quantify than simply the absence or presence of disease, yet are no less distressing or worthy of action (Wakefield & Baxter, 2010). In order to understand these more nuanced impacts, environmental justice scholarship must "privilege people's lived experiences of injustice" by making use of a variety of qualitative research methods – including case studies, ethnographic research, and personal interviews– in addition to traditional quantitative research that seeks "explicit causal associations" (Masuda et al., 2010, pg. 454; Wakefield & Baxter, 2010, pg. 96).

Secondly, environmental justice research is meant to examine not only the outcomes of inequitable distribution of environmental pollutants and amenities, but also the social and political *processes* that cause such inequity. Masuda and colleagues refer to "recognitional environmental injustice" as the processes by which disadvantaged groups

such as First Nations or low-income communities are excluded from decision-making, and by which traditional or experiential forms of knowledge are ignored in research and policy-making (Masuda, Poland, & Baxter, 2010, pg. 456). The ENRICH project examining toxic waste siting in Mi'kmaw and African Nova Scotian communities refers to this phenomenon as "procedural" environmental injustice, and stresses the importance of understanding the "institutional mechanisms that perpetuate inequitable distribution" (2015, para. 5). A common claim of polluters, governments, and service providers is that they do not *intentionally* discriminate in their decisions of where to site garbage dumps and grocery stores; however, a lack of explicitly discriminatory intent does not preclude racist, classist, or otherwise discriminatory decision-making (Bullard, 2001). An environmental justice framework requires researchers to question and examine the larger economic arrangements and structures of accountability – or lack thereof – that serve to create and reproduce racial inequality (Bullard, 2001). In his book *Where the Waters Divide: Neoliberalism, White Privilege, and Environmental Racism in Canada*, Michael Mascarenhas, a prominent environmental justice scholar, characterizes environmental racism as being simply one outcome of the "underlying racial formation (economic arrangements, power relations, government agencies, corporations and industry associations) that produces uneven health outcomes on a daily basis" (2012, pg. 85). This racial formation, according to lead researcher of the ENRICH project Ingrid Waldron, "privileges particular people, privileges their thoughts, privileges their history, their ideas and ideologies" (2015, as cited in Devet, 2015, n.p.).

Finally, environmental justice research is by definition a normative rather than a descriptive project. Based in Rawls' theory of social justice, which rejects the idea that inequality can be justified by a utilitarian appeal to the greater good, environmental justice research goes a step beyond the descriptive to explore, recommend, or even test solutions to environmental inequalities (Wakefield & Baxter, 2010). Much of contemporary environmental justice research is conducted within a participatory action research framework, which provides a more radical and collaborative approach to environmental issues by prioritizing the voices of community members in both research and action (Waldron, 2014).

Conceptual Frameworks: Food Security vs. Food Sovereignty

Most research on urban food deserts in the Global North utilizes the framework of food security or community food security (Canadian Environmental Health Atlas, 2013; Community University Research Alliance, 2015; Halifax Food Policy Alliance, 2014; Tarasuk, Mitchell, & Dachner, 2016). However, the concept of food sovereignty is increasingly being recognized in the community health literature (Clapp, 2014; Food Secure Canada, 2011; Weiler et al., 2015). An understanding of these terms, as well as the history and politics surrounding them, is a crucial prerequisite to engaging in food justice research.

Food security was first defined formally at the World Food Conference of 1974, hosted by the Food and Agriculture Organization (FAO), as the "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food

consumption and to offset fluctuations in production and prices" (FAO, 2006, para. 6).

Through the 1980s, as the Global North's embrace of neoliberal ideology led to punitive

structural adjustment policies in the Global South, farmers, activists, and economists alike

began to call into question the usefulness of this definition (Patel, 2009). In his

groundbreaking 1986 paper, *Food, Economics, and Entitlements,* Indian economist Amartya

Sen asserted that hunger is rarely caused by inadequate food produce, but rather usually

owes to inadequate wealth among the world's poorest, meaning they are not able to afford

food at the prices set by global markets. The peasants' movement La Via Campesina, as a

global coalition of smallholder farming organizations, similarly recognized that peoples'

ability to access food is highly dependent on political arrangements. They thus advanced

the concept of food *sovereignty* as a direct challenge to the FAO definition of food security,

which they felt failed to address how global structures of power and dependency affect food

supplies and livelihoods, especially for small agricultural producers and the world's poorest.

Food sovereignty frames the issue in terms of justice rather than in terms of sufficiency,

and calls for social control of the food system (Patel, 2009). As Windfuhr and Jonsén

assert, "while food security is more of a technical concept.... Food Sovereignty is essentially

a political concept;" one that, according to La Via Campesina, "is a precondition to

genuine food security" (Windfuhr & Jonsén, 2005, pg. 25; La Via Campesina, 1996, as

cited in Patel, 2009, pg. 4).

   Since the first multilateral definition of food security was introduced in 1974, the

concept has evolved considerably, in no small part due to the work of La Via Campesina,

Sen, and others who pushed for a more nuanced and rights-based approach to

understanding the global food system (FAO, 2006; Patel, 2009). The most often cited definition of food security was crafted at the World Food Summit of 1996: "food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2001, as cited in Clapp, 2014, pg. 207). Thus, food security "moved from being simply about producing and distributing food, to a whole nexus of concerns around nutrition, social control, and public health" (Patel, 2009, pg. 664). This broadening of the definition has led to wider adoption of the term, particularly among North American anti-poverty and health equity scholars and advocates who have "mobilized around 'community' food security as an alternative to individualized and charity-based approaches to hunger" (Weiler et al., 2015, pg. 1079). Indeed, the Food Action Research Centre (Food ARC) at Mount St. Vincent University centers its research and action around the concept of community food security, which it defines as "access to enough affordable, healthy and culturally appropriate food, produced in socially, economically and environmentally sustainable ways that promote self-reliance and social justice" (Community University Research Alliance, 2015, pg. 3).

The global discourse around food has thus shifted considerably since the 1974 World Food Conference. The 1996 World Food Summit definition of food security addressed the issue of inequitable entitlement through its emphasis on personal access to affordable and nutritious food. Definitions of *community* food security put forward by Food ARC and other organizations in the Global North go one step further in unpacking the multiple dimensions of food in their emphasis on "sustainability, social justice, and self-

reliance at the community scale" (Weiler et al., 2014, pg. 1079). However, the central tenet of food sovereignty – namely, democratic control – has yet to be affirmed in mainstream environmental and public health discourse. Both food security and community food security are safely apolitical and emphasize technical market-based solutions over the broader sociopolitical changes envisioned by La Via Campesina (Weiler et al., 2014). Furthermore, security-based models tend to overlook the processes "that structure individual health outcomes, such as colonialism, age and gender-related inequities" (Weiler et al., 2014, pg. 1080). As mentioned earlier, procedural justice analysis is a central component of environmental justice research; thus, the concept of food sovereignty is more compatible with the framework of environmental justice and thus more useful to this study than the concepts of food security or community food security.

National, Regional, and Local Context

Food insecurity is a recognized problem in Canada. In 2014, 12% of households in Canada experienced some level of food insecurity, and household food insecurity affected more than one in six Canadian children (Tarasuk, Mitchell, & Dachner, 2016, pg. 3). A number of organizations – including research groups, NGOs, and federal agencies – work at the national level to address this issue. Despite common goals, these organizations address the issue of food insecurity from a variety of different angles. An interdisciplinary research team known as PROOF has made significant contributions to research on food insecurity in Canada through the publication of annual reports on household food insecurity, which they define as "inadequate or insecure access to food due to financial

constraints" (PROOF: Food Insecurity Policy Research, 2017, para. 1). PROOF's research reports provide a rigorous national-level overview of food insecurity in quantitative terms, and the group has been instrumental in identifying trends and priority areas for policy intervention. PROOF's work does not, however, make reference to food sovereignty, environmental racism, or justice issues, and its definition of food security is highly individualistic and de-politicized. A more political perspective comes from Food Secure Canada, described on its website as "a pan-Canadian alliance of organizations and individuals working together to advance food security and food sovereignty" (Food Secure Canada, n.d., para. 1). In 2015, the organization released *Resetting the Table: A People's Food Policy for Canada,* a detailed policy platform developed in collaboration with over 3,500 Canadians involved in the grassroots food movement. This policy platform is based on the concept of food sovereignty, and includes goals such as poverty elimination, ecological production, and ensuring the participation of marginalized populations in decisions about the food system. Despite taking a more holistic and justice-based approach to food research, Food Secure Canada also leaves out mention of environmental racism.

Province-wide studies on food security in Nova Scotia similarly make little or no mention of racism. Nonetheless, research initiatives such as the Food Action Research Centre (Food ARC) at Mount St. Vincent University, and Healthy Eating Nova Scotia, have produced a solid body of research and policy recommendations for addressing food insecurity in the province. As Nova Scotia had the third highest rate of food insecurity of nine provinces studied in 2014 (surpassed only by Nunavut and the Northwest Territories) such initiatives are urgently needed (Tarasuk, Mitchell, & Dachner, 2016). Food ARC

conducts extensive qualitative and quantitative research on food security in Nova Scotia. This has included Participatory Community Food Security Assessments conducted in Eastern Shelburne, Spryfield, Northeastern Kings County, and Pictou Landing First Nation. Researchers at Food ARC also publish annual Food Costing assessing the affordability of a nutritious diet in Nova Scotia (Community University Research Alliance, 2015). Since 2003, they have consistently reported that income assistance recipients and minimum wage earners cannot afford to eat a minimally nutritious diet (Saulnier, 2013, para. 12). Healthy Eating Nova Scotia, the provincial strategic plan on food and nutrition, has similarly recognized that "people who live in poverty cannot afford to eat well, no matter how carefully they choose and prepare food" (Nova Scotia Alliance for Healthy Eating and Physical Activity, 2005, pg. 24). Although this report does not explicitly make reference to environmental racism, it does recognize that poverty in Nova Scotia is highly racialized, reporting that children of new immigrants, visible minority children, and Aboriginal children are approximately twice as likely to live in poverty than the provincial average (2005, pg. 24).

As Halifax was reported to have one of the highest rates of food insecurity of 27 Canadian cities studied in the latest PROOF report, research and action is equally important on the municipal scale (Tarasuk, Mitchell, & Dachner, 2016, pg. 18). The Halifax Food Policy Alliance, a coalition of individuals, government, and community organizations with a "collective vision of a healthy, just and sustainable food system for the Halifax Region," has led research efforts on food security in Halifax (Halifax Food Policy Alliance, n.d., para. 1). In 2014, it released a report called *Food Counts: Halifax Food*

Assessment, which identified six determinants for achieving this vision: accessibility,

adequacy, knowledge and agency, local food economy and infrastructure, public

investment and supports, and resource protection and enhancement (2014, pg. 9). These

components are based on a model of community food security similar to the one used by

Food ARC; it is multidimensional and attentive to public health and sustainability, but

tends to prioritize technical solutions over broader social change. The Ecology Action

Centre, an award-winning environmental organization based in Halifax, was a partner on

this research report, and has also conducted extensive community engagement, including

food production workshops and community garden projects (Ecology Action Centre,

2014).

Chapter 3: Methods

Study Area: North End Halifax

In this study, the North End of Halifax is defined as the area enclosed by Cogswell Street to the south, Windsor Street to the west, the Bedford Basin to the north, and Halifax Harbour to the east (Figure 3.1). The area encompasses a number of socioeconomically diverse neighbourhoods, including the Hydrostone District and Uniacke Square, as well as a number of major streets, including Gottingen, Agricola, North, and Young Streets. For my interviews, I focused in on three adjacent Dissemination Areas (12090344, 12090345, 12090346) within Census Tract 10 – or, the area roughly bounded by Cunard Street to the south, Maynard Street to the west, North Street to the north, and Brunswick Street to the east. The area is predominantly low-income and contains Uniacke Square, a public housing development. This neighbourhood is often characterized as a marginalized community as it faces a number of challenges including lack of service provision, encroaching gentrification, and stigmatization in the media (Waldron, 2010). The neighbourhood has not had a grocery store since 1980s, and schools in the area have been shut down in recent years (Beaumont, 2012;
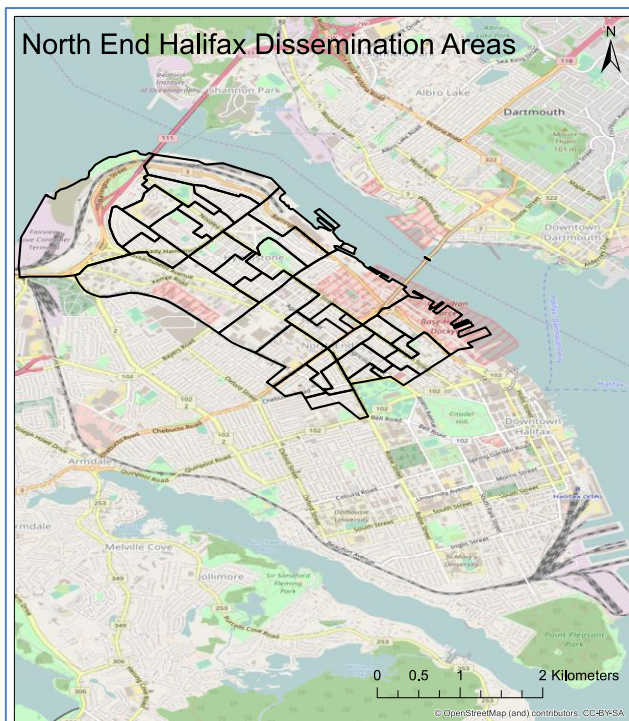
Figure 3.1: The Halifax Peninsula with Dissemination Areas that make up the North End outlined in black.

Beaumont, 2013). Media reports have tended to focus on incidents crime and violence in the area, rather than oppressions the community faces that may create the conditions for these incidents, or the promising community initiatives taking place in the neighbourhood, such as the youth-led North End Community Action Committee and the Hope Blooms community garden (Waldron, 2010; Neigh, 2017).

Mixed Methods Design

A mixed methods design was selected for this study as it allowed for analysis of a complex issue from a variety of perspectives. The issue being addressed in this study is situated at the intersection of several disciplines, namely environmental justice, human geography, and environmental health. Each discipline offers a unique approach for the analysis of food desert issues. Researchers in environmental health and human geography fields have employed quantitative methods to the study of food deserts through the use of Geographic Information Systems (GIS), a mapping software that enables the visualization and analysis of spatially referenced data. GIS has been used by environmental health scientists to establish links between the locations of environmental burdens or benefits and various adverse health outcomes, such as diabetes, obesity, mental illness, or cancer. It has also been used by geographers to establish links between such environmental features and various indicators of social vulnerability, such as low income, disability status, or lone parenthood (Larsen & Gilliland, 2008; Fryzuk, 1996).

Environmental justice research, in contrast, has evolved from a very different tradition. This research field developed alongside the environmental justice *movement* in

the 1980s and is rooted in local knowledge and community activism (Bullard, 2001). Environmental justice researchers have emphasized the importance of assessing the social and political *processes* that create injustice, as well as the statistical/spatial patterns in the allocation of environmental burdens and benefits (Masuda et al., 2010, Wakefield & Baxter, 2010). They have also stressed the responsibilities of researchers to recommend solutions and actively engage in pushing for change. Qualitative methods such as interviews and focus groups tend to be more appropriate for both procedural justice analysis and for identifying prescriptive measures, and thus have commonly been employed in environmental justice studies. Some examples include the ENRICH project mentioned earlier, in which public meetings were conducted in communities affected by environmental racism across the province; and the Community Food Security participatory action research project conducted by the Food Action Research Centre, which consisted of focus groups and Photovoice projects with food insecure communities across the province (Waldron, 2015b; Community University Research Alliance, 2015).

Using a mixed methods design allows me to address each of my research sub-questions and thus develop an understanding of both procedural and distributive/spatial justice issues related to food access in North End Halifax. My quantitative methodology, which consists of a spatial analysis in GIS, allows me to address my first sub-question, *are those living in a food desert more likely to belong to a vulnerable population than those living in well-serviced areas?* This is followed by qualitative research in the form of personal interviews, which allow me to address my next two questions: *what is the lived experience of residents of a food desert, and how do they cope with the challenges of food insecurity*; and, *what do they see as*

causes and solutions to this issue? Although both parts provide insight into the state of food sovereignty in a poorly studied region, the primary focus of the study is on the interviews, with the quantitative research serving mainly to establish the context and narrow the scope for the qualitative phase. This type of mixed methods design is known as explanatory sequential, defined as "a two-phase project in which the researcher collects quantitative data in the first phase, analyses the results, and then uses the results to plan (or build on to) the second, qualitative phase" (Creswell, 2014, pg. 224).

Phase 1: Spatial Analysis using GIS

In the first phase of my project, I use GIS to address my first research sub-question: *are people living in food desert areas in Halifax's North End more likely to belong to a vulnerable group than those living in well-serviced areas of the North End?* Answering this question necessitates a comparison between demographic data and food desert data. As there are no pre-existing studies examining food deserts in Halifax, gathering food data was somewhat challenging. Staff at the Dalhousie GIS Centre provided me with food retailer data from Environmental Systems Research Institute (ESRI); however, this data was found to be incomplete. I also sought data from Industry Canada, but found that this data was also highly inaccurate, having only eight food retailers listed for Nova Scotia. I thus compiled my own database of food retailers in Halifax from information available through Canada 411 Yellowpages. Using the Geocoding tool in GIS ArcMap 10.2.2, I was able to locate and mark these food retailers on a reference street network downloaded from the Halifax Open Data Catalogue (Halifax, 2015). I then classified the retailers by type, using a different coloured marker to

designate each of the following categories: grocery stores, convenience stores, specialty food stores, and ethnic food stores. In order to designate the boundaries of Dissemination Areas on my map, I downloaded Cartographic Boundary files from Statistics Canada (Statistics Canada, 2015). Dissemination Areas are geographic areas encompassing approximately 400-700 people, and are the smallest geographic unit for which Statistics Canada releases demographic data.

I created Service Areas around each food retailer in the North End using Network Analyst. Network Analyst is a tool in ArcMap 10.2.2 that allows users to "solve common network problems" by calculating routes along street networks (ArcGIS Resources, 2014). Network Analyst has been previously employed to create Service Areas in a food desert study in London, Ontario by Larsen and Gilliland (2008). A Service Area is a polygon that includes all possible routes along a street network within a specified distance from a specified facility. I designated my food retailers as facilities and specified the distance based on best practices from the literature. Estimates of maximum accessible walking distance in the literature range from 500 to 1,000 metres (Apparicio, Cloutier, & Shearmur, 2007; Furey, Strugnell, & McIlveen, 2001; Larsen & Gilliland, 2008). I conducted both a 500-metre and a 1,000-metre analysis, but decided to present the 1,000-metre analysis in order to be consistent with recent Canadian studies (Apparicio, Cloutier, & Shearmur, 2007; Larsen & Gilliland, 2008). I created a separate Service Area for each type of store identified on my map. I then classified the Dissemination Areas (DAs) in the North End based on level of access to food, labeling DAs that fell within the 1,000-metre grocery store Service Area as food "oases" and DAs that were excluded from the 1,000-metre grocery store

Service Area as food deserts. Although I included various types of food retailers in order to provide more information and to recognize that access to low quality food is better than lacking food access entirely, I nonetheless classified DAs lacking access to a full-service grocery store as deserts regardless of their proximity to convenience, ethnic food, or specialty food stores. This is to account for the superior quality, nutritional value, variety, and affordability of food provided at grocery stores in comparison to other food retailers.

I then turned my attention toward retrieving demographic data, with help of the University of Toronto Computing in the Humanities and Social Sciences (CHASS) Census Data Analyser (CHASS, 2014). This database allows users to download Comma-Separated Value (CSV) files summarizing data from Statistics Canada censuses for specific geographic areas. I downloaded Dissemination Area level data for Halifax Regional Municipality for several variables that were identified in the literature as indicating social vulnerability, such as education level, family structure, income level, and Aboriginal Status. I chose Dissemination Areas as my unit of analysis because their small size allows for finer-resolution analysis than do Census Tracts, or Federal Electoral Districts, for example. There are 1,633 Dissemination Areas in Nova Scotia, and 572 in Halifax Regional Municipality. I downloaded data for all Dissemination Areas in Halifax, and then later clipped my selection to include only the DAs situated in the North End. I defined the North End as the area bounded by Cogswell Street to the south, Windsor Street to the west, and the shorelines of the peninsula to the east and north. This area encompasses 36 Dissemination Areas. Unfortunately, comprehensive census data by Dissemination Area is not available past 2006. Although the National Household Survey was conducted in 2011,

because it was voluntary it cannot be considered representative and it contains very limited information at the Dissemination Area level. The North End has changed considerably in the past ten years and thus my use of dated census data must be considered a limitation in the study.

In order to make social vulnerability easier to assess, I created a composite index from the various demographic variables that I had retrieved from Statistics Canada. Following the methods used by Larsen and Gilliland to develop an index of neighbourhood socioeconomic distress, I calculated the z-score – based upon the mean and standard deviation – for each indicator, then added them up to determine a social vulnerability score for each Dissemination Area (2008, pg. 7). The demographic variables in my composite index were chosen based on findings in the literature about indicators of social vulnerability, and include: percentage of the population identifying as Aboriginal; percentage of the population identifying as female; percentage of the population over the age of 65; percentage of the workforce without a high school diploma; percentage of the population that are immigrants to Canada; percentage of the population with an annual income under $10,000; unemployment rate; and, percentage of the population identifying as a visible minority. I compared the social vulnerability score for each Dissemination Area with its food accessibility score in tabular form (Figure 4.3). I then selected three adjacent Dissemination Areas for further qualitative study partly due to their scores – high in social vulnerability and low in food accessibility – and partly for logistic reasons, as I was able to make contact with some community organizations in the area. These dissemination areas are indicated on a map in Chapter 5 (Figure 5.1).

Phase 2: Qualitative Interviews

The qualitative phase was the focus of the research and consisted of personal, semi-structured interviews with participants in the geographic area identified for further study in phase one. Recruitment of study participants was conducted primarily using snowball sampling. I reached out to a number of community organizations in the area that work directly with local residents. Both the Uniacke Centre for Community Development and Adsum for Women and Children expressed interest in taking part in the study. The Uniacke Centre for Community Development is "a full service community resource and neighborhood capacity-building hub" with a mission to "engage the residents of Uniacke Square in meaningful and participatory ways, to change the public perception of Uniacke Square as being a dangerous neighborhood, to promote the positive aspects of the community, [and] to build bridges between Uniacke Square and the greater HRM" (Uniacke Centre for Community Development, n.d., para. 1). Early on, I met with Sobaz Benjamin and Debra Paris-Perry, two members of the organizational team for the Uniacke Centre for Community Development, to discuss their involvement in the study. They raised concerns that participants may not feel adequately compensated for their time and energy, especially given that the community has faced – and continues to face – economic and political marginalization, as well as negative stereotypes in the media and in society. In response to these concerns, I adapted my study methods; instead of entering each participant into a draw for one $50 Sobeys gift card, I provided each participant with a $10 Sobeys gift card. I also provided snacks at the interviews, on the suggestion of Ms. Paris-Perry. I am grateful to Ms. Paris-Perry and Mr. Benjamin for their assistance and advice,

which allowed me to better respond to the needs of the community. I am also grateful to my supervisor, Karen Beazley, for providing the additional funding to be able to compensate the study participants more fairly.

Adsum for Women and Children is a non-profit organization that provides "services and support to women, families, youth and trans* persons during periods of homelessness" (Adsum for Women and Children, 2011, para. 1). Its mission is to "lead change in housing through advocacy, supports and services to end homelessness" (2011, para. 3). I was originally in contact with Kathy McNab, the Communications Officer at Adsum for Women and Children. Ms. McNab suggested that this study would be a good fit for residents and drop-in clients at The Alders, an affordable living complex owned and run by Adsum, and she put me in touch with Michelle Towill, the social worker at The Alders. In light of the concerns raised by Ms. Paris-Perry and Mr. Benjamin at the Uniacke Centre, I reviewed with Ms. Towill the steps I was taking to ensure that study participants felt fairly compensated for their time and effort, and I invited her to offer any additional suggestions. Ms. Towill asked that she be present during the interviews to help the participants feel more comfortable, which I said would not be a problem.

With the initial discussions and arrangements thus finalized, Ms. Paris-Perry and Ms. Towill each kindly gathered a small group of participants for my study. The criteria for my study were (a) that each participant is a resident of the North End and/or is involved in community work in the neighbourhood, and (b) that each participant is in charge of buying food for their own household or for themself. I was thus seeking two "types" of participant: the "average" community member and the key informant. The community

member was defined as anyone who lived in the North End. The key informant was defined as someone who was involved in community work in the North End, who may or may not also live in the neighbourhood. The interview questions (Appendix A) posed to community members and key informants differed slightly to reflect their differing perspectives. I interviewed five community members and one key informant at the Uniacke Centre for Community Development. At Alders, I interviewed four community members and one key informant, for a total of 11 interviews. Interviews lasted approximately half an hour each and consisted of 20 questions. These questions were kept open-ended, with the aim of sparking a more general discussion about the participants' experiences accessing food, and their opinions on the state of food justice in their neighbourhood. They were based upon eight indicators of community sovereignty that I developed based upon findings from the literature: Physical Access, Financial Access, Nutrition, Cultural Appropriateness, Dietary Needs, Food Safety, Environmental Sustainability, and Community Sustainability. Interview participants were also asked to complete a demographic survey (Appendix B) meant to assess how representative my sample was of the Dissemination Area as a whole. Each interview was audio recorded and partially transcribed (i.e., asides clearly tangential to the research questions were omitted).

Working from my transcriptions, I conducted a qualitative thematic analysis of the interview responses. First, I sorted each participant's responses based on my pre-determined indicators of community food sovereignty, or *a priori* themes. I further categorized these responses based on type of participant (i.e., community member or key informant) and community to which each participant belongs (i.e., The Alders or Uniacke

Square). The results of this initial thematic analysis are displayed in tabular form (Figure 5.2). I then identified other common ideas and themes. With these emergent – or *a posteriori* – themes in mind, I reviewed the interviews again to identify which themes were most prominent and which ones were less important than I originally thought. This allowed me to consolidate my list of *a posteriori* themes into those that seemed the most important and relevant. I then took note of common sub-themes and key quotations that fit under the broader umbrella of each emergent theme. These *a posteriori* themes are summarized in written form in the following chapter.

I received approval from the Dalhousie University Research Ethics Board before undertaking this study.

Chapter 4: Results of Spatial Analysis

I used GIS to assess whether food deserts exist in the North End, and if so, where. I did this by geocoding the locations of all food retailers in the area, then determining through network analysis which parts of the North End are able to access each retailer by travelling 1,000 metres – considered to be the maximum accessible distance in the literature – or less along city streets. My network analysis revealed that large areas of the North End lack access to grocery stores (see Figure 4.1-a). When I included all types of food retailers in the network analysis, however, the resulting service area almost entirely covered the North End (Figure 4.1-b). Thus, most of the North End has access to some sort of food retailer, whether a convenience store, a specialty food store, or an ethnic food store. However, given that these other food retailers don't tend to carry the same variety of fresh and nutritional produce, any area without access to a full-service grocery store is for the purpose of this study considered to be a food desert. The area in south-central North End that *does* fall within the grocery store service area is referred to as a "food oasis" in this study.

The North End food oasis is serviced by three grocery stores: a Sobeys on Windsor Street at North, an Atlantic Superstores on Quinpool Road, and another Superstore on Young Street at Robie. (The Superstore on Joseph Howe Drive was also considered in the network analysis despite being located outside of the boundaries of the north end, as it appeared to be close enough that it may be accessible to some residents in the northwest corner of the North End; however this turned out not to be the case). Beyond this oasis, two major food deserts are apparent in the North End: one in the northernmost tip of the peninsula, bounded by Duffus Street to the South, and even extending all the way down to

Figure 4.1: Results of Network Analysis
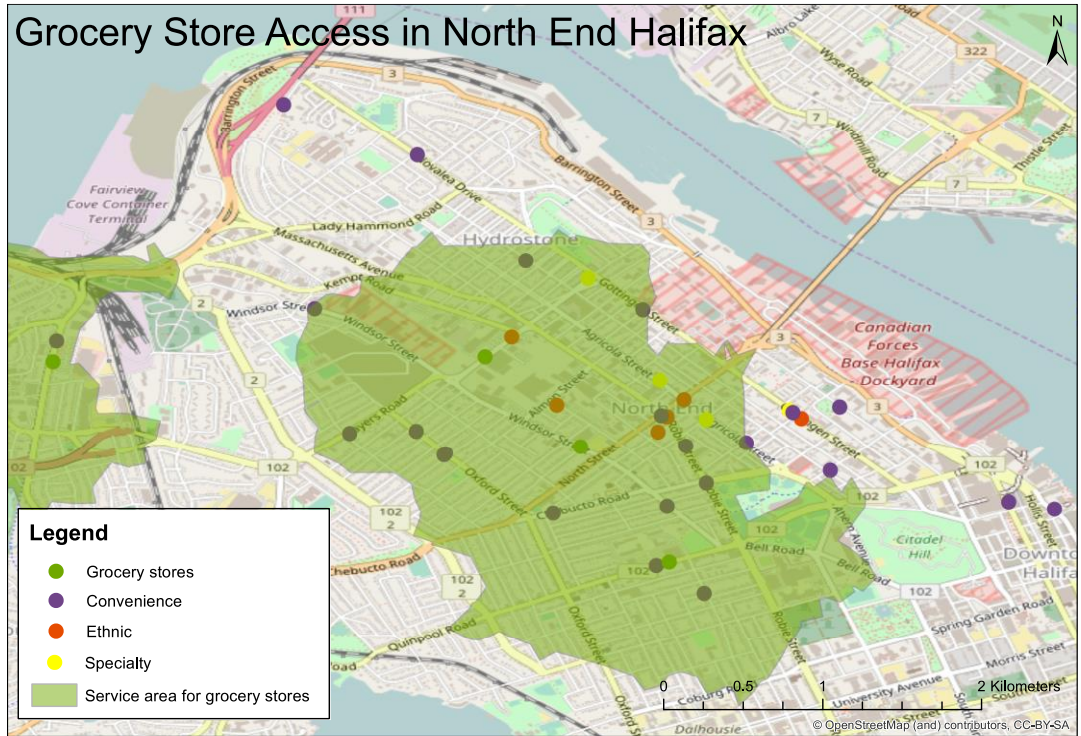
Figure 4.1-a: A 1,000-metre network analysis of full-service grocery stores in the North End. Residences located within the green service area are considered to be within accessible walking distance of one or more grocery stores.

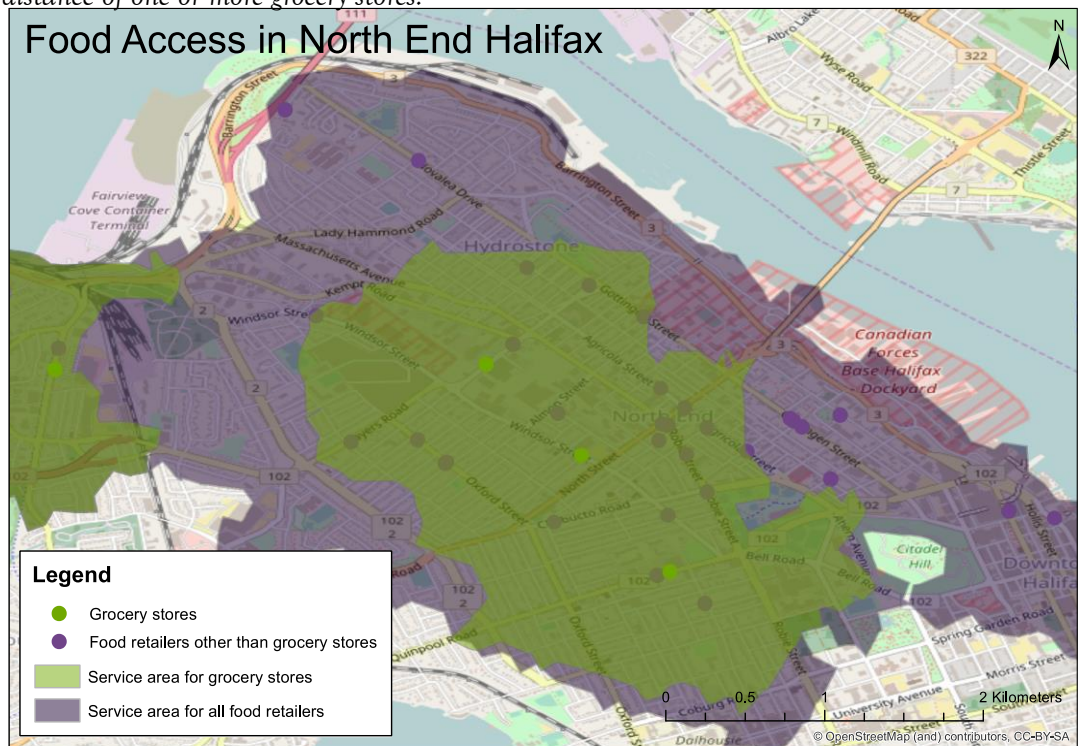*Figure 4.1-b: 1,000-metre network analysis of all food retailers in the North End. Residences located outside the green service area, but within the purple, are said to be within walking distance of one or more food retailers other than grocery stores. The stores were located using Canada 411 Yellowpages.*

Young Street in the area east of Devonshire; and another in the eastern section of the

North End between Creighton Street to the west, and the Halifax Harbour to the east. I

focused my study on the latter food desert, partly because the demographics of the area

were indicative of vulnerable populations noted in the literature as being likely to

experience food insecurity (see Figure 4.2, Table 4.1, & Table 4.2); and partly because I was

able to make contact with some community organizations in the area. More specifically, I

focused on the area centered on Gottingen and Uniacke Streets, and roughly bounded by

Cunard Street to the south, Maynard Street to the west, North Street to the north, and

Brunswick Street to the east. This area contains Uniacke Square, a public housing

development, as well as a number of affordable housing units and front-line service

agencies such as food banks and shelters. Recently, the area has seen increasing

gentrification as higher-end cafes and bars have begun moving in; however this

development has not yet brought a full-service grocery store to the area. In terms of food,

the area has geographic access to a number of convenience stores and ethnic food stores,

such as Joe Thomeh Kwik-Way, JJ Korean Mart, and Joe's Market.

With my network analysis thus completed, I then sought to answer my first

research sub-question: *are people living in food desert areas in Halifax's North End more likely to*

belong to a vulnerable group than those living in well-serviced areas of the North End? I approached

this question by collecting spatially referenced DA-level data from Statistics Canada's 2006

long form census for a variety of demographic indicators that are identified in the literature

as being linked with social vulnerability, such as income level, gender, and race; then

mapping these indicators with GIS to see if any patterns emerged. I found that many of the

Dissemination Areas I had labeled as food deserts had higher concentrations of vulnerable

populations than the average for the North End. Although the sample size was too small

for detailed statistical analysis, the spatial analysis in GIS strongly suggests an association

between social vulnerability and residence in a food desert, particularly when looking at

income levels and race. Figure 4.2 shows how DA-level concentrations of low-income

(defined in this study as being under $10,000 per year) and visible minority populations in

the North End of Halifax fairly closely correspond both to each other and to food deserts.

In order to better understand how social vulnerability is associated with food access, and

based on work by Larsen & Gilliland (2008), I created a composite Index of Social

Vulnerability that incorporates eight demographic variables. Table 4.1 lists the Social

Vulnerability score and food accessibility status of each North End Dissemination Area for
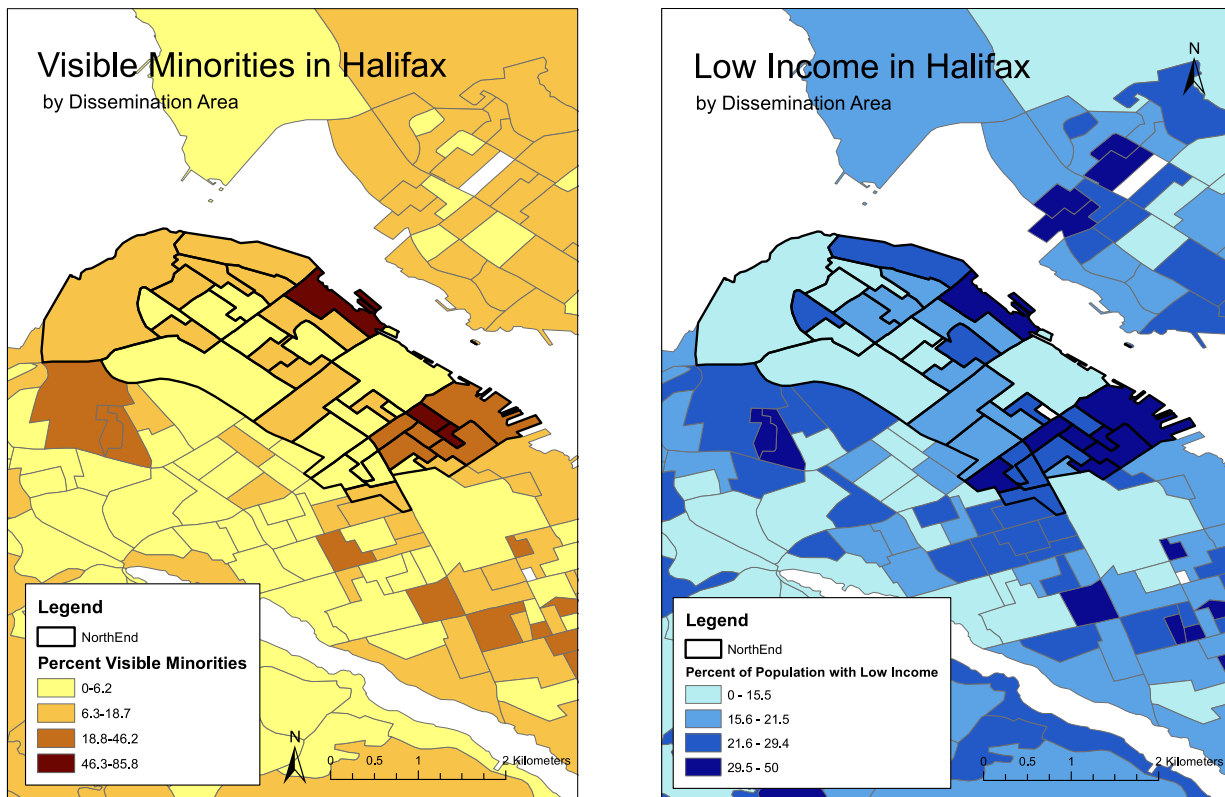
Figure 4.2: Concentrations of people who (a) identify as visible minorities and (b) have an annual income under $10,000, by Dissemination Area, in the North End. Derived from data from Statistics Canada's 2006 long form census.

direct comparison. I selected the Dissemination Areas numbered 12090344, 12090345, and 12090346 because they all fell within the large food desert on the eastern side of the North End, and because they all had high indices of Social Vulnerability, at 7.5, 7.9, and 2.7, respectively. This is particularly visible when Figure 4.2, which shows demographics by Dissemination Area, is compared with Figure 5.1, which situates the study DAs within the North End, as all three of the study DAs fall within the upper two categories for both their visible minority population and their low-income population. Table 4.2 provides further detail by comparing the study DAs to the North End average for several demographic variables including percent of the population identifying as Black, percent identifying as women, and percent without a high school diploma. The study DAs showed to have higher rates for most of these variables.

Table 4.1: Social Vulnerability in Food Deserts and Oases in the North End
Dissemination Areas in the North End compared by food accessibility and social vulnerability. Dissemination Areas labeled as oases under *food accessibility* fell inside the Grocery Store Service Area as determined by a 1,000-metre network analysis in GIS; DAs labeled as deserts fell outside the Grocery Store Service Area. DAs that fell on the border of the Service Area were classified as oases if more than 50% of the DA was inside the Service Area; they were classified as desert if less than 50% of the DA was inside the Service Area (see Figure 4.1). The *Social Vulnerability Index* values represent a composite of demographic variables typically indicating social vulnerability. A positive value indicates that the DA is more socially vulnerable than the average for the North End, based on the indicators studied; a negative value indicates that the DA is less socially vulnerable than the average. The DAs selected for further study are indicated by bolded green font.

DAUID	Food Accessibility	Social Vulnerability Index
12090223	Desert	-2.4
12090224	Desert	-2.0
12090225	Desert	-0.2
12090226	Desert	-1.0
12090227	Desert	-1.0
12090228	Desert	1.1
12090229	Desert	-2.5
12090230	Desert	0.7
12090231	Desert	-3.0
12090232	Oasis	-5.5
12090337	Oasis	-4.6
12090340	Oasis	-3.2
12090341	Oasis	-2.3
12090342	Desert	4.7
12090343	Desert	2.1
12090344	**Desert**	**7.5**
12090345	**Desert**	**7.9**
12090346	**Desert**	**2.7**
12090347	Oasis	3.9
12090348	Oasis	Insufficient data
12090349	Oasis	-2.9
12090350	Oasis	-2.2
12090351	Oasis	-2.1
12090355	Desert	-3.2
12090356	Desert	5.5
12090357	Desert	-3.7
12090358	Desert	-1.9
12090847	Desert	13.4
12090848	Desert	0.8
12090849	Oasis	0.2
12090850	Oasis	-1.4
12090851	Desert	-4.0
12090852	Oasis	-2.5
12090869	Oasis	-0.7
12090877	Oasis	1.1
12090878	Oasis	-0.1

Table 4.2: Demographics in the Study Area as Compared to the North End Average
A comparison between the Dissemination Areas selected for further study, and the average of the Dissemination Areas in the North End, on the basis of indicators of social vulnerability. Red indicates a value above the average; green indicates a value below the average. Derived from data from Statistics Canada's 2006 long form census.

DAUID	% Aboriginal	% Women	% Seniors	% Without High School Diploma	% Immigrants	% With Annual Income under $10,000	% Visible Minority	% Black	Unemployment Rate
Average	2.3	52.4	13.9	11.1	8.1	22.1	15.4	12.0	8.8
12090344	11.9	58.2	9.0	16.7	3.0	29.8	65.7	59.7	15.4
12090345	9.8	57.6	6.5	28.3	2.2	28.4	66.3	63.0	16.7
12090346	0	56.1	20.4	16.3	8.0	37.0	31.0	28.7	6.2

Chapter 5: Results of Personal Interviews

Demographic Summary

I interviewed 11 people at two locations on Gottingen Street: the Uniacke Centre for Community Development and The Alders by Adsum House. At the Uniacke Centre, I interviewed five community members and one key informant; at Alders, I interviewed four community members and one key informant. Of these participants, only two self-identified as male; the rest self-identified as female and two self-identified as LGBTQ2SIA. The ages of participants were fairly evenly distributed from under 16 to 64 years of age. Most participants had not completed high school, though a couple had trade/technical/vocational training, and one had a Bachelor's degree. Four of the participants self-identified as African Nova Scotian, one as First Nations/Métis, and the rest as white. Overall, this was a low-income group, with all but three participants living on an annual household income of under $10,000 CAD. Two participants reported an annual household income of $10,000 - $29,000 CAD, and one participant reported an annual household income of $30,000 - $59,000 CAD. About half of the participants were employed for wages, with the other half split between those looking for work, students, and those unable to work. Seven of the respondents were receiving income assistance. Just over half of the respondents self-identified as living with a physical and/or mental disability.
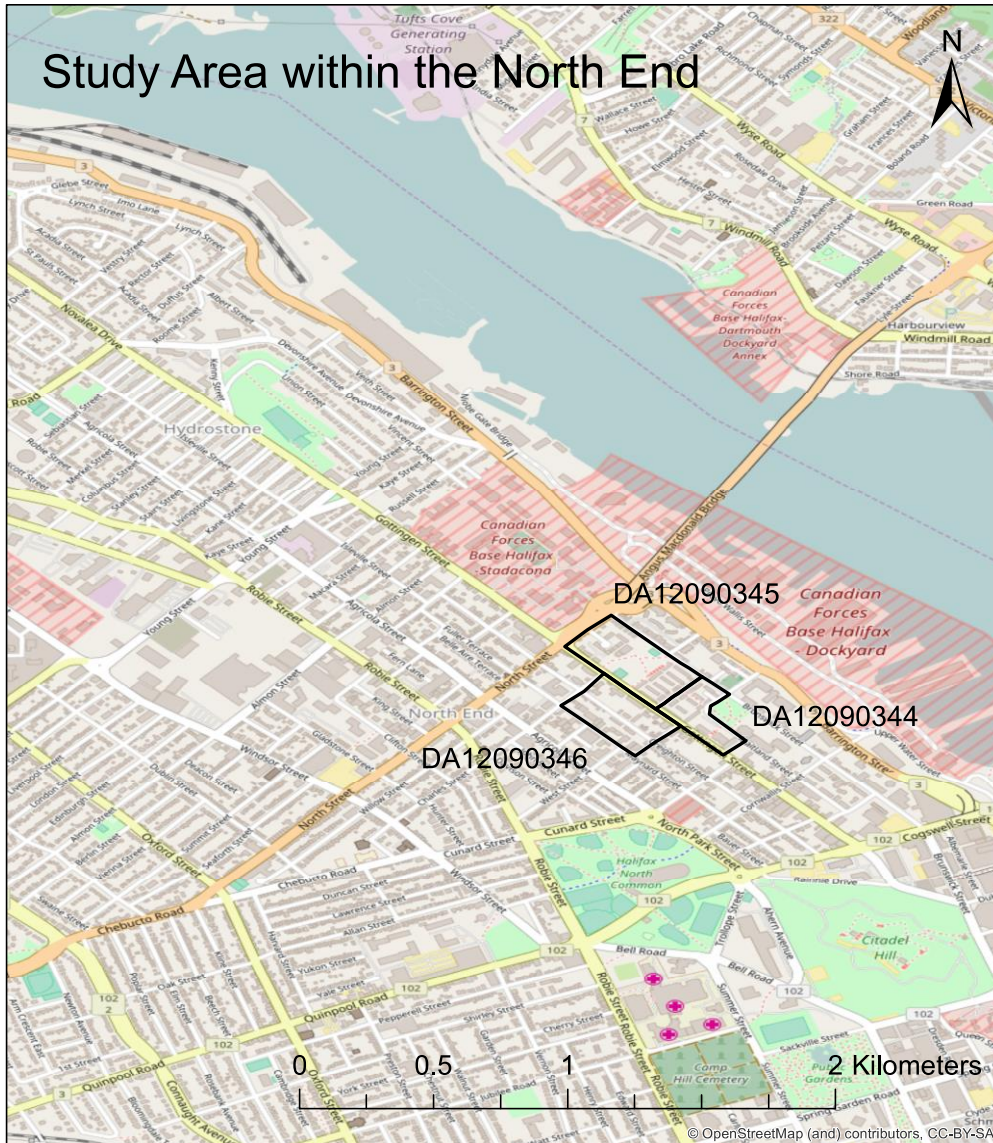
Figure 5.1: This map shows the 3 Dissemination Areas – in the Gottingen Street/ Uniacke Square community – where I focused my study.

Interview Analysis: *A Priori* and *A Posteriori* Themes

I developed the Indicators of Community Food Sovereignty based on the literature on

food sovereignty and community food security. These indicators are meant to encompass

all the aspects of a healthy, just, and sustainable food system, and include: physical access,

financial access, nutrition, dietary needs, cultural appropriateness, food safety,

environmental sustainability, and community sustainability. After conducting and transcribing the interviews, I classified my results according to these *a priori* themes. I then further divided the results by role of respondent (i.e., key informant or community member) and affiliation of respondent (i.e., Uniacke Square or The Alders) to enable direct comparison. These results, classified by *a priori* themes, are summarized in Table 5.1 below. In the process of my analysis, *a posteriori* themes emerged naturally as: (1) gentrification, dignity, and accessibility; (2) lack of resources; (3) community resilience; and, (4) solutions. These *a posteriori* themes are summarized through direct quotations and interpretive text following the table, as that seemed more appropriate to the context.

Organizing the interview results in a table according to the *a priori* Indicators of Community Food Sovereignty was revealing in itself. While I went in to the interviews assuming equal importance for each theme, they quickly assumed a hierarchy. Some themes, such as cultural appropriateness and food safety, were barely touched on by interviewees, while others, such as physical access and community sustainability, inspired many long and in-depth conversations. Other indicators that emerged as important include financial access and nutrition; while food safety, dietary needs, and environmental sustainability were seemingly less so. Across participant categories there were generally more similarities than differences; however, some key differences in the ideas and issues brought up by different categories of participant did emerge. All interviewees reported that physically accessing food is a challenge; however, participants affiliated with Uniacke Square were more likely to drive or carpool to buy their groceries, sometimes visiting discount stores outside the city-centre, while participants affiliated with The Alders were

more likely to walk or take the bus, and to rely on local convenience stores and food banks. By and large, the key informants from both groups echoed the concerns of community members. However, the key informant from The Alders largely focused on the need for higher levels of income, while the key informant from Uniacke Square offered a more nuanced perspective, highlighting diverse issues in the community from health education, to housing, to gentrification.

Table 5.1: Indicators of Community Food Sovereignty
Results from personal interviews categorized according to *a priori* themes, i.e. the Indicators of Community Food Sovereignty. Participants are sorted into four categories based on their role and community affiliation to allow for comparison. Statements that are consistent across two or more participant types are highlighted.

Uniacke Square		The Alders	
Community Members	Key Informant	Community Members	Key Informant
Physical Access			
Most leave the neighbourhood to shop; there are no full-service grocery stores in the area	Most leave the neighbourhood to shop; there are no full-service grocery stores in the area	Most leave the neighbourhood to shop; there are no full-service grocery stores in the area	Most leave the neighbourhood to shop; there are no full-service grocery stores in the area
Most popular stores are Sobeys on Windsor Street [1.3 km away] and Superstore on Young Street [1.8 km away]	Most popular stores are Sobeys on Windsor Street [1.3 km away] and Superstore on Young Street [1.8 km away]	Most popular stores are Sobeys on Windsor Street [1.3 km away] and Superstore on Young Street [1.8 km away]	Most popular stores are Sobeys on Windsor Street [1.3 km away] and Superstore on Young Street [1.8 km away]
Some access convenience stores for cheap meals near the end of the month when they are short on money	Many people also access convenience stores in the neighbourhood, especially for perishable items that are needed more frequently	For one participant, convenience stores in the neighbourhood are their main source of groceries; others did not mention	Did not mention convenience stores as a main source of groceries for community members
About half the participants mentioned accessing food banks or	Many people in the neighbourhood access food banks such as Parker	Every participant reported accessing community meals at centres such as	Community members rely heavily on community meals and food banks;

community meals; one participant said the food bank hours are very inconvenient if you work	Street, Brunswick Street Church, Salvation Army, and Manna for Health	Hope Cottage and Souls Harbour, and dry goods at food banks such as Parker Street, on a regular basis	Parker Street is the most popular because it is closest and the only food bank that provides fresh produce
Some people also go to No Frills [2.3 km away], Gateway [10 km away], or Wal-Mart [3.1 km away] when there are deals on and/or when they're able (these stores are much further but tend to be cheaper)	Some people also go to No Frills [2.3 km away], Gateway [10 km away], or Wal-Mart [3.1 km away] when there are deals on and/or when they're able (these stores are much further but tend to be cheaper)	These participants stick to the grocery stores that are closer to the community: Sobeys [1.3 km away] and Superstore [1.8 km away]	Many community members go to No Frills [2.3 km away] for better deals
Many participants have cars, but seem to be the exception in the community; they reported often carpooling with neighbours and friends: "a lot of the time I take people with me from the neighbourhood"	Most people do not have cars, and there are not a lot of transit options along Gottingen Street	None of these participants have cars; most walk to get groceries, though some are able to carpool with friends	Most community members do not have cars; many walk and take wheelie grocery carts with them, or splurge on a taxi when they need to stock up; grocery shopping this way can take an entire morning
Trend of buying in bulk at grocery stores at the beginning of the month, as income assistance cheques are recieved at the end of each month	Trend of buying in bulk at grocery stores at the beginning of the month, as income assistance cheques are received at the end of each month	Trend of buying in bulk at grocery stores at the beginning of the month, as income assistance cheques are received at the end of each month	Trend of buying in bulk at grocery stores at the beginning of the month, as income assistance cheques are received at the end of each month
Most cook on their own or with their families	There is a free community meal at The Uniacke centre every Friday; the	Most buy and cook on their own; sometimes they make shared meals at	The Alders provides snacks for residents and community members,

	key informant said that people do not tend to cook together very often because they have enough trouble getting food on their own tables, that doing a joint meal would be very challenging	The Alders	and they are always eaten up quickly; every few months The Alders has funding to take all the residents out for dinner at a local restaurant

Financial Access

Most do not make a budget ahead of time, but have a rough idea of how much they can spend	Most do not make a budget ahead of time, but have a rough idea of how much they can spend	Most do not make a budget ahead of time, but have a rough idea of how much they can spend	Most do not make a budget ahead of time, but have a rough idea of how much they can spend
Most find it challenging to afford enough food each month, especially those living on income assistance	Most find it challenging to afford enough food each month, especially those living on income assistance	Most find it challenging to afford enough food each month, especially those living on income assistance	Most find it challenging to afford enough food each month, especially those living on income assistance
Estimated spending is $70-140 per month per person	Income assistance is insufficient to afford basic needs: "how do you live on that amount of money?"	Estimated spending is $30-75 per person per month	"Personal allowance" of income assistance allotted by community services is only $200 and includes all expenses besides rent and utilities
Participants have developed a variety of strategies to save money, including buying in bulk	Most people try to minimize other costs by accessing donations (of clothing, appliances) and applying for utilities rebates offered by non-	Participants have developed a variety of strategies to save money, including buying in bulk, but expenses such as bus passes and dry goods take away	Community services should increase the personal allowance by at least $100-150 to account for these other expenses: "the amount they're given

	profits; this allows them to save money for food	from food budget	for food just isn't realistic nowadays"
It is very common to buy when sales are on: "mom usually knows what's on sale"	The informant noticed that convenience foods tend to go on sale right after cheque day, whereas higher quality foods tend to go on sale at the middle of the month	One participant expressed the belief that chain grocery stores intentionally do not put produce or other good quality foods on sale in the week following cheque days	"I heard through the grapevine that they deliberately don't put sales on around cheque day"
Most participants also reported looking at the flyers every week to find the best deals	The key informant believes that sometimes people are tricked by flyers into over-spending; tries to caution others about deception in advertisements	One participant mentioned looking at flyers to find deals	Did not mention flyers
Nutrition			
Perceptions of the importance of healthy eating vary significantly	The key informant believes that a taste for "junk" foods has been passed down through the generations	Perceptions of the importance of healthy eating vary significantly	Believes that people try to eat as healthy as possible, but that there are a lot of obstacles
One participant said they believe more education about nutrition is needed	Is working to increase awareness about healthy eating in their community: "I think if they learned more, and got to taste things, then	The Alders supplies healthy snacks and a vegetable garden, which several participants credited as their main source of fresh produce	Healthy snacks provided to residents of The Alders are always eaten up quickly

	people would like healthier foods"		
Most said that eating healthy is very challenging on a limited income, and that saving money is of greater priority	Very difficult to afford healthy foods: "I think that we get pushed toward non-healthy foods by price… I think that's the biggest problem"	All of those interviewed said they find it very challenging to afford healthy foods, especially fresh fruits and vegetables: "for me, the budget is: I can get one peach, or three boxes of Kraft Dinner"	Income assistance is not sufficient to afford a healthy diet; believes this has long-term impacts on peoples' health
People tend to resort to cheap and convenient (and less healthy) foods when they are short on money	Those receiving income assistance can apply for supplementary income to accommodate a "special diet;" many find this is the only way they can afford fresh produce: "I had to get a prescription for oranges"	Many receive extra income assistance to afford a "special diet" – e.g. low sodium, high fibre, fruits	Most special diet recipients find that the extra money is not enough to meet their dietary needs, and that the application requires a disproportionate amount of work
There is lots of fast food available in the neighbourhood at convenience stores, pizza joints, etc.	People also tend to buy in bulk, and it is difficult to stock up on fresh foods	People here also buy in bulk; several people said they do not eat very much fresh produce	Has noticed that the healthy snacks provided to residents of The Alders are always eaten up quickly
No one mentioned chronic illnesses	Diet-related chronic illnesses are common in the community	Most of the participants interviewed had a chronic illness	Diet-related chronic illnesses are common in the community
Dietary Needs			
None of the community members interviewed had specific dietary	Lactose intolerance is common in the Aboriginal community and it	Many diverse health conditions and dietary needs among those	"Almost impossible to meet dietary needs" for those with health

needs	can be difficult to acquire lactose-free foods; high blood pressure, hypertension, and diabetes are also common	interviewed (e.g., kidney stones, Crohns disease, cancer, low iron)	conditions; applying for additional income assistance for "special diet" is a very onerous process and offers inadequate funds

Cultural Appropriateness

None of the community members interviewed had specific cultural food needs or preferences	Many people in the community don't eat pork for religious reasons; as a result, community members eat mostly chicken or sometimes fish because beef is so expensive	None of the community members interviewed had specific cultural food needs or preferences	Key informant was unsure as to the types of cultural food needs in the community, but guessed that meeting such needs must be difficult because "specialty" foods can be very expensive

Food Safety

Food safety did not seem to be a major concern among those interviewed	Most community members cannot a afford to worry about best before dates, dented cans, etc.: "I'll tell you what food safety is around here: if it doesn't have fur, if it doesn't smell bad, its edible"	Food safety did not seem to be a major concern among those interviewed	People in this community are more likely to take risks with food safety because they are perpetually short on food
A few participants mentioned accessing food banks but did not mention the quality or freshness of	Produce available to community members at food banks and at discount stores such as No Frills is	Some expressed concern about the quality and freshness of food at food banks	The produce at the food bank tends to be good for only one day

the food	poor quality and usually not very fresh		
Most participants stock up on food once or twice a month and store a lot of food in their freezers	A rodent problem within Uniacke Square makes it difficult to stock up on dry goods such as rice and pasta: "I can't afford for the mice to piss in my rice 'cause I'm not gonna be able to get rice 'til next month"	Most participants stock up on food once or twice a month and store a lot of food in their freezers	Did not mention any concerns about food storage
Environmental Sustainability			
Participants emphasized environmental protection, and making sure one's immediate environment is safe and healthy: "don't abuse the Earth"	Environmental sustainability is part of the traditional way of life within the Aboriginal community: "it's something you just knew"	Participants emphasized being able to eat healthy, sustain life, and be safe: "trying to eat healthy in an unstable environment"	Having adequate supports in place to meet one's basic needs
Seems to be something people are aware of, but don't talk about very often: "I guess we take it for granted"	Most people are aware of the issues, but immediate concerns such as saving money and having enough food tend to take priority	Several participants grow their own vegetables in The Alders garden, which they spoke of positively: "like the garden in the back, that's a source of sustainability"	Most people are aware of the issues, but immediate concerns such as saving money and having enough food tend to take priority
Perceptions on whether foods at	Environmentally sustainable	Perceptions on whether foods at	Environmentally sustainable

grocery stores promote environmental sustainability varied	products are out of reach for community members due to their higher cost	grocery stores promote environmental sustainability varied	products are out of reach for community members due to their higher cost
Concerns about processed foods, GMOs, freshness	Concerns about the working conditions of migrant farm workers	Concerns about industrial farming techniques: "everything's so technology-geared these days, including vegetables, you know with speed growth, and hormones, and all kinds of stuff they give animals"	Concerned that community members lack the resources to make choices that promote environmental sustainability
Participants try to be environmentally conscious shoppers but cost is often prohibitive	Community members try to buy local food but it is often cost prohibitive	Many people mentioned urban gardens as a good way to promote environmental sustainability	Thinks The Alders garden helps promote environmental sustainability
Community Sustainability			
Helping others, living in harmony, and maintaining a certain lifestyle were all emphasized	Community sustainability is "people being able to afford to live where they've always lived"	Helping oneself as well as others, having sufficient access to community resources and groups, and education were all emphasized	"Having supports in place that develop a healthy community"
Perceptions on whether their community is sustainable varied	Sense that the community is at a pivotal moment with regards to sustainability: "It's what we're fighting for right now, here, within the neighbourhood.... And the gentrification happening"	Perceptions on whether their community is sustainable varied	Doesn't think community is sustainable because it is so under-resourced

Sense that people have a good relationship with food overall, and are doing the best that they can on a limited income: "we try here"	Sense that people have a good relationship with food overall, "but we're used to convenience and junk 'cause that's what's the cheapest"	Sense that people have a good relationship with food overall, and are doing the best that they can on a limited income	"People are trying their best, its just that there's not enough money or enough resources that go into food in the community"
Local organizations (e.g., Uniacke Centre, Hope Blooms, the Parent Resource Centre) help promote community sustainability	Some community projects have been very beneficial for the community, whereas others have left people out	Local organizations (e.g., Hope Blooms, The Alders, the Metro Non Profit Housing "coffee shop," Souls Harbour, Grace Mission) help promote community sustainability	Emphasized importance of community organizations: "all of them try to promote a sense of community for the people"
There is a sense that people look out for and take care of each other within the community	Community members will let each other know if there are good sales or deals on	Sense of enthusiasm for, and appreciation of, the community: "I like the community, I'm part of the community"	Believes that local groups provide not only resources, but a sense of community that is crucial to people's well-being
Concerns about the sustainability of their community, including: gentrification, not having a local grocery store, unemployment, inadequate social assistance, and the community not being consulted in decision-making	Concerned about the exclusion of community members from decisions affecting the neighbourhood: "I think most of the decisions are made prior to coming to see us"	Concerns about the sustainability of their community, including: gentrification, not having enough to eat, not having a voice in the community, and inadequate social assistance	Concerned about gentrification, the absence of a grocery store, and inadequate income supports

Upon reviewing the transcripts, predominant themes emerged around gentrification, dignity, and accessibility; lack of resources; community resilience; and, solutions. Each theme is presented, drawing upon the voices of the participants.

Gentrification, Dignity, and Accessibility: "You have to fight to get what you need. And that includes everything and everywhere you go, for the poor people" (Participant #8)

"They're trying to push the poor people out" (Participant #8)

Many participants brought up the issue of gentrification in their interviews, especially in response to questions about the sustainability of their community, and whether or not they felt they had a voice in issues affecting the community. Although only three participants used the term "gentrification," the majority of people expressed concern that their neighbourhood is changing rapidly – and not for the better. Several participants mentioned the recent increase in condo developments on Gottingen Street, and expressed frustration that amenities in the neighbourhood were catering to condo-dwellers, rather than those living in public or supported housing. For example, when I asked Participant #8 why they believed there were no grocery stores in the neighbourhood, they[1] responded with: "'Cause they wanted to save [space] for the condos... fancy restaurants, fancy stores..." Many participants also spoke of the effect that these upscale developments were having on the affordability of housing in the neighbourhood. Participant #11 estimated that apartments in the neighbourhood could cost up to $1,000/month, while Participant #5 recounted, "I know people that lived down here on Cornwallis, like they lived in their

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[1] Throughout this section I refer to participants in the study using the gender-neutral pronoun "they" in order to protect their privacy, given that I at times reveal other distinguishing characteristics or affiliations (e.g. groups that participants belong to).

places for years, and they got pushed out." Participants #4 and #8 expressed fears that Uniacke Square would be torn down and slated for high-end development sometime in the not-too-distant future.

"We should never be a hindsight. And I feel like a lot of times our community is just that: a hindsight" (Participant #4)

Many participants felt that community members are not appropriately consulted about decisions affecting their community. When asked whether or not they felt they have a voice in decisions affecting the community, five participants said they did not. Of the remaining six people, three said they weren't sure, and three said they did feel they have a voice. It is interesting to note, however, that those who *did* feel they have a voice cited involvement in local organizations or positive relationships with their neighbours – that is to say, they felt listened to by those *within* the community. Most participants, however, seemed to share a distrust of government organizations. Participant #2 mused aloud that city officials and urban planners probably already had the next 15 years planned, and would come to community members only to have them choose from a limited number of pre-set options, a phenomenon they referred to as "guided structure." Participant #4 similarly said, "I think most of the decisions are made prior to coming to see us.... How is it a 'community plan' if you make it first and then ask the community? That's not a community plan. Community plan means we all get together, and we make a plan!" Participant #9 explained, "as far as governmental decisions, I don't feel I have much of a say," and participant #8 suggested

that "social services should work more on getting to know their clients individually... to be able to recognize people's needs and wants to live an ordinary life on community services."

A number of participants felt that even some well-intentioned community groups fail to consult with the community in a meaningful way. When asked about the sustainability of their community, several participants brought up The Community Carrot Co-op. The Carrot Co-op was a small cooperative grocery store that opened on Gottingen Street in the fall of 2014, with the goal of making healthy and affordable food available in North End Halifax. Just over a year later, the store closed its doors permanently, citing financial difficulties. A number of participants remembered feeling hopeful when they first heard about the Carrot Co-op, but found that it didn't cater to the needs of the community. Participant #2 said that "the prices were outrageous" and that despite extensive community engagement work prior to the store's opening, "the community was not reflected in their vision." Participant #4 expressed frustration that it was necessary to spend $25 on a co-op membership in order to get the best sale prices, saying, "I have a hard enough time keeping food on the table, let alone buying a co-op membership." They felt that the Carrot was more focused on catering to the needs of higher-income community members in nearby "condo-ville" than it was in tackling food insecurity among low-income community members, adding that people in her community "didn't feel included." Three other participants echoed concerns that the Carrot had been unaffordable to low-income community members.

"So much red tape, lineups, questions" (Participant #8)

A sense of always having to "fight to get what you need" was another common theme mentioned by participants. Many expressed frustration at the amount of bureaucracy present in both community services and some non-government organizations. The majority of participants reported accessing the food banks at least occasionally. Nonetheless, many participants feel the food banks are under-resourced and lack accessibility. Participant #4 estimated that the local food bank sees up to 100 people on each of the three days per week that it is open, while participant #5 reported having waited "sometimes an hour, sometimes an hour and a half" in line for food. Participant #9 said they are unable to visit the local food bank except on holidays, because it is only open during her work hours, and they do not permit you to send a friend to collect food in your stead. Participant #6 said they know a number of people with chronic health conditions who find it very challenging to wake up early and wait in line at the food bank: "it almost kills them to get there, and they gotta go 'cause they're starving." Participant #8 reported having several chronic health conditions themself and echoed these concerns. They said they find it unfair that food bank users are only allowed to visit once a month, and if they try to return more often it feels like they have been "blacklisted." Participant #11 further offered,

> There's a lot of bureaucracy that goes on there... having to give your name, and your health card number, and all this information they want when you simply want some food; and it's quite degrading.... Sometimes the way people treat you there can make you feel demeaned; instead of loving, caring, 'here you go,' it's like 'what do you want, no you can't have that'....

Furthermore, many were disappointed with the quality of the food. Participant #4 referred to the food at food banks as "half-perished perishables," while participant #11 posited that it would not meet the quality standards of most grocery stores. Participant #8 echoed these concerns, asserting, "I think the poor people are worth more than that." Despite these problems, most participants acknowledged, "if it weren't for the food bank help, it would be even more difficult" (Participant #4).

Lack of Resources: "Money's a big thing here, you know" (Participant #9)

"How do you live on that amount of money?" (Participant #4)

Almost every participant spoke about encountering financial difficulties. A majority of the people I interviewed are recipients of social assistance, which according to the key informants typically means a Personal Allowance of $200/month meant to cover everything except rent. Further exacerbating the problem is the reality that many income assistance recipients are unable to find housing within the budget provided, so must take from their Personal Allowance in order to make rent, according to participants #2 and #11. This becomes increasingly difficult during the winter months due to the rising heating costs. Participant #7 estimated that they are left with $72 per month to spend on food. Participant #9 was a bit better off, but cautioned, "I work full time and I still have that problem, you know; two or three days before pay day I'm scrounging things together."

"In Black culture, we as a whole love to cook, we love to taste ingredients...; however, sometimes we don't have the means to cook what we want" (Participant #2).

"I had to get a prescription for oranges" (Participant #4)

While perceptions on the importance of healthy eating varied, most participants indicated that financial difficulties had an impact on their health. Several of the participants who receive income assistance said they would like to eat healthier, but feel that most healthy foods are not within their budget. Notably, participant #5 said, "as far as vegetables and fruit go, I see very little of that floating around," and participant #2 argued, "what the government allots, versus the cost of food, it doesn't correlate to eat healthy." Participant #4 observed that among community members, saving money and "feeling full" tended to take priority over trying to eat healthy. They noted that many people in the community live with diet-related chronic illnesses such as high blood pressure, hypertension, and obesity, and that local community groups are working to help people change unhealthy eating habits. However, education can only help so much when people are "pushed toward non-healthy foods by price" (participant #4). In particular, many participants remarked that local convenience stores and fast food chains tend to get the most business late in the month, when people are waiting to receive their next cheque from community services: "everything's booming around cheque day... but come two weeks later it's more scarce and that's when you see more kids running around with pizzas, or noodles, or craft dinner" (Participant #2).

"I don't feel like you should have to go out of your way to get groceries" (Participant #1)
In addition to the financial troubles faced by many community members, the absence of a full-service grocery store in the neighbourhood was a concern brought up by almost every

participant. Most participants reported shopping at the Sobeys on Windsor Street or the Superstore on Young Street, each of which is approximately 30 minutes away by foot. Although a few of the participants I interviewed have cars, they tended to indicate that most community members do not and have to rely on busses, carpooling with neighbours, or walking. This costs participants both monetarily and in terms of the time and effort it takes them to commute. Several participants spoke of having to "splurge on a taxi" (participant #11) on occasions when they simply had too many bags to carry home. As well, many reported shopping often at the local convenience stores, despite the inflated prices: "things like milk and bread, things that you go through quite often, you end up having to go to the corner store" (participant #4). Walking or bussing to the grocery store may save people money, but can be very tiring and a large time expenditure, as participant #1 remarked: "I've seen ladies walking, and they gotta take breaks every three steps, cause they've just got so many bags."

Community Resilience: "We try here. This community is full of wonderful, hardworking people." (Participant #9)

"The neighbours take care of each other" (Participant #3)

Despite the challenges – or perhaps because of them – people seemed to have a strong sense of belonging in their community. Participant #8 said, "I like the community, I'm part of the community," and participant #9 said, "the neighbours look out for each other, and they look out for your kids." Several participants mentioned carpooling with friends and neighbours, while others said that neighbours knock on each other's doors to let them

know about free things being given away by local organizations. Participants also cited a wide range of local initiatives and organizations that help them to meet their basic needs as well as to feel included in, and connected to, the community. A participant who was in high school cited their involvement with the North End Community Action Committee, a youth-driven group working to make change in the community, as the main reason they feel they have "somewhat of a voice" in decisions affecting the neighbourhood. Another participant referred to themself as an activist in the community. Another participant cited their involvement in March Breaks camps at the Parent Resource Centre and quilting classes at the Salvation Army as outlets through which they experience support and inclusion within the community. Many participants mentioned attending community meals at local non-profit organizations such as Hope Cottage, Souls Harbour, and the Uniacke Centre for Community Development. A few participants mentioned volunteering with local organizations and churches as a way to keep busy and connect with others, while others are involved in community gardens run by Hope Blooms and The Alders by Adsum House. Of local groups, participant #11 said, "all of them try to promote a sense of community for the people."

"People do what they can around here, to get what they need for their families"
(Participant #5)

Almost every person interviewed had a number of strategies for saving money. Most make a big trip to the grocery store once or twice a month, and those receiving income assistance typically make this trip right when they get each new cheque: "from the bank, to the

housing office, to the grocery store" (Participant #4). Stocking up on a monthly basis allows

people to get better deals while minimizing the number of expensive and/or time-

consuming trips they make to the grocery store. A number of participants mentioned

looking at flyers to find the best deals and buying based on sales, and Participant #4

asserted, "we've learned to work around our income."

Solutions: "Talk to community members about what they want – and they'd probably say grocery stores" (Participant #1)

In their interviews, participants offered a number of solutions to the problems they

identified. The most common and obvious suggestion across the board was to have a full-

service grocery store like Sobeys or Superstore back on Gottingen Street. Said participant

#4, "I think they would do OK here. I really do…. It would also bring people into the

neighbourhood, as opposed to taking people out of the neighbourhood, to shop." Another

common suggestion was to increase the Personal Allowance provided by Community

Services. One of the key informants, who works with low-income community members,

believes it should be increased by at least $100-150 per month. Participant #2 argued that

the minimum wage and child benefits should also be increased, and that a percentage of

homes in the area should be designated for low-income people in order to safeguard

against gentrification. Participant #8 called for more and better outreach by community

services to the people receiving income assistance: "we need to find someone who's going

to be a part of the community services to be a voice for us, but works for them… like a

middle man." Participant #4 said they would like to see more bus service in the

neighbourhood, and participant #2 suggested that subsidized metro passes be made available to low-income people. Participants #8 and #9 suggested that the food banks expand their hours, and include some evening pick-up times in order to be more accessible to working people. Several participants said they would like to see more community gardens in the neighbourhood.

The next section will pick up on these solutions in order to draw conclusions and make recommendations for change. In this section, I outlined the results of the qualitative phase of my study, first according to the *a priori* Indicators of Community Food Sovereignty, then according to the more varied *a posteriori* themes that emerged from my analysis. In the next section, I discuss the wider implications of these results from an environmental justice perspective, drawing insights and comparisons to the literature.

Chapter 6: Discussion

Inequitable access to healthy foods has been recognized in the health promotion and human geography literature as an environmental justice issue (Masuda et al., 2010; Hilmers, Hilmers, and Dave, 2012). The purpose of this study is to examine to what extent environmental racism exists in Halifax's North End – an area recognised as lacking in access to healthy food in the grey literature and by community members – with respect to food sovereignty. Answering this question requires an understanding of both food sovereignty and environmental justice. Food sovereignty is defined as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (La Via Campesina, 1996, para. 8). This definition offers a broad scope, including the question of who has control over the food system in addition to questions of individual access and health. Environmental justice as a movement and theory is similarly broad in scope, and centred on normative questions of rights and privileges; it can be defined as the right of peoples to a healthy environment, and their right to participate fully in decisions affecting the liveability of the community they live in (Masuda, Poland, & Baxter, 2010; Ornelas, 2010; The ENRICH Project, 2015). The results of my study strongly suggest that food sovereignty – and thus environmental justice – has not yet been fully achieved in North End Halifax.

The ENRICH Project investigating environmental racism in Nova Scotia conceptualizes environmental injustice as having two components: distributive/spatial, which refers to the inequitable distribution of environmental burdens and benefits across

communities; and procedural, which refers to the lack of political power that marginalized communities hold in preventing or opposing these inequities (The ENRICH Project, 2015). Some researchers have also referred to the second component as "recognitional environmental injustice" (Masuda, Poland, & Baxter, 2010, pg. 456). The existence of spatial injustice in North End Halifax with regard to food sovereignty is evidenced by my GIS analysis, and confirmed by interview participants, many of who stressed the impact this inequitable distribution has on their finances and their health. These interviews, however, reveal much more than a lack of access to grocery stores; they also strongly suggest the existence of procedural injustice through gentrification and political exclusion. For this reason, it seemed fitting to structure this discussion based on the framework put forward by the ENRICH Project, starting with the concept of distributive justice and the various ways it manifests spatially, financially, and health-wise; then examining procedural injustice and how it is embedded in political processes and gentrification. I then outline the ways in which community members support themselves and each other in the face of food insecurity, and describe efforts to enact change within the community. This serves as a basis for the final section, in which I offer recommendations for future research, policy, and action, and reassert that any interventions aiming to improve food security must be done in close collaboration with the community.

Distributive Injustice

Distributive injustice is at its core concerned with the *outcomes* of inequitable systems, whereas procedural or recognitional injustice is concerned with the *processes*. Often the

terms "distributive" and "spatial" are used interchangeably in environmental justice

research to emphasize that environmental benefits and burdens are distributed inequitably

across *space* and geographies. However, a broader interpretation of distributive injustice

could see it encompassing various types of distributive inequities that affect how people

experience and access their environment, including financial stability and community

health. The ENRICH Project indeed recognizes "the inequitable distributions of health

risks and health outcomes" as being part of distributive injustice (2015, para. 5). Thus, I

have divided this section according to *spatial*, *financial*, and *health* injustices to account for

these intersecting yet distinct facets of distributive environmental injustice.

Spatial Injustice

Interviews with residents strongly support evidence in the grey literature and my spatial

analysis that this North End community is a food desert. One issue that was brought up by

every interview participant was the absence of a full-service grocery store from their

community. Returning to the definition of a food desert as a "geographic [area] where

residents' access to affordable, healthy food options (especially fresh fruits and vegetables)

is restricted or non-existent due to the absence of grocery stores within convenient

travelling distance," this community would fit the bill exactly (Food Empowerment Project,

2015, para. 1). Research by Larsen and Gilliland suggests that suburban development in

North American cities over the past 50 years has increased "spatial inequalities in access to

supermarkets" (pg. 1), as "retailers [have followed] their wealthier customers to the

suburbs" (pg. 2), leaving inner cities behind, with no grocery stores (2008). This is exactly

what occurred in Halifax's North End, as the neighbourhood has not had a grocery store since wealthier residents began leaving in the 1980s (Beaumont, 2013).

Financial Injustice

Interview results reveal that while the lack of a nearby grocery store is a major hindrance to Gottingen Street residents, geography is not the only barrier; almost every participant interviewed said that financial difficulty was also major obstacle to obtaining a nutritious diet. Indeed, the prevalence of low-income households in the neighbourhood is likely one of the main reasons that grocery stores, driven by profit, have neglected it. However, even if there were a grocery store in the area, many residents would still not be able to afford a nutritious diet. Thus, financial injustice is both a contributing factor to spatial injustice, and an issue on its own. This finding underlines the need to be cautious of oversimplification in food security research. It also points to the need for a guaranteed living wage (Saulnier, Johnson, & Johnston, 2016). According to the 2016 report *Household Food Insecurity in Canada,* 15.1% of Halifax households experienced food insecurity in 2013-2014, one of the highest rates among 27 Canadian cities studied (Tarasuk, Mitchell, & Dachner, 2016, pg. 18). Across the country, households reliant on income assistance (IA) experienced a disproportionately high rate of food insecurity, at 60.9% (Tarasuk, Mitchell, & Dachner, 2016, pg. 12). This disparity was particularly pronounced in Nova Scotia, where the rate of food security among IA-reliant households was 82.1%, the second highest among Canadian provinces and territories studied after Nunavut (Tarasuk, Mitchell, & Dachner, 2016, pg. 12). Given that the majority of participants in my study are

recipients of IA, it is thus not surprising that most of them struggle to afford food. A study completed by Dr. Williams and colleagues in 2012 found that "households relying on IA in NS were (to various degrees) consistently unable to meet their basic needs and may have compromised their dietary intake to afford other, non-negotiable expenditures" (Williams, 2012, pg. 185). This is consistent with the feedback from some participants that they needed to take from their personal allowance – a fund designated for food and personal items – in order to cover rent and heating costs, leaving even less money with which to afford food. According to one of the key informants, single IA recipients typically receive a personal allowance of $200 – an amount that most participants feel is vastly insufficient and unrealistic. The key informant estimated that the personal allowance would need to be increased by $100 or $150 or more in order for recipients to meet their basic needs. A study conducted by the Halifax Food Policy Alliance in 2014 lends support to this argument with its finding that "federal and provincial government income security policies and programs are failing to ensure that income support is adequate to ensure food security" (Halifax Food Policy Alliance, 2014, pg. 3).

Despite the very real challenges faced by IA-reliant families and individuals, most research suggests that minimum wage earners are little better off. Another study by Dr. Williams and colleagues found that even "Nova Scotians relying on minimum wage could not afford to purchase a nutritious diet and meet their basic needs" (2006, pg. 430). With the exception of the two key informants, only one participant in this study was employed in a full-time position. Although more research would be needed to paint a representative picture of food security/insecurity among minimum wage earners in the North End, this

participant (Participant #9) was able to provide valuable insight as someone who had previously relied on IA and now had full time employment. While they feel they're significantly better off now than they had been when they received assistance – and likewise many people in their neighbourhood who still receive assistance – they nonetheless struggle to afford food for their family and sometimes rely on the food bank or other non profits for supplementary food or income. They feel that the challenges they still face shed light on the severity of food insecurity in their neighbourhood: "me having a car, having a job, finding these challenges, I can only – you know, I was there once too, on social assistance, not having a car... I know the struggle."

The struggle of eating well on a low income is exacerbated by the particular costs borne by low-income populations relative to well-resourced populations, according to interview participants. Participants cited the cost of travel to a grocery store outside of their neighbourhood, the inflated price of food at the convenience stores situated within their neighbourhood, and their inability to purchase a home while on income assistance (thus forcing them to remain renters long-term). Several participants also noted that grocery stores don't tend to have many good sales at the end of the month, when income assistance recipients receive their cheques from community services, with one saying that they had "heard through the grapevine that e deliberately don't have sales on around cheque day." Another participant remarked that the Atlantic Superstore in the South End, which has a wealthier clientele, tends to have a better selection and better deals on fresh foods than the grocery stores in the North End, adding, "we don't have that big of an option to shop other places, and they know that." The idea that it's "expensive to be poor" is not a new

one, rather, it is well established in both the academic and the grey literature (Leisbohn, 1999, pg. 122; Brown, 2009; "It's Expensive to be Poor," 2015). This unfortunate paradox is usually attributed to the inaccessibility of financial services to low-income populations; however, the higher cost of food in low-income neighbourhoods, the high cost of transportation for those who don't own cars, and rental costs all contribute (Brown, 2009). Added to this are the collective costs paid by low-income communities who "frequently have not received adequate public or private investments to serve overall community needs – schools, day care, health facilities, nonprofit-sponsored activities, or community centers" (Leisbohn, 1999, pg. 122). Or, as Participant #2 put it simply, "if you're not paying taxes they're not worried about you."

Health Injustice

The health and nutrition concerns expressed by most participants are also backed up in the literature. According to a report on food security by the Halifax Food Policy Alliance, "those with incomes below $20,000 were least likely to meet the recommended fruit and vegetable requirements" (2014, pg. 4). A report by the Nova Scotia Office of Health Promotion similarly concluded, "Nova Scotians who live on social assistance or minimum wage earnings cannot afford to eat well, no matter how carefully they choose and prepare food" (Nova Scotia Alliance for Healthy Eating and Physical Activity, 2005, pg. 3). Considering that a majority of participants interviewed had an annual income of less than $10,000, it is not surprising that residents struggle to afford healthy food. However, eating healthy is not just a matter of affordability. Some participants mentioned that they believe

some people in the community have developed unhealthy eating habits owing to both lack of education and continued exposure to low-cost, energy-dense foods growing up. This issue is exacerbated by the easy availability of low-nutrition convenience foods in the community. A study by Hilmers, Hilmers, and Dave found that communities with vulnerable populations were more likely to have access to "abundant sources of foods that promote unhealthy eating," adding, "accessibility is a key determinant of consumption and can act as a barrier to or a facilitator for healthy eating" (2012, pg. 1651). This, combined with the lack of full-service grocery stores in the area – which are more likely to carry fresh fruits and vegetables – incentivizes unhealthy eating in the community, especially when residents are running low on food and disposable income. As one participant put it, when people are waiting to receive their cheques from Community Services, "that's when you see more kids running around with pizzas, or noodles, or Kraft dinner."

Procedural Injustice

The ENRICH Project defines procedural environmental injustice as the "institutional mechanisms that perpetuate inequitable distribution" of environmental burdens and benefits (The ENRICH Project, 2015, para. 4). Procedural injustice both leads to spatial injustice, and limits the capacity of communities to respond where it already exists. Masuda and colleagues conceptualize of a number of "social, economic, and political processes" that function to exclude marginalized populations from environmental decision-making and thus contribute to the "production of environmental health injustices" (2010, pg. 456). First, most Canadian environmental procedures are rooted in western conceptions of

science that remain very technical, deliberative, and expert-based, and thus function to "render invisible the traditional expertise, values, and identities of First Nations and other non-western peoples" (2010, pg. 456). An environmental justice approach, then, must first and foremost aim to "level the playing field in terms of whose knowledge 'counts' in policy decisions that affect disenfranchised communities" (2010, pg. 457). Second, due to the long history of racism and colonialism in Canada, "uneven power relations [are] embedded in institutional policies and practices that reproduce and legitimate social and spatial inequities in environmental health" (2010, pg. 457). Masuda and colleagues suggest that these policies will remain uneven and racist until specific steps are taken to address the effects of historical injustice. Finally, again owing to the history of injustice in Canada, different communities possess uneven resources with which to enact change, and typically it is the communities "with sufficient social and economic capital that can influence the inevitably complex, technical, and protracted public consultative processes... leaving less resourced communities at the margins of planning, visioning, and decision-making" (2010, pg. 458). Masuda and colleagues submit that a broader definition of environmental health, coupled with stricter and more specific regulations for environmental policy, could help prevent the all-too-frequent exclusion of marginalized communities from environmental policy making. In North End Halifax, these processes of exclusion present political, social, and economic barriers to engagement for community members. Procedural injustice in the food system manifests itself in dynamics such as political exclusion and gentrification, which, taken together, progressively deprive residents of agency over the health and livability of their own community, including their access to food.

Political Exclusion

Exclusion from local decision-making was an issue brought up frequently in interviews. While most participants spoke highly of their community, few felt they had any say in decisions made by local government, city planners, and community services. Participant #2 said that community members advocating to preserve essential local resources such as schools and low-income housing were often dismissively told by the city to "fight it, or vote." Participant #8, when asked whether they believed they had a voice in their community, responded resignedly with "not really, nobody listens to anybody; they're gonna do what they want." Even the key informants, who were community leaders at The Alders and the Uniacke Centre for Community Development, felt they didn't have much of a voice in decisions about food or development in the community. Exclusion of marginalized groups from political decision-making is well documented in history, and Nova Scotia in particular carries a notoriously racist history of urban planning and environmental policy (Bullard, 2001; Wakefield & Baxter, 2010; Waldron, 2016; Fryzuk, 1996). Indeed, in one of the most infamous cases of environmental racism in Canada, residents of the Black community of Africville were forcefully removed from their land in 1970 without consent or prior consultation. Despite the community's establishment of a formal group, the Halifax Human Rights Advisory Committee (HHRAC), opposing relocation, city officials declined to consult with HHRAC and finalized plans without any participation from the community (Fryzuk, 1996).

Recent studies by Waldron through the ENRICH Project suggest that Nova Scotian communities facing environmental racism today are excluded in much the same way –

from the Lincolnville Reserve Land Voice Council, who, despite decades of organizing for landfill relocation, continue to be ignored by the Guysborough County government; to the Lucasville Community Association, whose requests for the local government to address excessive manure runoff from a neighbouring equestrian farm have been largely overlooked (Waldron, 2016, 2014). The common thread between these communities, however, is not only their political exclusion, but also the fact that they are all African Nova Scotian communities. Indigenous communities in Nova Scotia also face significant environmental racism, and the ENRICH Project has documented similar dynamics of pollution and exclusion in the Mi'kmaw communities of Membertou, Acadia First Nation, and Millbrook First Nation (Waldron, 2015b, 2014). These patterns strongly suggest that the issue is systemic. Indeed, race has been shown to be a strong determinant of environmental exposure, as greater than 30 percent of African Nova Scotians live within a 5-km radius of a landfill (Deacon & Baxter, 2013, pg. 612). Waldron asserts that the failure of government to meaningfully engage with African Nova Scotian and Mi'kmaw communities on these issues is a form of "structural violence" (Waldron, 2016, para. 1). In her paper, *Experiences of Environmental Health Inequities in African Nova Scotian Communities*, she cites a number of subtle forms of political exclusion that can lead to the perpetuation of this violence, including "non-scientific and undemocratic decisions, exclusionary practices, public hearings held in remote locations and at inconvenient times, and use of English-only material when communicating and conducting hearings for a non-English speaking public" (Waldron, 2016, pg. 24).

Gentrification

Nearly every participant expressed concern about gentrification, if not by name then by allusion to developers and businesses they claim are trying to "push the poor people out." Waldron defines gentrification as "a dynamic process that seeks to restore a less affluent or working class neighbourhood through migration of and reinvestment by middle and upper-class individuals" (2015a, pg. 11). Gentrification has been ongoing in North End Halifax for approximately ten years, and the area has seen an influx of condominiums, townhouses, and new businesses catering to the middle and upper class. While these changes are often celebrated for bringing new investments to the neighbourhood and encouraging growth of an "artistic community," low-income residents rarely reap the economic benefits of gentrification, and often feel socially excluded from this new (often middle-class and white) community (Waldron, 2010, pg. 12).

In Waldron's 2015 study of community health in the North End, many residents in the Black community expressed fear that they were being "priced out" of the neighbourhood due to rising rent and property taxes, coupled with the exodus of essential resources such as grocery stores and banks (Waldron, 2015a, pg. 11). In the face of such inequitable neighbourhood change – which, to add insult to injury, is often celebrated as community development or "renewal" (Barkley, 2015, para. 2) – Waldron found that "much resentment is felt by those who have lived their entire lives in the area" (Waldron, 2010, pg. 12). I found this fear and resentment generally to be true in my interviews. I spoke with residents of the North End – many who had lived in the neighbourhood their entire lives, some who were part of the Black community, and most of whom were living

on an income of less than $10,000 per year. Some were frustrated, like Participant #5: "this is the kind of stuff people need not to happen;" some were resigned, like Participant #2: "either way gentrification is coming, because prices are going up, property values are going up;" and some were determined, like Participant #4: "[Our community is] what we're fighting for right now, here, within the neighbourhood … and the gentrification happening; … people being able to afford to live where they've always lived." But not one participant seemed to feel that the recent changes in the neighbourhood would benefit their community.

Based on these interviews as well as evidence from the literature, I submit that gentrification is detrimental to food sovereignty because it raises the cost of living for the most vulnerable residents of the community, it contributes to the displacement of essential resources in favour of high-end businesses, and it creates a social divide that is harmful to the mental health of low-income residents. Many interview participants expressed concern about rising rents in the neighbourhood, and some even knew of tenants who had been forced to leave their building – which is now being redeveloped into upscale housing – due to rising rents. Despite efforts by the municipality to provide affordable housing, many felt that the measures in place were insufficient to save their community. Participants #2 and #4 both noted that the city and the community have very different definitions of "affordable:" while residents with incomes of $30,000 per year occupy affordable housing in the neighbourhood, many of the most vulnerable members of the community live on less than $10,000 per year, and some of them resent having to compete with those with much larger incomes for access to a limited supply of affordable housing. As Participant #2

put it, "the perception of the city versus the perception of us as the people, is totally different. So it depends what lens you see it through," likely alluding to a more general disconnect between city hall and the community. Another harmful effect of gentrification is that rising rents and property values affect businesses as well, causing essential resources such as grocery stores, banks, post offices, and even schools to be squeezed out by higher-end businesses such as organic grocers, nightclubs, restaurants, and expensive cafes (Waldron, 2010, 2015a). Participant #1 captured the sentiment of most of those interviewed well: "I think I can speak for most community members when I say that nobody really buys food locally… maybe fast food but they don't go grocery shopping at Local Source [an organic grocer on Gottingen Street]; they have to go out of their way… and some people don't drive so they have to walk."

The effects of gentrification are not only economic, however; evidence from this study, as well as previous research and the grey literature, indicates that it is also a powerful force of social exclusion in the North End of Halifax. This social divide exists not only along lines of class, but also along lines of race. A 2015 series by the CBC entitled "Halifax: A city with two north ends" addressed the fact that despite the area's "strong African-Nova Scotian roots… not many of the employees at these new establishments [i.e. local restaurants and bars] reflect the diversity of the north end community and [neither do] the clientele" (McGregor, 2015, para. 2). Waldron similarly found that "many Black residents in the North End are among those most negatively impacted by the social and economic challenges of gentrification" (2015a, pg. 4). As mentioned above, many residents of the 'old' North End feel some resentment and distrust toward the new, wealthier community

members. When asked about their feelings toward their community, Participant #9 said without hesitation that they wholly trust their friends and neighbours, but that "it's the people coming in I don't know about."

Grassroots Resistance

The theme of community resilience has received less attention in the food security and community health literature than have themes of resource poverty and lack of accessibility (Larsen & Gililland, 2008; Hilmers, Hilmers, and Dave, 2012). In other words, there has been more of a focus on establishing the issues and recommending solutions than on recognizing pre-existing capacity within the community. Given that nearly every participant interviewed in this study seemed to be engaged in their community – either formally, through local organizations, or informally, through frequent interaction and sharing with their neighbours and friends – this seems like a significant oversight. There were some notable exceptions to this in the literature. A study conducted by the Food Action Research Centre in Eastern Shelburne, Nova Scotia, highlighted the importance of community-based resources such as urban gardens and cooking classes, not only for improving food security but also for information sharing and developing a sense of community. The report also noted the importance of more informal relationships in the community – such as those between neighbours and friends – as being crucial to maintaining this sense of mutual support. In the words of one of their interview participants, "you grow relationships, you grow friendships, and you grow all these great connections" (Shelburne Seeds, 2014, pg. 11). This rings true to the testimony by

participants in this study about checking in on their neighbours, carpooling, and finding a voice and a sense of belonging – as well as crucial dietary support – within local organizations such as Hope Blooms, Souls Harbour, and the Uniacke Centre for Community Development.

Even with its emphasis on relationships and support, the Eastern Shelburne report largely left out a central focus of environmental justice-based research: activism. Studies examining food security though the lens of environmental justice, in contrast, tend to put a stronger focus on existing mobilization efforts within the community. As described in the introduction, the environmental justice movement has a rich history of grassroots activism, from the Warren County fight against PCB siting, to ongoing Indigenous struggles against colonization. It is important to remember that the movement started within marginalized communities, and scholarly research and government investigation followed – not the other way around. Thus, environmental justice researchers are impelled to acknowledge and centre existing voices, capacity and mobilization efforts within the community before recommending solutions. Not doing so not only further marginalizes the knowledge and experience of community members, but also contributes to stigma – often perpetuated by the media – surrounding marginalized communities. Masuda and colleagues, who have called for an environmental justice approach to health promotion research, argue "an environmental health justice approach [seeks] to level the playing field in terms of whose knowledge 'counts' in policy decisions that affect disenfranchised communities" (Masuda et al., 2010, pg. 547). This includes recognizing the activism that community members were engaged in prior to investigation by researchers, and ensuring that this activism guides

further work by researchers and policy-makers – not the other way around. Several participants in this study indeed spoke about the activism and mobilization efforts they are involved in within their community to improve food security and stop gentrification, from advocating to local politicians, to organizing community lunches, and from leading conversations about gentrification with their neighbours, to volunteering at local community gardens.

Recommendations

From the suggestions by interview participants, as well as conversations about the activism many are already involved in, three main themes emerged in terms of what needs to change in the community, the city, and beyond in order to grow a just and sustainable food system. These were to address the political exclusion of community members, to curb gentrification in the area and prioritize the establishment of a grocery store, and to increase minimum wage and income supports. The following section develops these broad recommendations with specific suggestions from both interviews and the literature.

Address the exclusion of vulnerable groups, especially African Nova Scotians, Mi'kmaq First Nations, and low-income earners living in the North End, from local political processes
Access to food is fundamentally a justice issue, and thus any interventions aiming to improve food security in the North End must address underlying issues and processes of justice and equity. The North End has strong African Nova Scotian roots, and yet African

Nova Scotians are underrepresented in all sectors of municipal and provincial government, as well as in many local non-profits meant to serve the community. The same is true for low-income earners, Mi'kmaq, single mothers, and many other vulnerable groups that have traditionally called the North End home. Regardless of intent, City hall and Community Services are not acting in the best interest of vulnerable residents of the North End. Government actors with jurisdiction over the North End must strive to meaningfully involve vulnerable groups at every stage of the political process. Many of the community members I spoke with are keen to be actively involved in political decision-making affecting their community, but felt their voices are too often ignored. Participants called for greater consultation of their community by municipal planners – "how is it a 'community plan' if you make it first and then ask the community? ....Community plan means we all get together, and we make a plan!" – and by Community Services – "we need to find someone who's going to be a part of the community services to be a voice for us, but works for them... like a middle man."

Similarly, environmental organizations and non-profit groups aiming to tackle food security issues in the neighbourhood must better recognize the efforts and leadership already underway among those most marginalized by a racist and unjust food system. Although the founders of the Community Carrot Coop seemingly had only the best intentions – to bring healthy and sustainable food to a neighbourhood that has long been a food desert – their efforts missed the mark. Many of those interviewed in this study felt that the way in which the project was planned and executed was inappropriate to the community, as most of the people living in subsidized housing and experiencing severe

food insecurity could not afford to shop at the Carrot Coop. Meanwhile, many initiatives already exist within the community to tackle food insecurity and gentrification. The Uniacke Centre for Community Development offers a weekly free lunch to members of the community, and is looking at ways to bus or carpool community members to the grocery store on cheque days. The North End Community Action Committee, a group led by Black youth in the North End, is leading the effort to oppose gentrification in the neighbourhood by engaging their community in neighbourhood improvement efforts, and advocating to local government to ensure that new developments are in the interest of community members (Neigh, 2017). It is incumbent upon non-profit groups who are not from the community, or who belong to more privileged groups within the community, to listen to and learn from those who are most marginalized before acting. Only by recognizing their own privileges, seeking to understand the issues that are most important to members of the community, and following the leadership of groups already enacting change within the community, will those from outside the community be likely to have a positive impact. As a first step, such groups should seek to lend support to – and of course listen to and learn from – the community's own activists and leaders in existing initiatives, before proposing new initiatives to the community.

Curb the uneven impacts of gentrification through policy measures and community partnerships

Efforts to improve food security/sovereignty in North End Halifax must also address the problem of gentrification. Gentrification causes rising rent, rising food prices, social

exclusion, and the displacement of essential resources, and thus is detrimental to community food sovereignty. The impetus to address these challenges must come from both government and local businesses. Local government must prevent the displacement of low-income residents of the North End by increasing access to affordable and subsidized housing, especially for the most vulnerable, as well as putting in place stricter rent control. One interview participant proposed that at least 10% or so of buildings in the area should be designated low-income housing. Another suggested that more of the neighbourhood housing should be rent-to-own. Several interviewees further stressed that affordable housing should be allocated on the basis of need, as they've noticed even low-income housing has been gentrifying to accommodate those with incomes of $30,000-$60,000 ahead of the poorest community members living on less than $10,000 per year. Many participants also called for the establishment of a full-service grocery store in the neighbourhood. City councilors and planners should provide incentives for grocery stores to relocate to and remain in the North End, be it through tax cuts or the amendment of zoning bylaws. Furthermore, urban planners should work more closely with community members and groups to ensure that establishments that are important to the community are not pushed out by high-end development.

The newer and higher-end businesses that have become common in the North End must also take responsibility for addressing their contributions to gentrification and its impacts on the community. As a group whose ownership and patronage is primarily white and middle-class, these establishments must acknowledge the race and class dynamics that allow their businesses to prosper while low-income and African Nova Scotian residents

who have long inhabited the neighbourhood are systematically displaced (Barkley, 2015).

However, addressing the inequalities caused by gentrification does not necessarily equate to

stopping development completely. Local businesses could begin by making efforts to attract

more members of the local community as staff and clients. Jackie Barkley, a social worker,

activist, and longtime resident of the North End, offered the following suggestions for local

businesses looking to diversify their staff and patrons:

> If the "new" (code for white and cool and mostly expensive) businesses in the north
>
> end want to hire local residents, I'm sure a 10-minute walk to the youth employment
>
> centre at the Community Y on Gottingen, or the Hope Blooms office on Cornwallis,
>
> or the Black Business Initiative office, or the Parent Resource Centre on Uniacke St.,
>
> or the North Branch Library, or the Mi'kmaq Native Friendship Centre would
>
> educate them very quickly and easily on ways to at least change the staff profile.... Or,
>
> if they need even more help, they could close their place for a day, and invite people
>
> from all the agencies and institutions in from the "old" North End to a free mini-
>
> conference, and provide free funky food, and do some listening, rather than
>
> pretending or ignoring the class and race issues attending the new world order of the
>
> North End (Barkley, 2015, para. 6).

Additional actions could include collaborating with local organizations, adding more

affordable items to their menus or providing discounts to low-income community

members, sponsoring or hosting community events, and providing support to African

Nova Scotian and/or low-income community members looking to establish their own

businesses. In an interview with Talking Radical Radio, Donntayia Jones, a member of the

North End Community Action Committee, expressed the concern that "most of the time when people of colour go in to the [new] restaurants, they're not feeling welcomed, and not wanted in the restaurant." Payton Ashe, another member of the Action Committee, said that even actions as simple as being more welcoming to members of the Uniacke Square community would make a big difference: "there are stigmas and stereotypes, and it would be nice if before people came here, they would lose those stigmas and stereotypes... it's not a bad community – you only know that once you open yourself up to the people and get to know them" (Ashe, 2017, as cited in Neigh, 2017).

Ensure a living wage for all by raising the minimum wage and increasing income assistance

The results of this study indicate that money is a major barrier to food security for many in the North End of Halifax. National and provincial studies have produced similar findings (Tarasuk, Mitchell, & Dachner, 2016; Williams, 2012). This suggests that current policies and supports are wholly inadequate to ensure that all Canadians are able to afford a minimally nutritious diet. Many anti-poverty organizations, researchers, and activists have called for the adoption of the living wage in order to close the gap between income and expenses for those who are most marginalized. The living wage is defined as the minimum income that a full-time worker would need to earn in order to be financially stable and food secure, and support their family (Saulnier, Johnson, & Johnston, 2016). It is distinct from the minimum wage, which is the legally mandated minimum amount an employer must pay its workers. The living wage "sets a higher test" and is calculated as the "hourly

rate at which a household can meet its basic needs, once government transfers have been added to the family's income (such as the Universal Child Care Benefit) and deductions have been subtracted (such as income taxes and Employment Insurance premiums)" (Living Wage Canada, 2008, pg. 1). It differs from community to community based on the cost of living and the provincial and municipal benefits available, and it is adopted voluntarily by employers.

Based on 2016 calculations by the Canadian Centre for Policy Alternatives, the living wage for Halifax is $19.17 per hour (Saulnier, Johnson, & Johnston, 2016). Currently, the minimum wage in Nova Scotia is set at $10.20 per hour. Basic Income Assistance, which is only available to those who are unemployed or significantly underemployed, consists of a total allowance of at most $875 per month (Province of Nova Scotia, 2013a). Converted into the equivalent hourly wage for full time work, Nova Scotians receiving IA could be said to be making $5.05 per hour. As one interview participant put it, "How do you live on that amount of money?" Christine Saulnier, the director of the Canadian Centre for Policy Alternatives Nova Scotia, further adds, "the system of last resort, the punitive income-assistance system, provides support that is well below any measure of poverty or low income" (Saulnier, 2013, para. 11). The government of Nova Scotia, in turn, has referred to itself as "a leader in the area of food security" (Province of Nova Scotia, 2013b, para. 3). And yet our government is failing the 30,900 people earning minimum wage, and additional 44,000 living on income assistance, whom according to numerous studies cannot afford a minimally nutritious diet (MacEwen, 2016, table 1; Foster, 2015, para. 3; Williams, 2012; Tarasuk, Mitchell, & Dachner, 2016). It

should not be too idealistic to expect that all citizens and residents of a wealthy country like Canada should be able to meet their basic needs. Moreover, as food insecurity disproportionately affects vulnerable populations – including women, African Nova Scotians, First Nations, and immigrants – the inadequate support our government provides to those facing poverty is in direct violation of its stated commitment to equality. Achieving food sovereignty in the North End, as well as other marginalized communities across Canada, will thus require a significant increase in financial support from all levels of government. However, change need not only come from the government. Employers in both the public and private sectors wishing to address food insecurity can start by providing a living wage to their employees. In particular, businesses in the North End must begin to address their role in gentrification and poverty by hiring locals and paying a living wage.

Chapter 7: Conclusion

In this study I explored food security as an environmental justice issue in the North End of Halifax. Halifax has one of the highest rates of food insecurity in Canada, and the North End has historically been a low-income community, something that typically indicates food insecurity. In recent years, the North End has seen significant gentrification, which according to the grey literature has contributed to the creation of food deserts in the area (Beaumont, 2012). Despite widespread awareness, food security in the North End has not been studied academically. My goal in this project was to identify whether food deserts exist in the North End, and if so, to find out where they are located, whether food insecurity is correlated with social vulnerability, what the lived experience is for residents of a food desert, and potential actions for redressing food insecurity. Using a mixed methods design helped me to examine this issue from different angles and to narrow the focus of the study. A spatial-demographic analysis in GIS provided context and scope, while personal interviews shed light on the perspectives of local residents and what they saw as key issues and opportunities in the community. Through my spatial analysis, I found that food deserts do exist in Halifax's North End, and that they tend to be clustered in areas with large visible minority populations and high rates of poverty. This finding was backed up by the personal interviews, as most participants said they found it both physically and financially difficult to access sufficient and nutritious food. Many participants also spoke of feeling disenfranchised by government institutions, such as Community Services and the municipal planning department, which they feel don't always have community members' best interests at heart. Also commonly mentioned was concern about intensifying

gentrification of the area. Both of these processes are part of a larger systemic issue of political, economic, and social exclusion of marginalized communities, particularly low-income populations and African Nova Scotian communities. Thus, perhaps the most revealing finding was how deeply and inextricably connected food security is with other systemic issues, such as racism, gentrification, and poverty.

Given the systemic nature of food insecurity and environmental racism, solutions must address the root of the problem rather than the symptoms, and prioritize the voices of those most marginalized by these issues. Participants in this study, most of who belong to marginalized communities, offered many ideas for change. Some of the most commonly mentioned recommendations were increased and more meaningful consultation of community members by decision makers, increased wages and income assistance, and the introduction of municipal policies to curb gentrification and bring back a full-service grocery store to the neighbourhood. Further research and collaboration with this community and other food insecure communities could help in actualizing these recommendations, and could provide greater insight into the issues and possible solutions. Such research could include a larger-scale GIS analysis of food deserts and social vulnerability, covering all of HRM or even all of Nova Scotia. This analysis could be done using the data from the 2016 long form census, which would provide a more up-to-date prognosis as my study relied on data from 2006. Ideally the resulting maps would be made open-source in the spirit of community-based research. A larger study could also look at other areas in Halifax where food deserts exist, and collaborate with local community organizations and activists to conduct qualitative research that could be compared and

contrasted with the results of the interviews done for this study. Subject to availability of funding, a larger scale participatory action research project could be conducted on the model of – or in collaboration with – existing projects such as Food ARC or ENRICH. This project could involve food insecure communities from across Nova Scotia, working with groups already tackling local issues in order to address food insecurity in Nova Scotia as an environmental justice issue.

This particular study makes both a methodological and a theoretical contribution to the broader scholarly literature on food security and environmental racism. Expanding on research conducted by Larsen & Gilliland in London, Ontario, I provide a model for GIS-based spatial analysis investigating links between food deserts and demographic indicators. This method could be applied in other cities across Canada, allowing both for case-based analysis and comparison across jurisdictions. As more research accumulates on this topic it is my hope that broader trends will emerge, which in turn will contribute to guiding national policy on food security and environmental justice. This study also provides a framework for conducting community-based personal interviews and for integrating qualitative and quantitative research to provide several perspectives on one issue. I believe it to be vitally important to highlight peoples' stories alongside the numbers and figures in order to keep food justice research – or any social science research for that matter – firmly grounded in communities' lived experiences of injustice. This is important not only to build the most truthful account of the issues, but also to ensure that the research being done is serving the interests of the community – and not the other way

around. Thus it is my hope that this study contributes to the ever-evolving conversation around best practices for cooperation between researchers and communities.

From a theoretical perspective, my findings add to the mounting evidence that food deserts are disproportionately found in communities of colour and low-income communities (Hilmers, Hilmers, & Dave, 2012; Larsen & Gilliland, 2008; Ornelas, 2010). My research also supports findings in the literature that current social assistance policies in Nova Scotia are vastly insufficient to fulfill our government's stated commitments to food security (Williams et al., 2012). The interview results contribute anecdotal evidence to arguments in the environmental racism and community health literature about the negative social consequences of gentrification and the procedural exclusion faced by marginalized communities. More generally, my study suggests that our relationship with food and the environment is deeply entwined with social and political structures of power, privilege, and race. Thus, while specialized geographic research on the boundaries and characteristics of food deserts is immensely important to building the knowledge base and informing decision-making, more interdisciplinary community-based collaboration between anti-poverty activists, food security researchers, environmental justice movements, urban planners, and most importantly community members will be essential to making progress on this multi-faceted issue.

References

Adsum for Women and Children (2011). *About Adsum.* Retrieved from

    http://www.adsumforwomen.org/about-adsum

American Nutrition Association. (2011). *USDA Defines Food Deserts.* Retrieved from

    http://americannutritionassociation.org/newsletter/usda-defines-food-deserts

Anguelovski, I. & Martínez Alier, J. (2014). The "Environmentalism of the Poor" revisited:

    Territory and place in disconnected local struggles. *Ecological Economics, 102,* 167-176.

    Retrieved from http://dx.doi.org/10.1016/j.ecolecon.2014.04.005

Apparicio, P., Cloutier, M.-S., Shearmur, R. (2007). The case of Montreal's missing food deserts:

    evaluation of accessibility to food supermarkets. *International Journal of Health Geographics,*

    6(4), 1-13. doi:10.1186/1476-072X-6-4

ArcGIS Resources. (2014). *Types of Network Analysis Layers.* Retrieved from

    http://resources.arcgis.com/EN/HELP/MAIN/10.1/index.html#/Types_of_network_ana

    lysis_layers/004700000032000000/

Barkley, J. (2015, Apr 20). Racism and gentrification in Halifax's North End. *Halifax Media Co-op.*

    Retrieved from http://halifax.mediacoop.ca/

Beaumont, H. (2012, Nov 4). Everyday life's a challenge in a "food desert." *The Chronicle Herald.*

    Retrieved from http://thechronicleherald.ca/

Beaumont, H. (2013, Aug 8). Pushed out by gentrification? *The Coast.* Retrieved from

    http://www.thecoast.ca/

Brown, D.L. (2009, May 18). The high cost of poverty: why the poor pay more. *The Washington*

    Post. Retrieved from http://www.washingtonpost.com/

Bullard, R. D. (2001). Environmental justice in the 21st century: Race still matters. *Phylon, 49*(3/4), 151-171. Retrieved from http://jstor.org/stable/3132626

Canadian Environmental Health Atlas. (2013). *Measuring the Food Environment in Canada.* Retrieved from http://www.foodsecuritynews.com/resource-documents/MeasureFoodEnvironm_EN.pdf

CHASS. (2013). *Canadian Census Analyser.* Retrieved from http://dc1.chass.utoronto.ca/census/ea.html

Clapp, J. (2014). Food security and food sovereignty: Getting past the binary. *Dialogues in Human Geography, 4*(2), 206-211. doi:10.1177/2043820614537159

Community Carrot Co-op to open in north-end Halifax. (2013, Dec 4). *CBC News.* Retrieved from http://www.cbc.ca [in text citation: "Community Carrot," 2013)]

Community University Research Alliance. (2015). Making Food Matter: Strategies for Activating Change Together. Retrieved from http://foodarc.ca/wp-content/uploads/2014/11/Making-Food-Matter-Report_March2015rev.pdf

Creswell, J. W. (2014). *Research Design.* Los Angeles: Sage Publications Ltd.

Deacon, L. & Baxter, J. (2013). No opportunity to say no: A case study of procedural environmental injustice in Canada. *Journal of Environmental Planning and Management, 56*(5), 607-623. Retrieved from http://www.enrichproject.org/wp-content/uploads/2015/05/Leith-Deacon-Article.pdf

DeVet, R. (2015, Oct 26). Facing environmental racism and white privilege. *Halifax Media Co-op.* retrieved from http://halifax.mediacoop.ca

Ecology Action Centre. (2014). *The Our Food Project: Reconnecting Food and Community, 2013-2014.* Retrieved from https://www.ecologyaction.ca/files/images-documents/file/Food/EAC%20OFP%20AR%20Aug1-2014%20Email.pdf

Erwin, A. (2016, May 12). Halifax's Mobile Food Market launches this weekend. *The Coast.* Retrieved from http://www.thecoast.ca

FAO. (2006). Food Security Policy Brief. Retrieved from http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf

Food Empowerment Project. (2015). *Food Deserts.* Retrieved from http://www.foodispower.org/food-deserts

Food Secure Canada. (n.d.). *Who We Are.* Retrieved from http:// foodsecurecanada.org/who-we-are

Food Secure Canada. (2011). *Resetting the Table: A People's Food Policy for Canada.* Retrieved from http://foodsecurecanada.org/sites/default/files/fsc-resetting-2015_web.pdf

Foster, J. (2015, May 4). Nova Scotians staying on income assistance longer than needed: Minister. *CTV News Atlantic*. Retrieved from http://atlantic.ctvnews.ca/

Fryzuk, L.A. (1996). Environmental Justice in Canada: Empirical Study and Analysis of the Demographics of Dumping in Nova Scotia. Retrieved from http://www.enrichproject.org/resources/#Ex-Publications

Furey, S., Strugnell, C., McIlveen, M.H. (2001). An investigation of the potential existence of "food deserts" in rural and urban areas of Northern Ireland. *Agriculture and Human Values, 18*(4), 447-457. doi:10.1023/A:1015218502547

Ghosh-Dastidar, B., Cohen, D., Hunter, G., Zenk, S. N., Huang, C., Beckman, R., & Dubowitz,

T. (2014). Distance to store, food prices, and obesity in urban food deserts. *American

Journal of Preventative Medicine, 47*(5), 587-595. doi:10.1016/j.amepre.2014.07.005

Green-LaPierre, R., P. L., Glanville, N. T., Norris, D., Hunter, H. C., & Watt, C. G. (2012).

Learning from "knocks in life": Food insecurity among low-income lone senior women.

Journal of Aging Research. doi:10.1155/2012/450630

Halifax. (2015). *HRM Open Data Catalogue.* Retrieved from

http://catalogue.hrm.opendata.arcgis.com

Halifax Food Policy Alliance. (2014). *Food Counts: Halifax Food Assessment.* Retrieved from

https://halifaxfoodpolicy.files.wordpress.com/2015/03/foodcounts-assessment-web-

fin4.pdf

Halifax Food Policy Alliance. (n.d.). *About Us.* Retrieved from:

https://halifaxfoodpolicy.wordpress.com/about/

Hilmers, A., Hilmers, D., & Dave, J. (2012). Neighborhood disparities in access to healthy foods

and their effects on environmental justice. *American Journal of Public Health, 102*(9), 1644-

1654.: 10.2105/AJPH.2012.300865

It's Expensive to be Poor. (2015, Sep 3). *The Economist.* Retrieved from http://www.economist.com

[in text citation: "It's expensive to be poor," 2015)]

La Via Campesina. (1996). *What is La Via Campesina?* Retrieved from

http://viacampesina.org/en/index.php/organisation-mainmenu-44/what-is-la-via-

campesina-mainmenu-45

Larsen, K., & Gilliland, J. (2008). Mapping the evolution of "food deserts" in a Canadian city: Supermarket accessibility in London, Ontario, 1961-2005. *International Journal of Health Geographics, 7*(16). doi:10.1186/1476-072X-7-16

Leibsohn, D. M. (1999). Community development: financial services innovation in community development. *Journal of Affordable Housing and Community Development Law, 8*(2), 122-131. Retrieved from http://www.jstor.org/stable/25782383

Living Wage Canada (2008). Canadian Living Wage Framework. Retrieved from http://livingwagecanada.ca/files/3913/8382/4524/Living_Wage_Full_Document_Nov.pdf

MacEwen, A. (2016, Jun 30). Who earns minimum wage? *Canadian Dimension.* Retrieved from https://canadiandimension.com

Mascarenhas, M. (2012). *Where the Waters Divide: Neoliberalism, White Privilege, and Environmental Racism in Canada.* Plymouth: Lexington Books.

Masuda, J., Poland, B., & Baxter, J. (2010). Reaching for environmental health justice: Canadian experiences for a comprehensive research, policy and advocacy agenda in health promotion. *Health Promotion International, 25*(4), 453-463. doi:10.1093/heapro/daq041

McGregor, D. (2009). Honouring Our Relations: An Anishnaabe Perspective on Environmental Justice, in *Speaking for Ourselves: Environmental Justice in Canada.* J. Agyeman, P.Cole, R. Haluza-DeLay, P. O'Riley (eds.), 27-41. Vancouver: UBC Press.

McGregor, P. (2015, Apr 14). Halifax: A city with two North Ends. *CBC News Nova Scotia.* Retrieved from http://www.cbc.ca

McLaughlin, K. A., Greif Green, J., Alegría, M., Costello, J. E., Gruber, M. J., Sampson, N. A., & Kessler, R. C. (2012). Food insecurity and mental disorders in a national sample of U.S. adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 51*(12), 1293-1303. Retrieved from

> https://www.clinicalkey.com/content/playBy/doi/?v=10.1016/j.jaac.2012.09.009

Neigh, S. (2017). Black youth opposing gentrification and empowering community. *The Media Co-op.* Retrieved from http://mediacoop.ca

Nova Scotia Alliance for Healthy Eating and Physical Activity. (2005). *Healthy Eating Nova Scotia.* Retrieved from http://novascotia.ca/dhw/healthy-communities/documents/Provincial-Healthy-Eating-Strategy.pdf

Ornelas, l. (2010). *Shining a Light on the Valley of Heart's Delight: Taking a Look at Access to Healthy Foods in Santa Clara County's Communities of Color and Low- income Communities.* Retrieved from http://www.foodispower.org/documents/FEP_Report_web_final.pdf

Patel, R. (2009). Food sovereignty. *The Journal of Peasant Studies, 36*(3), 663-706. doi:10.1080/03066150903143079

PROOF: Food Insecurity Policy Research (2017). *About.* Retrieved from

> http://proof.utoronto.ca/about-proof

Province of Nova Scotia (2013a). *Basic Income Assistance Rates.* Retrieved from

> http://novascotia.ca/coms/employment/income_assistance/BasicAssistance.html

Province of Nova Scotia (2013b). *Healthy Communities.* Retrieved from

> https://novascotia.ca/dhw/healthy-communities/health-eating-security.asp

Saulnier, C. (2013, July 26). Consider this an Outcry about Special Needs Income Assistance in

    Nova Scotia, *Halifax Media Co-op*. Retrieved from http://halifax.mediacoop.ca

Saulnier, C., Johnson, C., and Johnston, M. (2016). *Working for a Living, Not Living for Work: The*

    Halifax and Antigonish Living Wages for 2016. Canadian Centre for Policy Alternatives Nova

    Scotia Office. Retrieved from http://policyalternatives.ca

Shelburne Seeds and Activating Change Together for Community Food Security. (2014). Eastern

    Shelburne County Community Food Security Research Report. Nova Scotia: Food Action

    research Center, Mount Saint Vincent University.

Statistics Canada. (2015). *Boundary Files.* Retrieved from http://www12.statcan.gc.ca/census-

    recensement/2011/geo/bound-limit/bound-limit-eng.cfm

Tarasuk, V., Mitchell, A., Dachner, N. (2016). *Household food insecurity in Canada, 2014.*

The ENRICH Project. (2015). *Background.* Retrieved from

    http://www.enrichproject.org/about/background

The Nova Scotia Participatory Food Costing Project. (2012). *Can Nova Scotians Afford to Eat*

    Healthy? Report on 2012 Participatory Food Costing. Retrieved from http://foodarc.ca/wp-

    content/uploads/2013/05/NSFoodCosting2012_Report.pdf

The Nova Scotia Participatory Food Costing Project. (2013). *Pictures that Represent Voices…*

    Examining Impacts of Participatory Food Costing on Communities and Organizations. Retrieved

    from http://foodarc.ca/wp-content/uploads/2013/06/FC_Photovoice-

    Report_final_April-2013.pdf

The People of Colour. (1991). Principles of Environmental Justice. First National People of Color

     Environmental Leadership Summit. Retrieved from

     http://www.ejnet.org/ej/principles.html

Toronto: Research to identify policy options to reduce food insecurity (PROOF). Retrieved from

     http://proof.utoronto.ca/

Uniacke Centre for Community Development. (n.d.). *About*. Retrieved from

     http://www.facebook.com/pg/uniackecentre/about/?ref=page_internal

Wakefield, S. E. L. & Baxter, J. (2010). Linking health inequity and environmental justice:

     Articulating a precautionary framework for research and action. *Environmental Justice, 3*(3),

     95-102. doi:10.1089/env.2009.0044

Waldron, I. (2016). Experiences of environmental health inequities in African Nova Scotian

     communities. Retrieved from http://www.enrichproject.org/resources/#In-Publications

Waldron, I. (2016, Dec 1). Op-ed: Environmental racism is violence. *The Nova Scotia Advocate*.

     Retrieved from https://nsadvocate.org

Waldron, I. (2015a). Final study report for North End Matters: Using the people assessing their

     health process (PATH) to explore the social determinants of health in the Black

     community in the North End. Retrieved from

     https://www.dal.ca/content/dam/dalhousie/pdf/healthprofessions/School%20of%20Nu

     rsing/Final_PATH_Report_2015.pdf

Waldron, I. (2015b). Findings from the series of workshops "In Whose Backyard? – Exploring

     Toxic Legacies in Mi'kmaw and African Nova Scotia Communities." *Environmental Justice,*

     8(10), 1-5. doi:10.1089/env.2014.0034

Waldron, I. (2014). Report on the regional meetings & convergence workshop for: "In whose

      backyard? Exploring toxic legacies in Mi'kmaw & African Nova Scotian communities."

      Environmental Noxiousness, Racial Inequities & Community Health Project. Retrieved from

      http://www.enrichproject.org/wp-content/uploads/2013/12/Environmental-Injustice-

      Report.pdf

Waldron, I. (2010). Challenges and Opportunities: Identifying Meaningful Occupations in Low-

      Income, Racialized Communities in North End, Halifax. Retrieved from

      http://www.scribd.com/doc/87546895/Can-We-Talk-Community-Report

Walsh, M. (2014, Nov 3). Halifax gardening program "Hope Blooms" growing again. *Global News.*

      Retrieved from http://globalnews.ca/news/1650037/halifax-gardening-program-hope-

      blooms-growing-again/

Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory

      needs assessment. *Health Education & Behavior, 24*(3), 369-387.

      doi:10.1177/109019819702400309

Ward, R. (2016, Jun 5). Mobile Food Market attracts more shoppers than expected. *CBC News.*

      Retrieved from http://www.cbc.ca

Weiler, A. M., Hergesheimer, C., Brisbois, B. Wittman, H., Yassi, A., & Spiegel, J. M. (2015).

      Food sovereignty, food security and health equity: A meta-narrative mapping exercise.

      Health Policy and Planning, 30, 1078-1092. doi:10.1093/heapol/czu109

Williams, P. L., Watt, C.G., Amero, M., Anderson, B. J., Bloom, I., Green-Lapierre, R., Johnson,

      C. P., &Reimer, D.E. (2012). Affordability of a nutritious diet for income assistance

recipients in Nova Scotia (2002-2010). *Canadian Journal of Public Health, 103*(3), 183-188.

Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22905636.

Williams, P. L., Johnson, C. P., Kratzmann, M. L. V., Johnson, C. S. J., Anderson, B. J., &

Chenhall, C. (2006). Can households earning minimum wage in Nova Scotia afford a

nutritious diet? *Canadian Journal of Public Health, 97*(6), 430-434. Retrieved from

http://journal.cpha.ca/index.php/cjph/article/view/780/780.

Windfuhr, M. & Jonsén, J. (2005). *Food sovereignty: Towards Democracy in Localized Food Systems.*

Burton-on-Dunsmore: ITDG Publishing.

Appendix A: Interview Materials

Interview Questions for Community Members

1. Where do you usually buy your food?

2. How do you usually get there? How long does it take to get there?

3. Do you spend money on transportation? If so, how much?

4. How often do you buy groceries? When do you usually go? How long does it take
   when you are at the store?

5. Do you share grocery shopping and food preparation responsibilities with
   someone else? If so, who? How do you decide whose turn it is to buy or prepare
   food?

6. Do you have a weekly budget for your food costs? If so, how much?

7. Do you find it easy/difficult to stay under budget?

8. How concerned are you with eating healthy food?

9. Do you have any special cultural food needs or preferences? If so, how
   easy/difficult is it to find foods that meet your needs?

10. Do you have any special dietary needs? If so, how easy/difficult is it to find foods
    that meet your needs?

11. Are you concerned about food safety? Have you ever had issues with expiry
    dates, improper sealing, contamination, etc.?

12. Have you heard the term "environmental sustainability"? What does it mean to you?

13. Do you think that the foods available to you are environmentally sustainable?

14. What does community sustainability mean to you?

15. Do you think your community is sustainable when it comes to food?

16. Do you think people have a good relationship with food in your community?

17. Do you see any issues with the way food is bought and sold in your neighbourhood? In Halifax more generally? In Nova Scotia?

18. If you see issues with the food system in your neighbourhood, what do you see as potential solutions?

    a. [If the participant is stuck for solutions]: Some neighbourhoods have tried to improve peoples' access to food by introducing cooperative grocery stores, mobile food trucks, or urban gardens. Do you think any of these solutions could help people in your neighbourhood?

19. Do you feel that you have a voice in decisions affecting your local food system? If you wanted to get involved in changing the food system, what would your first steps be?

20. Is there anything else you'd like to add?

Interview Questions for Key Informants

1. Where do residents of this community usually buy their food?

2. How do they usually get there? How long does it take?

3. Do residents of this community spend money on transportation? If so, how much?

4. How often do people in this neighbourhood buy groceries? When do they usually go?

5. Do residents usually share the responsibility for grocery shopping and food preparation within and/or between households? How are these sorts of decisions made?

6. Do people typically set a weekly budget for their food costs? If so, how much do they typically spend?

7. Do residents of this community find it easy/difficult to stay under budget?

8. How concerned are residents of this community with eating healthy foods?

9. Do people in this community find it easy/difficult to meet any cultural food needs or preferences?

10. Do people find it easy/difficult to meet their dietary needs?

11. Are people in this community concerned about food safety? Do you know if they've ever had issues with expiry dates, improper sealing, contamination, etc.?

12. Have you heard the term "environmental sustainability"? What does it mean to you?

13. Do you think that the foods available to your community are environmentally sustainable?

14. What does community sustainability mean to you?

15. Do you think your community is sustainable when it comes to food?

16. Do you think people have a good relationship with food in your community?

17. Do you see any issues with the way food is bought and sold in your neighbourhood? In Halifax more generally? In Nova Scotia?

18. If you see issues with the food system in your neighbourhood, what do you see as potential solutions?

    a. [If the participant is stuck for solutions]: Some neighbourhoods have tried to improve peoples' access to food by introducing cooperative grocery stores, mobile food trucks, or urban gardens. Do you think any of these solutions could help people in your neighbourhood?

19. Do you feel that you have a voice in decisions about food in your neighbourhood? If you wanted to get involved (or get others involved) in changing the food system, what would your first steps be?

20. Is there anything else you'd like to add?

Appendix B: Demographic Questionnaire

1. What is your gender?

    a. Male

    b. Female

    c. Other

2. What is your age?

    a. 17 or under

    b. 18-24

    c. 25-34

    d. 35-44

    e. 45-54

    f. 55-64

    g. 65 years and over

3. What is the highest level of education you have completed?

    a. Some high school

    b. High school graduate, diploma or GED

    c. Some college

    d. Trade/technical/vocational training

    e. Bachelor's degree

    f. Graduate degree

    g. Professional degree

    h. Doctorate degree

4. Do you self-identify as lesbian, gay, bisexual, transgender and/or queer?

    a. Yes

    b. No

    c. Prefer not to answer

5. What is your ethnic background?

a. European

    b. African

    c. First Nations or Metis

    d. Latin American

    e. Asian or Pacific

    f. Other

6. What is your citizenship status?

    a. Canadian citizen

    b. Permanent resident

    c. Landed immigrant

    d. Other (i.e. refugee, student visa)

7. What is your approximate **household** income?

    a. Under $10,000

    b. $10,000 - $29,000

    c. $30,000 - $59,000

    d. $60,000 or more

    e. Prefer not to answer

8. What is your current employment status?

    a. Employed for wages

    b. Self-employed

    c. Out of work and looking for work

    d. Out of work but not currently looking for work

    e. Stay at home parent or spouse

    f. Student

    g. Retired

    h. Unable to work

9. Are you currently living on income assistance?

    a. Yes

b. No

        c. Prefer not to answer

10. Are you currently living with a physical or mental disability?

        a. Yes

        b. No

        c. Prefer not to answer

11. How many people in your household contribute to wage earning?

        a. 0

        b. 1

        c. 2

        d. 3 or more

12. How many people in your household are dependent?

        a. 0

        b. 1

        c. 2

        d. 3

        e. 4

        f. 5

        g. 6 or more

Food Justice *in north end halifax*

Research Questions

Are people living in food desert areas in Halifax's North End more likely to belong to a vulnerable group than those living in well-serviced areas of the North End?

What is the lived experience of residents of a food desert, and how do they cope with the challenges of food insecurity?

What do they see as causes/solutions to this issue?

Methods

Part 1: GIS Analysis

Mapped locations of food retailers in the North End
Conducted Network Analysis to create 500m "service areas" around each store
Compared grocery access to indicators of social vulnerability
Selected Dissemination Area where food insecurity appeared to be most severe

Part 2: Interviews

Recruited participants through two community-based organizations in the North End: the Uniacke Centre for Community Development and Adsum House
Conducted 11 semi-structured interviews based on indicators of food sovereignty
Each participant also completed an anonymized demographic survey

Location of Grocery Stores in North End Halifax
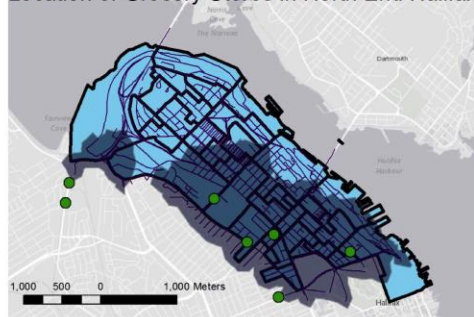
what did people say?

"Money's a big thing here, you know"
Many struggle with personal finances, as well as the lack of resources available in their community

"I had to get a prescription for oranges"
Recipients of income assistance struggle to afford a healthy diet while navigating a highly bureaucratic process

"They're trying to push the poor people out"
Recent gentrification of the Gottingen Street area has meant rising rent and food prices

"We should never be a hindsight"
Community members are not consulted meaningfully about local decision-making

"The neighbours take care of each other"
Most participants expressed feeling supported by, and connected to, their community

Key Concepts

Food Deserts and Community Health

A food desert is an urban area that lacks access to affordable and healthy foods
Typically found in marginalized communities
Studies examining the link between food insecurity and socioeconomic distress:
- Larsen & Gilliland, 2008
- Hilmers, Hilmers, & Dave, 2012

Environmental Justice Perspectives

Food security is increasingly being recognized as an environmental justice issue
This has several implications for researchers:
1. A responsibility to "privilege people's lived experiences of injustice"
2. A duty to examine *processes* that create food insecurity, as well as outcomes
3. A responsibility to suggest or engage in action for change

Food Security vs. Food Sovereignty

Food Security: "when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (World Food Summit, 1996)
Food Sovereignty: "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (La Via Campesina, 1996)

Conclusion

Environmental injustice exists in North End Halifax with regard to food sovereignty
Food is *physically* inaccessible due to a lack of full-service grocery stores in the area, and *financially* inaccessible due to inadequate income assistance
Projects aimed at addressing these issues must prioritize the needs and first-hand knowledge of community members