

# FOOD COUNTS

## HALIFAX FOOD ASSESSMENT



# ACKNOWLEDGEMENTS

*Food Counts: Halifax Food Assessment* was made possible with the support of many individuals who offered their time, knowledge, expertise, and passion to establishing a better understanding of our food system. Contributors included members of the Halifax Food Policy Alliance, Public Health- Understanding Communities Unit, Leticia Smillie-Halifax Municipality and Chris Stothart-FoodARC, MSVU. A special thank you to Rebecca Hare (Capital Health dietetic intern), Alishia Caplin and Nicole Meister (Mount Saint Vincent University nutrition students) who participated in primary data collections featured in the report and Megan Ramsay who supported the writing process.

We are especially grateful to our expert reviewers for the time, knowledge, expertise and encouragement they gave to this project. The expert reviewers included:

Julianne Acker-Verney

Jennifer Berry

Aimee Carson, Ecology Action Centre

Dr Richard Donald

Darren Leyte, Health Canada

Dr. Christine Saulnier, Canadian Center for Policy Alternatives,

Malcolm Shookner, Nova Scotia Department of Finance-Community Counts

Dr. Patty Williams, FoodARC, Mount Saint Vincent University

Marjorie Willison

Thank you to Sandra MacLeod and Bill Lord who provided editing support.

Finally we would like express our gratitude to The Dartmouth Family Centre, Transition Bay–St Margaret’s, Common Roots Urban Farm, Ecology Action Centre, Public Good Society of Dartmouth and Dalhousie University for sharing your inspirational stories that highlight your commitment to building a healthy, just and sustainable food system for all.

The Halifax Food Policy Alliance Food Assessment Working Group:

Valerie Blair, Public Health—Capital Health

Stella Lord, Community Society to End Poverty—Nova Scotia

Rita MacAulay, Public Health—Capital Health

Marla MacLeod, Ecology Action Centre

For more information on the Halifax Food Policy Alliance and its membership visit the website at:  
[halifaxfoodpolicy.wordpress.com/](http://halifaxfoodpolicy.wordpress.com/)

## FOOD COUNTS

### A MESSAGE FROM OUR MEDICAL OFFICER

Accessing food isn't always as simple as just going to the grocery store. After all, a grocery store in the neighborhood may not exist. And then, the food there has to be fresh, it has to be relatively easy to prepare, it has to be nutritious, it has to be affordable, it has to be culturally appropriate and it has to be grown, caught, and harvested in a sustainable way. Communities, then, must be clever, savvy and sophisticated in order to get the food and nutrition needs of their citizens met. And those needs are real: in our Halifax neighborhoods, 1 in 5 households are food insecure. This means we aren't getting the food we need to healthily sustain ourselves and our families – and this in turn means we are at risk of illness: everything from tooth decay to diabetes and obesity, and more. These risks are preventable.

The Halifax Food Policy Alliance – on behalf of the clever, savvy and sophisticated communities who see this need and want to do more to see the need reduced – has gathered the data, information and stories that help paint the picture of what it really takes to access food in our city. This compilation will be an important resource for all of us as we work towards the vision of a sustainable and efficient food system for Halifax.

Thank you to the Halifax Food Policy Alliance for reminding us that Food Counts. You are right – it matters. Cheers to what we can do together to improve the food system in Halifax.



A handwritten signature in black ink, appearing to read 'G.W.C.', written in a cursive style.

**Gaynor Watson-Creed**  
MSc, MD, CCFP, FRCPC  
Medical Officer of Health  
Public Health Services  
(Halifax and West Hants)

## FOOD COUNTS

### A MESSAGE FROM OUR MAYOR

Progressive cities are developing partnerships to support local food and grow a healthy food system. The *Mayor's Conversation on a Healthy and Liveable Community* is one example of how we have inspired important initiatives around health and well-being in Halifax. Community food security emerged as a key theme during these discussions, becoming a priority in our 2014 Regional Plan, and inspiring creative projects like Halifax's first urban orchard. Local food production also promotes our local economy, and I'm excited to pursue opportunities that support increased access to healthy and affordable food in a thriving local food system.

I'd like to thank the Halifax Food Policy Alliance for developing this report and for laying the groundwork for greater food security in Halifax. The Halifax Food Assessment will no doubt become an invaluable tool for decision-makers and communities as we strive to achieve a higher level of health and liveability in Halifax.

Sincerely,

A handwritten signature in blue ink that reads "Mike Savage". The signature is written in a cursive style and is underlined with a single blue stroke.

Mike Savage,  
Mayor



# TABLE OF CONTENTS

Acknowledgements	
Executive summary .....	6
Glossary .....	15
<b>1. Introduction .....</b>	<b>20</b>
<b>2. Methods .....</b>	<b>26</b>
<b>3. Demographic, socio-economic conditions and food security .....</b>	<b>29</b>
3.1 <i>Who lives in Halifax?</i> .....	29
3.2 <i>Socio-economic factors and food security</i> .....	32
3.3 <i>Poverty and vulnerability to food insecurity</i> .....	35
<i>Summary</i> .....	39
<b>4. Findings related to the six determinants of a healthy, just, and sustainable food system: .....</b>	<b>41</b>
<b>4.1 Accessibility:</b>	
<b>Where and how do we acquire our food? .....</b>	<b>41</b>
4.1.1 <i>Availability</i> .....	42
4.1.2 <i>Community food resources</i> .....	46
<i>Summary</i> .....	51

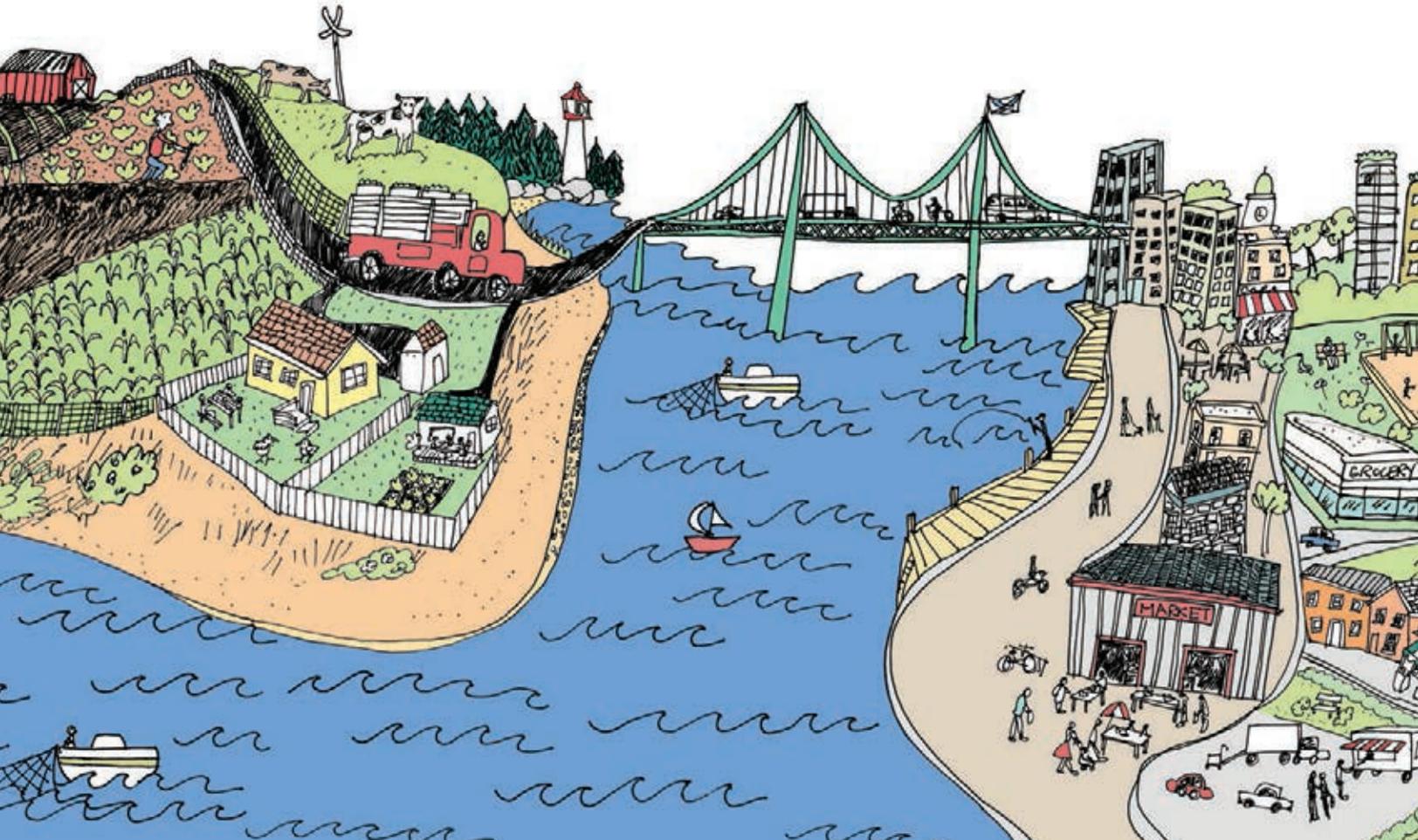


<b>4.2 Adequacy:</b>	
<b>Does the food system meet our needs?</b> .....	<b>52</b>
4.1.1 <i>Cultural appropriateness</i> .....	52
4.2.2 <i>Health</i> .....	54
4.2.3 <i>Affordability and sufficiency</i> .....	57
<i>Summary</i> .....	61
<b>4.3 Knowledge and agency:</b>	
<b>How do we learn about and apply our knowledge of the food system?</b> .....	<b>62</b>
4.3.1 <i>Education programs</i> .....	62
<i>Summary</i> .....	66
<b>4.4 Local food economy and infrastructure:</b>	
<b>How does our food system operate from land and sea to table?</b> .....	<b>67</b>
4.4.1 <i>Agriculture</i> .....	67
4.4.2 <i>Urban agriculture</i> .....	70
4.4.3 <i>Community food infrastructure</i> .....	71
4.4.4 <i>Fisheries</i> .....	74
4.4.5 <i>Labour</i> .....	76
4.4.6 <i>Distribution</i> .....	77
4.4.7 <i>Processing</i> .....	77
<i>Summary</i> .....	79
<b>4.5 Public investment and supports:</b>	
<b>How do we support our food system?</b> .....	<b>80</b>
4.5.1 <i>Food policy</i> .....	80
4.5.2 <i>Emergency response</i> .....	84
4.5.3 <i>Research</i> .....	84
<i>Summary</i> .....	85
<b>4.6 Resource protection and enhancement:</b>	
<b>How do we sustain our food system?</b> .....	<b>86</b>
4.6.1 <i>Agricultural land base</i> .....	86
4.6.2 <i>Fisheries</i> .....	88
4.6.3 <i>Seed</i> .....	89
4.6.4 <i>Energy</i> .....	89
4.6.5 <i>Soil, air and water quality</i> .....	90
4.6.6 <i>Food waste</i> .....	90
<i>Summary</i> .....	91
<b>5. Conclusion</b> .....	<b>93</b>
<b>6. References</b> .....	<b>95</b>
<b>7. Appendices</b> .....	<b>105</b>



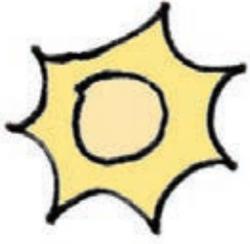
# FOOD COUNTS

## HALIFAX FOOD ASSESSMENT



HALIFAX FOOD POLICY ALLIANCE

# 2014 EXECUTIVE SUMMARY



# EXECUTIVE SUMMARY

## 1. INTRODUCTION

In Canada, municipalities hold pivotal positions in creating healthy, resilient, local food systems. They are influential in supporting (or hindering) the realization of community food security because they govern the use and development of land in addition to setting policies and by-laws.<sup>(1)</sup> *Food Counts: Halifax Food Assessment* report marks the beginning of a comprehensive, ongoing monitoring and reporting on the state of community food security<sup>1</sup> in Halifax, Nova Scotia. The development of the report was led by the food assessment working group of the Halifax Food Policy Alliance (HFPA) and was fueled by the need to better understand our local food system, in order to lay the foundation for a food strategy and municipal policies that better support community food security. The primary purpose of the report is to use existing qualitative and quantitative data to answer the question: What is the current state of our food system in Halifax? Through answering this question, we are able to identify potential areas for research and further policy development as revealed by the gaps, limits and strengths in the data described throughout the report.

Although much of the jurisdictional power of our food system lies with the federal and provincial governments, the ways food is produced, distributed, accessed, prepared, consumed, recycled and disposed of are directly linked to our quality of life, the vibrancy of our neighborhoods, and sustainability of our urban centres and rural landscapes.<sup>(2)</sup> Moreover, municipalities are often faced with the consequences resulting from the loss of agricultural land, water and air pollution, and climate change. The financial struggles of fishers and farmers, the inequitable distribution of wealth that affects people's ability to afford food, and reduced employment and tax revenues from food related businesses have social impacts that present challenges for municipalities. Food assessments are useful tools and starting points that can demonstrate the state of our food system and identify areas to focus and improve municipal by-laws, practices, and policies.

---

1 A state when all community residents have access to enough healthy, safe food through a sustainable food system that maximizes community self-reliance and social justice.

## 2. METHODS

The process began in 2013 with a review and analysis of existing literature related to food assessments and food policy work of other jurisdictions. While much of the data focused on Halifax, the report does feature data that were identified at other levels of geography.

Arising from this, it was decided that the *Food Counts Halifax Food Assessment* should be defined by six determinants that captured the complexity and diversity of our food system and represented prerequisites for a healthy, just, and sustainable food system.<sup>(3)</sup>

The six determinants are:

- Accessibility
- Adequacy
- Knowledge and Agency
- Local Food Economy and Infrastructure
- Public Investment and Supports
- Resource Protection and Enhancement

## 3. DEMOGRAPHY, SOCIO-ECONOMIC CONDITIONS AND FOOD SECURITY

In 2011, 42.3% of the population of Nova Scotia lived in Halifax. In comparison to the rest of the province, the population is slightly younger with a smaller proportion aged 65 years and older. There is a higher proportion of immigrants and visible minorities and a lower proportion of people who identified as Aboriginal. Halifax has a higher median income across a number of different household configurations when compared to the rest of Nova Scotia. Educational attainment is generally higher in Halifax and there are lower rates of unemployment and income assistance when compared with Nova Scotia as a whole.

There are a number of socio-economic conditions that impact community food security that need to be considered, such as the high number of low income households and the high proportion of children living in low income households. The income spent on housing in Halifax is relatively high compared to the rest of the province. People living on low wages or on income assistance may find it difficult to afford or access healthy nutritious food.

## 4. FINDINGS

### 4.1 ACCESSIBILITY

#### Where and how do we acquire our food?

Healthy, culturally appropriate and sustainably produced food needs to be physically available to all citizens in order to enhance community food security. Access to food is directly related to income, the affordability of food, the distance to food outlets, access to resources to produce food and the availability of a sustainably produced food supply.

#### Data collected show that...

Food is physically accessible in Halifax in the following places:

- 37 grocery stores; however, distribution of stores is sparse outside the urban area;
- 227 fast food chain outlets with the majority clustered in the urban area;<sup>(4)</sup>
- 12 farmers' markets;
- 15 to 18 food trucks;
- 20 Community Supported Agriculture enterprises;
- 1 Community Supported Fishery;
- an unknown number of pop-up fish and farm markets.

Currently there is no inventory of community based food resources in Halifax, but we have identified several community based initiatives.

- 43,700 meals were delivered by Meals on Wheels and Frozen Favorites in 2013;
- 62% of the 165 schools that make up the Halifax Regional School Board (HRSB), Le Conseil Scolaire Acadien Provincial (CSAP) and the 18 private schools have breakfast programs;
- No human milk banks, but informal breast milk sharing arrangements do exist;
- 43 Feed NS food banks<sup>(5)</sup> as well as non-affiliated charitable food assistance;
  - 28.6% increase in food bank use in Nova Scotia since 2008;<sup>(6)</sup>
  - 8,555 people, 2,660 of whom were children, relied on food from a food bank, in Halifax (2013);<sup>(5)</sup>
  - Access to charitable food assistance is affected by the day in the week.<sup>(7)</sup>

The distribution of large scale grocery stores that carry a full range of food items is sparse in many communities outside of Halifax's urban area.<sup>2</sup> While there has been an increase in alternative food options that also appear to serve mainly urban areas, complete data on some access alternatives (e.g., small scale meat markets, pop-up fish or produce markets, and small supply grocers or bakeries) is difficult to obtain, so the reach of innovative food retail access points may not be fully understood at this time.

Though most experts agree that food bank use under-represents the extent of food insecurity, a high number of low income people in Halifax do rely on food banks. Access to charitable food outlets fluctuates in that the majority of agencies and organizations are open throughout the weekdays while very few are open on weekends. Federal and provincial government income security policies and programs are failing to ensure that income support is adequate to ensure food security.

---

<sup>2</sup> Urban areas are those with a population density greater than 400 persons per km<sup>2</sup>.

Alongside food banks, researchers and community organizations are involved in seeking more sustainable approaches to improving access to affordable nutritious food. Some provide transportation to conventional food resources, others develop cooking or gardening programs, or offer spaces for people to come together to grow, cook, prepare and share food. These initiatives and advocacy efforts also help to build skills and community connections.

## 4.2 ADEQUACY

### Does the food system meet our needs?

Adequacy refers to the ability of every individual to acquire sufficient quantities of safe, culturally appropriate, nutritious and sustainably produced food without resorting to emergency or charitable food sources. The food available will be of the quality and quantity to promote health and manage chronic disease. The protection and promotion of breastfeeding are recognized to be important dimensions of food adequacy.

### Data collected show that Halifax has...

- 43 vendors at 5 farmers' markets who sell culturally diverse foods from 24 different countries;
- 64 ethno-cultural retail food stores;
- higher rates of diabetes, high blood pressure and obesity than the national average;<sup>(8-11)</sup>
- a lower percentage of women (85%) who initiate breastfeeding than the provincial and national rates;<sup>(12)</sup>
- the percentage of women in Capital Health who were exclusively breastfeeding dropped from 53% at 2 weeks to 14% at 6 months;<sup>(13)</sup>
- only 38% of Halifax adult residents report adequate fruit and vegetable consumption;<sup>(14)</sup>
- those with incomes below \$20,000 were least likely to meet the recommended fruit and vegetable requirements;<sup>(14)</sup>
- 1 in 5 households in Halifax are food insecure;<sup>(15)</sup>
- 70% of Nova Scotia households relying on income assistance were food insecure;<sup>(15-16)</sup>
- 4X increase in the cost of a National Nutritious Food Basket (NNFB)<sup>3</sup> in NS since 2002;<sup>(17)</sup>
- 23% locally produced items on the NNFB.<sup>(18)</sup>

The presence of culturally appropriate foods appears to be growing with access points in large grocers, farmers' markets and independently owned small retail stores. Little is known about the adequacy of traditional aboriginal foods in Halifax.

The data show that nutrition-related chronic diseases such as obesity, diabetes, and high blood pressure are higher in Halifax than the national rates.<sup>(8-11)</sup> Rising rates in household food insecurity and the rising cost of food will make it difficult for individuals to meet their daily requirements for fruits and vegetables and other nutritious food needed to prevent and manage chronic diseases. This could impact our already high rates of nutrition-related chronic diseases. A high minimum wage and an increase in welfare income could help the financial situations of those most at risk of food insecurity.<sup>4</sup>

---

3 The National Nutritious Food Basket (NNFB) is a tool developed by Health Canada that is used by stakeholders at various levels of government to monitor the cost and affordability of healthy eating.

4 The inability to acquire or consume an adequate quality diet or a sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.

Most women in Halifax are initiating breastfeeding however, despite evidence heralding the benefits of exclusive breastfeeding during the first six months and continued breastfeeding for up to two years or beyond, breastfeeding rates in Halifax show a steady decline between initiation and six months. There is a need to examine why the rates of exclusive breastfeeding decline over time as well as information about what supports and conditions mothers and families need to continue exclusive breastfeeding.

Research shows that just over 1/3 of Halifax residents (12 and older) meet their daily requirement of fruit and vegetables.<sup>(14)</sup> The adequate consumption of fruits and vegetables has an impact on the prevention and management of chronic disease. This may signal an opportunity for targeted programs and social enterprises to increase access of affordable fruits and vegetables to populations most at risk.

Household food insecurity is an issue in the Halifax region, with levels increasing from 13% (2007) to 20% (2013).<sup>(15)</sup> In 2013, Halifax rated highest in household food insecurity among 33 Canadian cities.<sup>(15)</sup> As food costs rise, income assistance levels are not adequate enough for households to afford a healthy, nutritious diet as measured by National Nutritious Food Basket (NNFB). Minimum wage earners also struggle to have enough income to purchase healthy food options.

### 4.3 KNOWLEDGE AND AGENCY

#### **How we learn about and apply our knowledge of the food system?**

Knowledge is defined in this report as opportunities for citizens to gain skills, awareness, familiarity and understanding of food and the food system, including where, how, and by whom food is produced and distributed.<sup>(3)</sup> Agency enables citizens to act upon this knowledge to enhance personal and community food security and health.

#### **Data collected show that Halifax has...**

- 42 of 165 schools with a school garden;
- 74% of junior and senior high schools offer food skill development courses;
- three 4-H clubs with a total of 95 members (2014);
- 4 food training programs are offered by Nova Scotia Community College and Feed NS;
- 249 safe food handling courses conducted by Department of Agriculture (2008-2013);
- a growing number of community- based skill development programs;
- breastfeeding supports, programs and services available and outlined in the Breastfeeding Community of Practice's Breastfeeding Helping Tree resource.

There are a number of programs and opportunities to gain knowledge about the food system, mainly education programs at universities and schools, along with some community-based food skill programs. There appears to be a strong foundation upon which food related skills and knowledge could be furthered.

The data would suggest that there are many opportunities to be trained and involved in the food and agriculture system. However, there may be a low-level of awareness of the opportunities to work in the agriculture and food sector. This could be the result of traditional views of food producers as being farmers with a long history of living in a rural community, with access to skills and resources that are inaccessible to those who reside outside of those communities. There may also be stigma associated with careers in the agriculture, farming and fishing industries. Some of these challenges may be addressed through the promotion of careers in food and agriculture to graduating students. A recent survey at the University of Guelph demonstrated that for every agriculture graduate, there were two job opportunities<sup>(19)</sup>

There may be a gap in our knowledge related to how agency is built as a result of knowledge and skill building opportunities. Anecdotally, there appears to be a greater awareness related to local food as evidenced by the data presented in the full report such as, increases in farmers' markets, community gardens, buy-local media and the inclusion of buy-local guidelines embedded in institutional policies. There is less certainty how social isolation, feelings of belonging, awareness, knowledge and skills, and opportunities to act, are impacted by involvement in knowledge building activities.

#### 4.4 LOCAL FOOD ECONOMY AND INFRASTRUCTURE

##### **How does our food system operate from land and sea to table?**

The diversity and strength of a local food economy and the individuals all along the supply chain are significant determinants of the strength and self-sufficiency of our food system. A healthy, just, and sustainable food system is economically, environmentally, and socially beneficial for everyone involved including farmers, fishers, workers, and citizens.

##### **Data collected show that Halifax has...**

- 3 urban farms and 41 community gardens;
- 6 community greenhouses;
- 250 bee colonies;
- 164 farms;<sup>(20)</sup>
- 1 meat processing plant, 2 milk processors, 1 flour processor, 1 major bread producer and a number of other small bakeries and food processors;
- farm operators whose average age of 56.4 years and 57.4% of farm operators are aged 55 years and older;<sup>(21)</sup>
- 414 fewer fishing licenses in 2012 compared to 2010 in the Nova Scotia maritime fishing zone<sup>(22)</sup>
  - increases in the proportion of older fishers (aged 45-64);<sup>(22)</sup>
- 22 fish processing plants (2006);<sup>(23)</sup>
- average market day spending that ranges from \$6,435 (VG Partners for Care Market) to \$239,800 (Seaport Market);<sup>(24)</sup>
- farmers' market day visitors that range from 486 (Tantallon Market) to 9,482 (Seaport Market).<sup>(24)</sup>

The data show both reasons to be optimistic and reasons to be concerned. On the positive side, the number of community gardens and community greenhouses has increased in recent years, as have the number of farmers' markets and other forms of direct marketing such as Community Supported Agriculture (CSA).<sup>5</sup> On the negative side, the majority of farmers are over age 55 and the proportion of fishers age (45-64) is growing. This is a concerning trend, as it suggests that older farmers and fishers are retiring and new farmers and fishers are not replacing them.

There are many new examples of how small-scale and urban or peri-urban agriculture production systems are viable, and offer a way to support the development of a secure and stable food system in Halifax. Nova Scotia was the only province in Canada that showed an increase in farm numbers between the last two agriculture censuses (2006-2011)<sup>(20)</sup>—an indication of the opportunity and availability of resources. Moreover, it is generally considered that there is no other province in Canada that has such an optimal combination of soil, water, climate and infrastructure to support small-scale agriculture. Combined with the educational support (shown in the previous section) and the availability of land in the Halifax region, there are lots of reasons to be optimistic.

## 4.5 PUBLIC INVESTMENTS AND SUPPORTS

### How we support our food system

Governments, businesses, and institutions can set policies and spending priorities that impact community food security. Optimally, these actions would be coordinated, strategic, and evidence-based.

### Data collected show that Halifax has...

- 352 sites with provincial food policy guidelines that support local procurement;
- over 50 breastfeeding-friendly spaces through the Make Breastfeeding Your Business initiative;
- 2 marketing programs that support community food security: Select Nova Scotia and Taste of Nova Scotia;
- some businesses and organizations who include food provisions as part of their emergency response plan.

The data show that local governments, organizations, institutions, and community led initiatives are contributing to strengthening community food security through policies, practices and processes. There are a number of policies, initiatives, and strategies focused on the advancement of community food security by promoting healthy eating, local food procurement, adopting of waste management practices, improving food access and creating opportunities for learning.

There are gaps in our knowledge in relation to emergency preparedness and Halifax's current capacity to be self-sustaining should an emergency arise requiring closure of the transportation network. There are a number of research projects and knowledge supports focused on the food system and a few examples are shared in the report. It is also likely more research is being conducted that we are currently unaware of. The development of an inventory of these activities would be a valuable contribution to understanding the food system both locally and beyond. This knowledge could inform decisions related to potential food system actions in future.

---

<sup>5</sup> Community Supported Agriculture (CSA) is a program that partners consumers directly with you, the producer, to sell products and build relationships. Customers buy annual shares or subscriptions from individual farmers, usually at the start of the season before the crops are even in the ground. In return, the farmer provides fresh produce on a regular basis.

## 4.6 RESOURCE PROTECTION AND ENHANCEMENT

### How can we sustain our food system?

A healthy, just, and sustainable food system is reliant upon a strong foundation of local farmers and farmland, as well as fishers and fishing grounds. The health of the system is impacted by the degree to which farmland and fish stocks are protected from loss. In a sustainable food system, the health of the environment is protected, promoted and preserved.

### Data collected show that Halifax has...

- dairy and mixed farming as important sources of employment despite the fact that the number of farms has declined in the last 50 years;
- the Musquodoboit Valley as the only remaining prime farmland in Halifax that is largely unaffected by non-agricultural uses;<sup>(25)</sup>
- 164 farms<sup>(20)</sup>, comprising 4131 hectares of farmland;<sup>(21)</sup>
- 2 food retailers (Sobeys and Loblaws) with sustainable seafood sales policies;
- 1 seed library;
- 3976 km: average distance traveled by a food item from its origin to Halifax;<sup>(26)</sup>
- community gardens with higher concentrations of lead (which is naturally occurring) than the recommended guidelines (1/3 of samples);<sup>(27)</sup>
- 52% of residential waste and 66% of industrial and commercial waste diverted from the landfill (2012);<sup>(28)</sup>
- 51,328 tonnes of organic waste generated (2012) for use as compost.<sup>(28)</sup>

The protection and enhancement of our food, agricultural, and fisheries resources are piecemeal. The assessment shows that there is some recognition of the need to protect farmland and topsoil in Halifax. With regard to fisheries, there is a lack of Halifax specific data because of the way the fishery zones are defined. The sustainable seafood sales policies of the major retailers are a promising trend but there is still much work to be done to fully realize the potential of these policies. Haligonians are largely dependent on food from both outside the region and outside the province, as is evidenced by the average distance travelled by a given food item. Food waste is a serious issue in all of Canada, where it is estimated that 27 billion dollars or roughly 40% of the food produced is wasted each year.<sup>(29)</sup>

While we do not have Halifax specific statistics related to food waste, it is reasonable to assume that the trends are similar to the rest of the country. Halifax, however, does divert much of its food and yard waste from the landfill to be composted.

## 5. CONCLUSION

This report details some of the evidence about the current food system, highlighting some of the strengths and challenges. There are many examples of a movement towards a healthy, just, and sustainable food system in the Halifax region and, therefore, many reasons to celebrate. The region has a long history of fishing and farming activity. Children and youth in schools and adults in the community are learning to grow food. Farmers' markets are creating hubs of social interaction while providing a distribution centre for local food products and people are coming together to talk about food. Local food has a stronger presence in the community and innovation abounds with food trucks, pop-up fish stands and farm markets. Children and youth in schools and in the community are learning to grow food and building entrepreneurial skills through gardening and value added product businesses. Institutions are supporting ways to procure local food and protect the environment through composting and recycling efforts. Researchers are working with community partners and people affected by household food insecurity to advocate for changes in social policies.

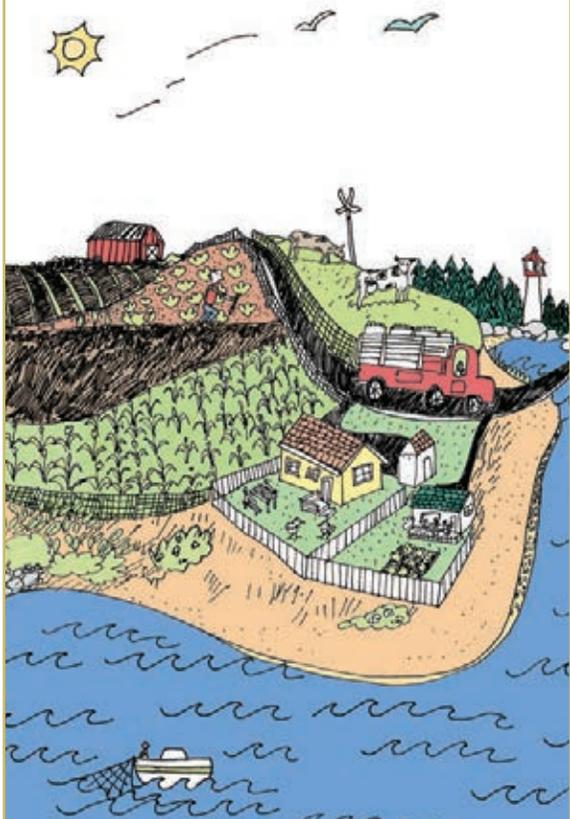
Yet, while there is much to celebrate, more work is needed to ensure everyone has access to enough nutritious, culturally acceptable, and safe food. Many residents are still not able to afford a healthy diet, some neighborhoods lack places to purchase healthy foods and there appears to be a loss of food-related knowledge and skills. Chronic disease rates are high and the ability to prevent or manage chronic disease is a struggle when healthy, nutritious food is not physically or monetarily accessible. Farmers and fishers are likely to experience challenges to make an adequate living and a tension exists between development and preservation of agricultural land. Collectively these are all very real and very complex issues that require careful deliberation and collective action.

It is our hope that the information presented in this report will prompt a discussion in the community where residents with different backgrounds, interests, and knowledge about the food system will come together to explore the possibilities in building a healthy, just, and sustainable food system.

# COMMUNITY FOOD SECURITY IS...

A HEALTHY, JUST,  
AND SUSTAINABLE FOOD  
SYSTEM FOR ALL.

Rooted in healthy and resilient communities, where no one is hungry and everyone can access nutritious and culturally preferred food. It is an economically viable, diverse, and ecologically sustainable system to grow, harvest, process, distribute, and prepare food.



HEALTHY · JUST · SUSTAINABLE

## GLOSSARY

Community Food Security defines a state when all community residents have access to enough healthy, safe food through a sustainable food system that maximizes community self-reliance and social justice.<sup>(30)</sup>

### ABORIGINAL IDENTITY

A person who identifies as a member of the Aboriginal Peoples of Canada. This includes those who reported being an Aboriginal person, that is, First Nations (North American Indian), Métis or Inuit and/or those who reported Registered or Treaty Indian status that is registered under the Indian Act of Canada and/or those who reported membership in a First Nation or Indian band.

### CHILD POVERTY

Poor children live in poor households, but to determine levels of poverty amongst children, statistics isolate and compute the number and prevalence of children under 18 (0-17) living within households and families that live below whatever measure of poverty is being used. Child poverty, therefore, is related to but is not the same as family or household poverty.

### CONVENTIONAL FOOD SYSTEM

The conventional food system is based on the imports and exports of large quantities of foods at the lowest price possible. Food is viewed as a commodity to be traded and is often transported long distances from farm to plate.

### EMPLOYMENT SUPPORT AND INCOME ASSISTANCE

Provision of financial assistance and supports to persons in need and to facilitate their movement towards employment, independence and self-sufficiency.<sup>(31)</sup>

## FOOD CHARTER

An expression of a community's vision, principles and values for a healthy, just and sustainable food system for all.<sup>(1)</sup>

## FOOD STRATEGY

An official plan or road map to help regions integrate the full spectrum of food systems issues related to community food security within a single framework.<sup>(1)</sup>

## FRUIT AND VEGETABLE CONSUMPTION, FIVE TIMES OR MORE PER DAY

The number of times (frequency) per day a person reported eating fruits and vegetables. Measure does not take into account the amount consumed. These data are available for individuals aged 12 and over.<sup>(14)</sup>

## HOUSEHOLD AFFORDABILITY (SPENDING 30% OR MORE OF HOUSEHOLD INCOME ON HOUSING COSTS)

Refers to the proportion of average monthly total household income spent on owner's major payments (in the case of owner-occupied dwellings) or on gross rent (in the case of tenant occupied dwellings).<sup>(33)</sup>

## HOUSEHOLD FOOD INSECURITY

The inability to acquire or consume an adequate quality diet or a sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.<sup>(15)</sup>

## IMMIGRANT

A landed immigrant/permanent resident is a person who has been granted the right to live in Canada permanently by immigration authorities. Immigrants are either Canadian citizens by naturalization (the citizenship process) or permanent residents (landed immigrants) under Canadian legislation. Some immigrants have resided in Canada for a number of years, while others have arrived recently. Most immigrants are born outside Canada, but a small number are born in Canada.

## LOW INCOME CUT-OFF-AFTER TAX

A measure of income at which a family may be in straitened circumstances because it has to spend a greater proportion of its income on necessities than the average family of similar size. Specifically, the threshold is defined as the income level at which a family is likely to spend 20 percentage points more of its income on food, shelter and clothing than the average family.<sup>(34)</sup> There are separate cut-offs for seven sizes of family—from unattached individuals to families of seven or more persons - and for five community sizes—from rural areas to urban areas with a population of more than 500,000. The aftertax LICO is based on total income (i.e. income including government transfers, before the deduction of income taxes).

## LOW INCOME CUT-OFF-BEFORE TAX

Same as above except it reflects how many people fall below this income level after paying taxes.<sup>(32)</sup>

## LOW INCOME MEASURE

A fixed percentage (50%) of median household income that has been adjusted so that household needs are taken into account. An adjustment for household size reflects the fact that a household's needs increase as its membership increases.

## MARKET BASKET MEASURE (MBM)

The Market Basket Measure (MBM) attempts to measure a standard of living that is a compromise between subsistence and social inclusion. It also reflects differences in living costs across regions. The MBM represents the cost of a basket that includes: a nutritious diet, clothing and footwear, shelter, transportation, and other necessary goods and services (such as personal care items or household supplies). The cost of the basket is compared to disposable income for each family to determine low income rates.<sup>(34)</sup>

## MEDIAN ANNUAL FAMILY INCOME

Family income is the value at which 50% of the reported incomes are greater than or equal to that value, and that the other half of reported incomes is less than or equal to the median amount. The data are collected from income tax returns submitted to

Canada Revenue Agency. Families are comprised of: 1) couples (married or common-law, including same-sex couples) living in the same dwelling with or without children, and 2) single parents (male or female) living with one or more children. Seniors are defined as persons 55 years of age or over.<sup>(32)</sup>

### NUMBER OF HOMELESS

Public Health Agency of Canada cites the United Nations definition that describes two categories of homelessness: Absolute—literal or visible homelessness applies to people living “on the street” with no physical shelter of their own, e.g. sleeping in temporary shelters or in locations not meant for human habitation and Relative Homelessness—hidden or concealed homelessness such as couch-surfing or sleeping in a vehicle.

### PERCENTAGE OF LONE-PARENT FAMILIES

Lone-parent families, categorized by sex of parent, expressed as a percentage of all census families. A census family refers to a married couple (with or without children), a common-law couple (with or without children) and a lone parent family.<sup>(35)</sup>

### PERCENTAGE OF LONE PERSON HOUSEHOLDS

Individuals living alone in private households. It does not include individuals living in collective households or households outside of Canada.<sup>(35)</sup>

### PERCENTAGE OF POPULATION THAT IS FOOD INSECURE

The percentage of population aged 12 and over who reported being moderately or severely food insecure. This variable is based on the Household Food Security Survey Module, a set of 18 questions that is a component of Statistic Canada’s CCHS and indicates whether households both with and without children were able to afford the food they needed in the previous 12 months. The levels of food security are defined as: 1) Food secure: No, or only one, indication of difficulty with income-related food access; 2) Moderately food insecure: Indication of compromise in quality and/or quantity of food consumed; 3) Severely food insecure: Indication of reduced food intake and disrupted eating patterns.

### PERSONS WITH A DISABILITY

Persons with a disability are identified as having a physical or mental disability related to seeing, hearing, mobility, flexibility, dexterity, pain, learning, development, psychological/mental disorders or memory.<sup>(36)</sup>

### POPULATION AGED 20 AND OVER WHO HAVE OBTAINED A CERTIFICATE, DIPLOMA, OR DEGREE

Refers to the highest certificate, diploma or degree completed based on a hierarchy generally related to the amount of time spent ‘in-class’. This includes high school diploma or equivalent.<sup>(35)</sup>

### POPULATION DENSITY

Population density is the number of residents per square kilometer of land area.<sup>(4)</sup>

### POPULATION GROWTH

Change in population over a defined period of time, expressed as a percentage.<sup>(4)</sup>

### RATES OF UNEMPLOYMENT

Measures the number of persons unemployed and actively looking for a job as a percentage of the total labour force.<sup>(35)</sup>

### SCHOOL AGE CHILDREN

Individuals who are in the elementary/secondary school age (5-19 years of age). Age is determined at last birthday before the reference date the data was collected.<sup>(32)</sup>

### SENIORS

Percentage of individuals who are 65 years of age and older in a given population. The population of seniors is often broken down into age groups 65-74 years and over 75 years.\*<sup>(32)</sup>

\* *This definition differs from that used in the Median Annual Family Income data where a senior is considered 55 years of age and older.*

# NOTES:

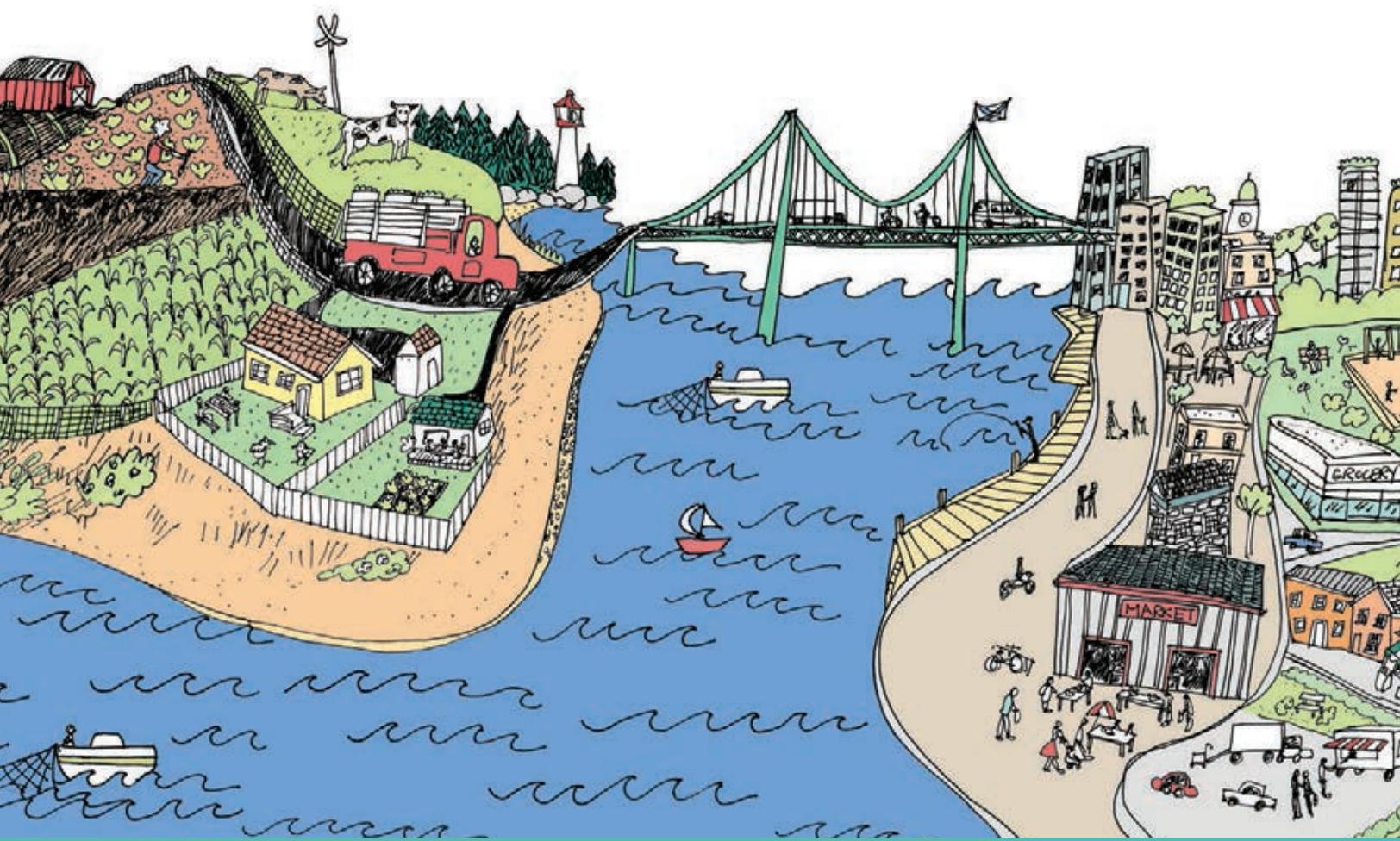
A series of horizontal dotted lines for taking notes, spanning most of the page width.





# FOOD COUNTS

## HALIFAX FOOD ASSESSMENT



HALIFAX FOOD POLICY ALLIANCE

# THE FULL ASSESSMENT - 2014

# INTRODUCTION

*Food Counts: Halifax Food Assessment* report marks the beginning of a comprehensive, ongoing monitoring and reporting on the state of community food security in Halifax, Nova Scotia. The development of the report was led by the food assessment working group of the Halifax Food Policy Alliance (HFPA) and was fueled by the need to better understand our local food system in order to lay the foundation for a food strategy and municipal policies that better support community food security. The primary purpose of the report is to use existing qualitative and quantitative data to answer the two questions: What is the current state of our food system in Halifax and to what extent does our food system conform to criteria for community food security? Community food security exists when all community residents have access to enough healthy, safe food through a sustainable food system that maximizes self-reliance and social justice.

The Halifax Food Policy Alliance, formerly the Halifax Food Strategy Group, is a partnership of individuals and organizations that represent different sectors related to the food system. Together they are working to support program and policy initiatives that have potential to achieve their collective vision of a healthy, just, and sustainable food system for the Halifax Region. The food system is defined by the activities of commercial and non commercial actors who grow, catch, harvest, process, transport, distribute market, acquire, prepare, recycle, and dispose of food within particular economic, environmental, social, and political spheres of influence.<sup>(1)</sup> The food system influences and is influenced by the environment, the economy, the social structure, the health of the population, and ultimately consumers.<sup>(2)</sup> Figure 1 illustrates the key components of the food system and refers to the inputs, influences, and processes involved with providing food to people.

Achieving community food security requires integrated processes to ensure that the economic, social, environmental, and nutritional health of a region or community is enhanced. Food system thinking reflects an awareness of how the actions by one group in the system affect others. A key step in understanding the matrix of these relationships within the food system is to complete an assessment to better recognize the impact of each component in defining a healthy, just, and sustainable food system for the Halifax region.

A food system is influenced by political, social, economic, and environmental systems.



A healthy, just, and sustainable food system is supported by public investments, supports, and policies along with individual and collective knowledge and agency.

Figure 1: Characteristic influences and supports that make up the food system.

The Halifax Food Policy Alliance will support the development and implementation of a food strategy for Halifax that works to build a healthy, just, and sustainable food system for all.

**TO ACCOMPLISH ITS PURPOSE, THE HALIFAX FOOD POLICY ALLIANCE WILL FOCUS ON THE FOLLOWING ACTIONS:**

1. Complete a food assessment that describes the current state of the food system in the Halifax region;
2. Develop a community food assessment toolkit that can be used in local planning processes to guide communities assessing their food systems;
3. Actively engage with program and policy initiatives that work to build environments that support a healthy, just, and sustainable food system in Halifax;
4. Create a vision (Food Charter) to support the development of a healthy, just, and sustainable food system;
5. Support the development of a Food Strategy, that will integrate the full spectrum of food system issues within a single policy framework. The strategy will be based on the food charter;
6. Guide the implementation of the Food Strategy.

A food strategy can provide a road map that will integrate the full spectrum of regional food systems issues related to community food security. The food strategy can be flexible and will likely include actions that can span neighborhood, municipal, provincial, and even federal jurisdictions. The food strategy will also serve as a framework to build on the strengths and address some of the gaps in the current food system.

## WHY FOCUS AT THE MUNICIPAL LEVEL?

Much of the jurisdictional power of the food system lies with the federal and provincial governments<sup>(2)</sup>, but municipalities in Canada and around the world hold vital positions in the creation of healthy, resilient, local food systems through their influence in shaping healthy food initiatives across communities. The ways food is produced, harvested, distributed, accessed, prepared, consumed, recycled, and disposed of are directly linked to quality of life, neighborhood vibrancy, and sustainability of urban centers and rural landscapes. Moreover, municipalities are often faced with the consequences that result from the loss of agricultural land, effects of water and air pollution, and climate change.<sup>(1)</sup> The financial struggles of fishers and farmers, the inequitable distribution of wealth that impacts people's ability to afford food, and reduced employment and tax revenues from food related businesses are real challenges impacting municipalities. Food assessments are useful tools and starting points in showing the current state of the food system and can be used to identify areas of focus for municipal food strategies and policies. Strategies subsequently provide a means to bring various facets of food system policy and actions into one framework that will contribute to community food security at the municipal level.

There has been a growing interest in the role of municipalities and local community action in the achievement of community food security. The attention and urgency to address food issues is propelled by a web of factors such as increased incidence of diet-related chronic diseases, increased trends of food insecurity, and the struggles experienced by local food producers to access markets and to make an adequate living. These and many other indicators of community food security will be described in this food assessment.

Municipalities are active participants in promoting and championing change towards healthy, just, and sustainable food systems. Currently there are 64 municipal food policy initiatives<sup>(1)</sup> in progress throughout Canada. Many of these have included the development of food assessments, food charters, and food strategies.

The role of municipalities in food systems does not occur in isolation and should be considered in the context of the network of municipal, provincial, and federal structures, policies and practices that result in a complex web outlined in a diagram in Appendix A.(1) It is important to note that the diagram reflects a broader provincial and federal policy context and that it does not accurately reflect the municipal reality in Halifax. This is because public health, housing, long-term care, employment and social services are not fully managed under municipal jurisdiction. Nevertheless, because of the many jurisdictional spheres of influence on the food system, there are abundant opportunities for collaborative action to address the issues. The diagram serves as a reminder of the multi-dimensional characteristics of the food system and the need for collaboration among many actors who have a role in realizing a healthy, just, and sustainable food system for all.

## STRUCTURE OF THIS REPORT

Using data from multiple sources from 2006-2014, the report describes the food system in Halifax in the broader context of community food security. We have made an effort to describe Halifax's demography and socio-economic profile, emphasizing the factors associated with community food security such as location and type of residence, levels and sources of income, ethnicity, education, and so on. Following this, we used six determinants to capture the complexity and diversity of the food system (See Figure 2).<sup>(3)</sup>

The six determinants represent the prerequisites for a healthy, just, and sustainable food system and are defined as follows:

- **Accessibility**  
Healthy, culturally appropriate and sustainably produced food needs to be accessible and physically available to all citizens in order to enhance community food security. Access to food is directly related to income, the affordability of food, the distance to food outlets, resources to produce food and the availability of a sustainably produced food supply.
- **Adequacy**  
Adequacy refers to the ability of every individual to acquire sufficient quantities of safe, culturally appropriate, nutritious and sustainably produced food without resorting to emergency or charitable food sources. The quality and quantity of the food available will be sufficient to promote health and manage chronic disease. The protection and promotion of breastfeeding are recognized to be important dimensions of food adequacy.
- **Knowledge and agency**  
Knowledge is defined in this report as opportunities for citizens to gain skills, awareness, familiarity and understanding of food and the food system, including where, how, and by whom food is produced and distributed.<sup>(3)</sup> Agency enables citizens to act upon this knowledge to enhance personal and community food security and health.
- **Local food economy and infrastructure**  
The diversity and strength of a local food economy and the individuals all along the supply chain are significant determinants of the strength and self-sufficiency of our food system. A healthy, just, and sustainable food system is economically, environmentally, and socially beneficial for everyone involved including farmers, fishers, workers, and citizens.
- **Public investment and supports**  
Governments, businesses, and institutions can set policies and spending priorities that impact community food security. Optimally these actions would be coordinated, strategic, and evidence-based.
- **Resource protection and enhancement**  
A healthy, just, and sustainable food system is reliant upon a strong foundation of local farmers and farmland, as well as fishers and fishing grounds. The health of the system is impacted by the degree to which farmland and fish stocks are protected from loss. In a sustainable food systems, the health of the environment is protected, promoted and preserved.

The connections across the six determinants used in the framework to show the current state of the food system are illustrated in Figure 2. Each determinant impacts the others; therefore it is vital that each one not be viewed in isolation but as one influence among many within the larger food system. While the interplay of determinants contributes to the complexity, it also presents an opportunity to build relationships among sectors across the food system. It highlights the important role of the social, environmental, political, and economic systems on the food system, and demonstrates that integrated solutions are required in order to achieve a healthy, just, and sustainable food system for all.

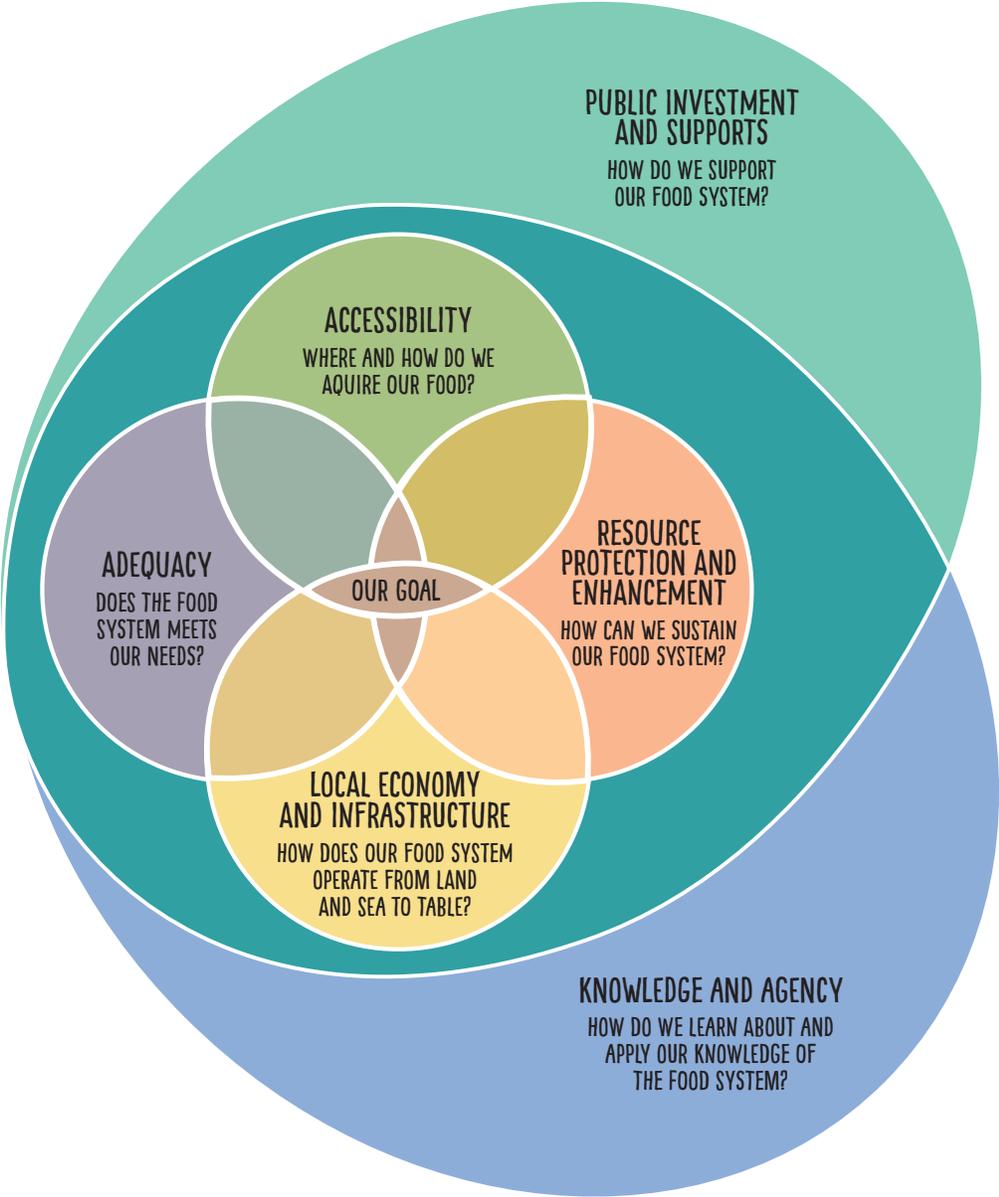


Figure 2: Determinants of a healthy, just, and sustainable food system.

The process and framework for *Food Counts: Halifax Food Assessment* began in 2013 with a search of literature produced by other jurisdictions involved in food assessments and food policy work. A representative from one region that recently completed a food assessment was contacted by telephone to discuss their experiences conducting a food assessment. In all, 11 food assessments and tool kits were reviewed, and three were chosen based on their alignment with the goals identified by the Halifax Food Policy Alliance (HFPA).

- *How Food Secure is Vancouver in a Changing World? (2010)*<sup>(3)</sup>
- *Towards a Healthy Food System for Waterloo Region*,<sup>(37)</sup>
- *Community Food Assessment Guide, Provincial Health Services Authority*.<sup>(38)</sup>

#### KEY CRITERIA

> TIMELINE

> REPRESENTATIVE

> ACCESS

> RELEVANCE

**Key criteria to guide indicator selection: timeline (able to be done within a 6 month timeframe), representative (meaningful in a regional scope), accessible (data were readily available or easily obtained) and relevant to the development of a food charter vision and ultimately a food strategy.**

Indicator selection was also based on the Activating Change Together for Community Food Security (ACT for CFS)<sup>6</sup> case community of Spryfield, NS<sup>(39)</sup>, and input from public meetings of the Halifax Food Strategy group (later renamed the Halifax Food Policy Alliance). These meetings offered significant contributions to the indicator selection, by facilitating a review by a broad range of stakeholders (including researchers, community developers, students, health workers, and municipal staff).

Following our final review, 70 indicators were selected to describe 22 themes linked to six determinants of community food security.<sup>(3)</sup> (See Appendix B). Some themes were not assigned indicators due to lack of available data within the projected timeline or because the indicators were yet to be developed. These information gaps are vital to our understanding of our food system, since what we *do not* know may be as important as what we *do* know. This report meantime helps identify important priority areas for future research and data collection.

The framing of this report was primarily informed by “*How food secure is Vancouver in a changing world? 2010*.”<sup>(3)</sup> document which defines six determinants of community food security. Each determinant, there are themes and related indicators. We tailored the framework to capture the unique characteristics of the Halifax region. These changes include adding indicators related to breastfeeding and fisheries.

This framing provides a comprehensive approach to assessing community food security, integral to establishing benchmarks from which future assessments could be based. Additionally, the framing provides a sense of balance, as the indicators describing each determinant represent a mix of community food security themes. For example, under the *Local economy and infrastructure* determinant there are indicator groupings specifically related to urban agriculture and rural farming (See Appendix B).

<sup>6</sup> Activating Change Together for Community Food Security (ACT for CFS) is a 5-year Social Sciences and Humanities Research Council (SSHRC) funded participatory research Community University Research Alliance (2010-2015) that aims to increase community food security for all Nova Scotians. Rooted in lived experiences, real community needs and innovative solutions, ACT for CFS amplifies and broadens conversation, research, and action to strengthen capacity for policy change. The community of Spryfield is one of four communities where participatory community food security assessments took place.

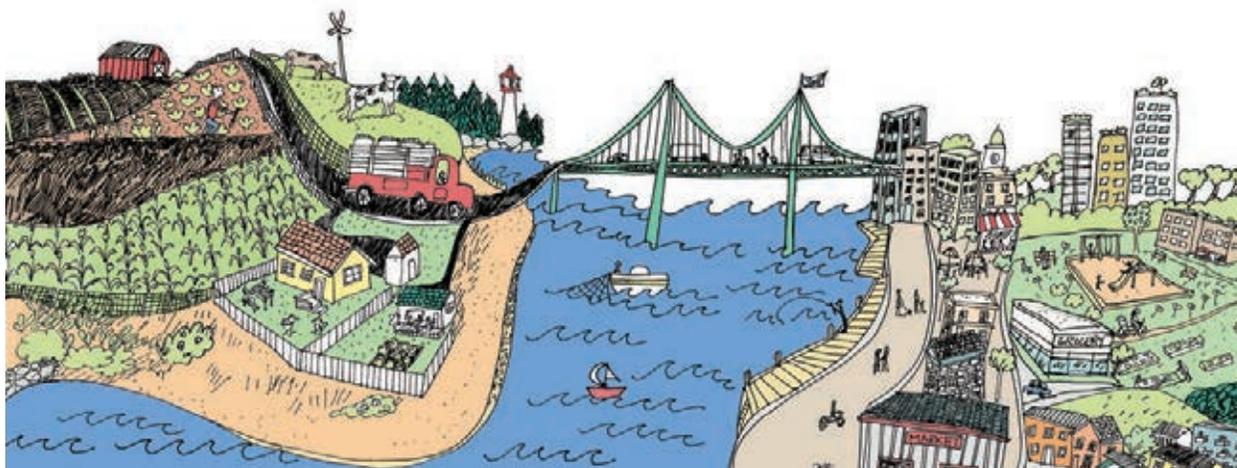
## TIMELINE AND SUMMARY OF ACTIVITIES



Review of indicators from key reports and food strategy meetings	July 2013
Collation of indicators and development of selection criteria	Aug 2013
Review and input on indicators from stakeholders	Sept-Oct 2013
Finalizing of indicator selection and framework	Nov 2013
Data collection	Dec 2013-Feb 2014
Report writing and review	Jan 2014-Feb 2015
Release of the final report	May 2015

There were four primary data collection activities completed for the report.

1. **School gardens, breakfast programs, and food related curriculum:** Data were collected through telephone interviews with key informants at the individual schools and school boards represented in the Halifax region, health promoting schools coordinators, and youth health centre coordinators involved in garden and breakfast programs. Some gardens were included based on researcher knowledge. [Data collection occurred from February-June 2014]
2. **Ethnic retail stores:** The ethnic retail stores were identified using internet and a telephone book search. Telephone calls were placed to each business and a short questionnaire was administered. Additional locations of retail stores were included based on researcher knowledge. [Data were collected over a three week time frame from February-March 2014]



3. **Ethnic food vendors at farmers' markets:** Completed through a website scan of seven farmers' markets in the Halifax municipality and follow up phone calls placed with market coordinators. [Data was collected in February 2014]
4. **Number and size of community and urban gardens:** Data were collected by building on an inventory of food gardens listed on the Halifax Garden Network website and cross checked with Ecology Action Centre staff. Telephone and email were used to contact the garden coordinators to determine the approximate number of garden plots, square meters of land used for gardening, and area of land potential for expansion. In three cases, the researchers, upon invitation, went onsite and conducted the measurements. [This research was completed between January-April 2014]

Additional data such as the location of grocery stores, farmers' markets, and schools with breakfast programs and food gardens were mapped by Halifax Electoral District boundary and are presented throughout the report.

## DEFINING HALIFAX REGIONAL BOUNDARIES

During the writing of this report, the Halifax Regional Municipality (HRM) name was changed to Halifax. As a result, we use 'Halifax region' and 'Halifax' interchangeably to refer to the sixteen electoral districts that make up the geographical boundaries of Halifax. Whenever possible, data were reported at the Halifax region level. However, some data sets, such as those related to chronic disease, breastfeeding and the fishery sector were not conducive to reporting at this level so other geographic representations of the data were chosen. These are noted in the report. The geographic areas used throughout the report are defined and summarized in Appendix C.

# DEMOGRAPHIC, SOCIO-ECONOMIC CONDITIONS AND FOOD SECURITY

The demographic composition and socio-economic conditions in a community influence the extent to which we can enjoy a healthy, just, and sustainable food system. Such things as where you live, your ethnicity, education and rates of employment or underemployment and income levels not only influence community food security but also individual and household food security.<sup>(15-17, 40-42)</sup>

This summary of our demographic mosaic, key indicators related to socio-economic conditions and status of the population provides a context for the current state of our food system in Halifax.

## 3.1 WHO LIVES IN HALIFAX?

### POPULATION DENSITY<sup>7</sup> AND GROWTH

With 390,285 people,<sup>(32)</sup> Halifax is the largest city in Nova Scotia, representing 42.3% of the province's population in 2011. Comparing 2006<sup>(43)</sup> and 2011<sup>(35)</sup> census data, population growth in Halifax was 4.5% compared with 0.9% for Nova Scotia. The population of Halifax was also younger. With a median age of 39.9 years compared with a provincial median of 43.7 years, 50.1% of the population in Halifax was under the age of fifty, compared with 45% in the province as a whole.<sup>(44)</sup>

Based on the 2011 census, population density in Halifax was 71.1 persons per square km, compared with 17.4 provincially.<sup>(33)</sup> However, Halifax covers a diverse geography of urban, suburban and rural landscapes totaling 5,490.28 sq. km<sup>(33)</sup> which includes agricultural lands, coastal areas and fishing communities, as well as large rural and suburban areas surrounding an urban core. While the average population density is 71.1 persons per km<sup>2</sup>, density varies across the region from 6.6 persons per km<sup>2</sup> to 3,317.8 persons per km<sup>2</sup>.<sup>(4)</sup> Composed of 16 electoral districts (Figure 3) Halifax, therefore, shows marked regional differences, with the urban areas of Halifax Peninsula and Dartmouth being the most densely populated and the rural areas of Eastern Shore—Musquodoboit being the least densely populated.

The population of Halifax is also fairly mobile. Between 2006 and 2011, 40.4% of the Halifax population moved; 3.4% moved outside of Canada, 7.0% within Canada, 3.9% within the province, and 25.5% moved within the city.<sup>(39)</sup> This mobility, combined with overall population growth, has contributed to differences in the rate of densification between urban, rural, and suburban areas. The greatest growth in population density between 2001 and 2011 was found in the suburban areas, while the Halifax Peninsula had the smallest growth.<sup>(4)</sup> Communities with the highest population growth were in the suburbs of Timberlea—Beechville—Clayton Park, Hammonds Plains—St. Margaret's, and Bedford—Wentworth, while communities with the largest population declines were Dartmouth Centre, Peninsula North, and Harbourview—Burnside—Dartmouth East.<sup>(37)</sup>

<sup>7</sup> The population density of an area is reported as the number of residents per square kilometer of land area. While density calculations can give a description of how urban or how rural a population is, density is of population health interest also because appropriately increased density in urban areas can have many positive effects, including reduction of urban sprawl, decreased reliance on motorized transport, increased use of active transportation, decreased air pollution, and several other benefits (Brownstone & Golob, 2009; Clean Air Partnership, 2010; Clifton & Dill, 2005; Gauvin, et al., 2008; Hess, Moudon, Snyder, & Stanilov, 1999; Saelens, Sallis & Frank, 2003; Toronto Public Health, 2012).

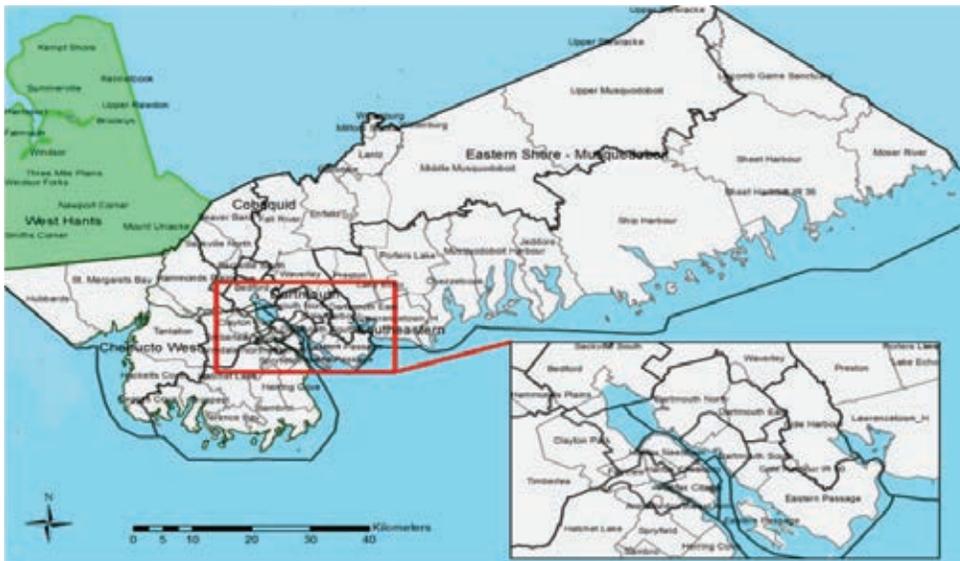


Figure 3: Halifax Regional Municipality by electoral boundary, 2013.

The Halifax region encompasses six community health boards. (Refer to Map 1 on page 134) The Halifax and Dartmouth Community Health Board (CHB) areas are considered to be part of the urban core<sup>8</sup> representing 34.5% of the population, while the Eastern Shore - Musquodoboit CHB is more rural in nature, containing 11.3% of the population.<sup>(4)</sup> (Figure 4 shows the population by geographic area).

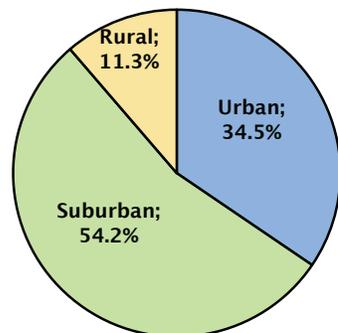


Figure 4: Percentage of Halifax population by geographic area.<sup>9</sup>

8 Urban core means the core business areas of downtown Halifax and Dartmouth, including Spring Garden Road, Agricola and Gottingen Streets north to Young, Quinpool to Connaught and the areas encompassing Saint Mary's, Dalhousie and King's College universities.(The definition of urban core developed for A Greater Halifax, Economic Strategy 2011-2016).

9 Capital District Health Authority (2013). An overview of the health of our population. Retrieved from: <http://www.CapitalHealth.nshealth.ca/public-health/population-health-status-report>.

## DEMOGRAPHY AND COMMUNITY FOOD SECURITY

Demographic factors, such as the age, gender, family status and ethnic make-up of the population, play a role in determining food security, particularly in relation to the diversity of food options available and the extent to which individuals and families can access affordable, healthy food and maintain a healthy diet. There are important demographic differences between Halifax and Nova Scotia as a whole, especially considering segments of the populations who are more likely to be vulnerable to food insecurity (See appendices D and E for a detailed demographic and socio-economic profile of the Halifax region as it compares to the provincial picture).

Table 1 shows the population in Halifax is younger with more school-aged children, but there are fewer seniors (those aged 65 years and older) than in the province as a whole. In 2011, there were 51,090 (13.1%) seniors living in Halifax compared with 16.6% in Nova Scotia; 14.3% were female and 11.7% were male.<sup>(40)</sup> The proportion of lone parent families was only slightly lower than in the province as a whole. This difference is not statistically significant, however between 2001 and 2011, there was an increase in lone parent families in both Halifax and Nova Scotia, with an increase of 9.9% in Halifax and 5.9% in Nova Scotia—a difference which is statistically significant. In Halifax, women are more likely to be lone parents than men (13.7% female compared with 3.1% male). The prevalence of female lone parent households is almost as high in Halifax as it is in the province (13.7% compared to 13.9%). The proportion of the population who are immigrants and those belonging to a visible minority is also greater in Halifax than the province as a whole. However, there were fewer people reporting aboriginal identity in Halifax than in Nova Scotia (Table 1).

**IN 2012, 28% OF CANADIAN HOUSEHOLDS WITH AN AFRICAN-CANADIAN OR ABORIGINAL RESPONDENT WERE FOOD INSECURE. THIS IS MORE THAN DOUBLE THE NATIONAL AVERAGE (12.6%).<sup>(15)</sup>**

*Table 1: Selected demographics for Halifax and Nova Scotia, 2011.*

	<i>Halifax</i>	<i>Nova Scotia</i>
<b>Median age (years)<sup>(44)</sup></b>	39.9	43.7
<b>Proportion of seniors<sup>(33)</sup></b>	13.1%	16.6%
<b>School-aged children<sup>(32)</sup></b>	16.3%	16.3%
<b>Visible minority<sup>(32)</sup></b>	9.1%	5.2%
<b>Aboriginal identity<sup>(32)</sup></b>	1.4%	2.7%
<b>Immigrants<sup>(32)</sup></b>	7.4%	5%
<b>Lone parent families<sup>(32)</sup></b>	16.7%	17.3%
<b>Lone male parent families<sup>(32)</sup></b>	3.1%	3.4%
<b>Lone female parent families<sup>(32)</sup></b>	13.7%	13.9%
<b>Proportion of people living alone<sup>(32)</sup></b>	12.3%	12.0%
<b>Proportion of people aged 65 years and older living alone<sup>(32)</sup></b>	3.4%	4.4%

Although data are not available at a lower level of geography than provincial, it is important to note that of all the Canadian provinces Nova Scotia has the highest percentage of persons with disabilities; 18.8% compared with an average of 13.7% for Canada.<sup>(45)</sup> (See Appendix F). This is significant with respect to community food security as research shows that having a disability increases vulnerability to food insecurity.<sup>(6)</sup> Possible explanations for this increased vulnerability include limited access to transportation, special food requirements that may be difficult to obtain, as well as issues related to employment, educational attainment, and higher levels of poverty.

## 3.2 SOCIO-ECONOMIC FACTORS AND FOOD SECURITY

The prevalence and sustainability of local food producers-farming and fisheries-is a key element of community food security. The outmigration from rural and coastal communities, the aging population and inadequate income security programs and policies are potentially impacting labour market participation in farming and fishing industries. As discussed in Section 4 the detailed data are not readily available but the workforce does seem to be aging and declining.

Socio-economic conditions in a community such as rates of employment and unemployment, along with the socio-economic status of individuals and families as influenced by educational attainment, type of employment, or source of income all impact household income levels and the rate and depth of poverty in communities. Such socio-economic factors may overlay and compound the effects on food security of other demographic factors discussed above. Comparing Halifax with Canada and Nova Scotia as a whole, this section considers several indicators of socio-economic conditions that may influence food security in Halifax.

### EDUCATION

Educational attainment has an impact on income and food security. The prevalence of food insecurity is less likely for individuals and families who have completed some kind of post-secondary education.<sup>(14)</sup> In 2011, 90.3% of those aged 25-64 years living in Halifax had obtained a certificate, diploma or degree compared to 85.4% for the rest of the province.<sup>(32)</sup> In 2011, 59.9% of the Halifax population had some post-secondary education and 27% had a Bachelor's degree or higher, whereas in comparison, 54.3% of Nova Scotians had some post secondary and 18.9% held a Bachelor's degree or higher.<sup>(32)</sup>

### EMPLOYMENT SECTORS AND OCCUPATIONS

Employment sectors and occupations vary according to wages and working conditions which in turn influence job security in addition to individual and family income. The top three sectors for employment in 2011 in Halifax were in the fields of Public Administration (12.6%); Healthcare and social assistance (11.8%); and Retail (11.6%).<sup>(32)</sup> In Nova Scotia, the top three were the same, but Retail topped the list (12.6%) with Healthcare and Social Assistance (12.3%) and Public Administration (9.7%) coming second and third respectively. This is not dissimilar to Canada as a whole where Retail (11.3%), Healthcare and social assistance (10.8%), and Education (7.2%) top the list with Public Administration close behind at 7%.

In 2011, the top three occupational fields in Halifax were in Sales and Service (24.6%); Business and Administration (17.0%); and Education, Law, or Social Services (13.9%). In the province as whole, 14.5% were employed in Business and Finance occupations; 14.2% in Trades, Transit and Equipment occupations; and 12.7% in Education, Law or Social Services occupations.<sup>(32)</sup> In relation to employment in the farming sector in Halifax, 44.7% of farmers participate in paid work outside the farm and 38% are working in paid jobs in excess of 40 hours per week.<sup>(21)</sup>

## LABOUR FORCE PARTICIPATION, EMPLOYMENT AND UNEMPLOYMENT

The labour force participation rate is a relatively good indicator of economic stability and security in a community. High rates of labour force participation amongst women can also contribute to higher family incomes and research shows that dual earner households tend to experience less food insecurity than single earner households.<sup>(15)</sup> In 2011, 69.1% of the population of Halifax aged over 15 participated in the labour force.<sup>(32)</sup> This is higher than in Canada as a whole (66.0%) and higher than in Nova Scotia (63.1%). (Refer Table 2) Though the rate of female labour force participation is slightly lower in Nova Scotia than in Canada (59.3% compared with 61.6%), females in Halifax have a higher rate of labour force participation (65.3%) than in either Canada or Nova Scotia.<sup>(32)</sup>

Employment levels and unemployment rates<sup>10</sup> vary with the overall economy, but they are also a good indicator of economic security and stability over time. The rate of unemployment in 2011 in Halifax (7.2%) was slightly lower than the national average (7.8%) and considerably lower than the Nova Scotia average (10%).<sup>(32)</sup> It is also noteworthy that the rate of unemployment was slightly higher for men than for women in Canada, Nova Scotia, and Halifax.

Table 2: Labour force participation, unemployment, unemployment rate in Canada, Nova Scotia, Halifax, 2011 National Household Survey.<sup>(32)</sup>

	<i>% Labour force participation</i>	<i>% Employed</i>	<i>% Unemployed</i>	<i>Unemployment rate</i>
<b>Canada</b>	<b>66</b>	<b>60.9</b>	<b>5.1</b>	<b>7.8</b>
<i>Male</i>	70.6	64.9	5.7	8.0
<i>Female</i>	61.6	57.0	4.6	7.4
<b>Nova Scotia</b>	<b>63.1</b>	<b>56.8</b>	<b>6.3</b>	<b>10.0</b>
<i>Male</i>	67.2	59.9	7.3	10.9
<i>Female</i>	59.3	53.8	5.5	9.2
<b>Halifax</b>	<b>69.1</b>	<b>64.1</b>	<b>5</b>	<b>7.2</b>
<i>Male</i>	73.2	67.6	5.5	7.6
<i>Female</i>	65.6	60.8	4.5	6.9

10 There is a difference between the unemployment rate and the employment rate in terms of how it's calculated. The unemployment rate is the number of people looking for work in the previous month (averaged over the year). The employment rate is the number of people in the labour force.

## HOUSEHOLD AND FAMILY INCOME

According to the 2011 National Household Survey (NHS), the median after-tax *household* income in Halifax in 2010 was \$53,399. This compares with a slightly higher median after-tax household income of \$54,089 in Canada and a considerably lower median of \$47,399 for Nova Scotia as a whole.<sup>(32)</sup> Perhaps due to the high rate of women’s labour force participation in Halifax, the median after-tax *family* income of \$67,939 was slightly higher than in Canada as a whole (\$67,044) and \$8,500 higher than the provincial median after-tax *family* income of \$59,371. (Refer to Figure 5)<sup>(32)</sup> Both single males and seniors had higher median household incomes at \$33,888 and \$27,760 respectively, when compared to single females (\$24,340) in Halifax.

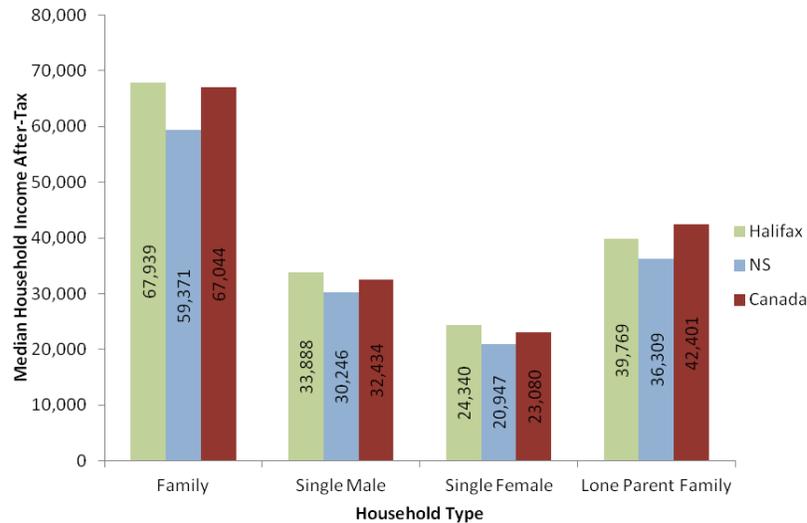


Figure 5: Median household income for families, individuals and lone parents in Halifax and NS, 2011.<sup>11</sup>

## HOUSING COSTS

If housing costs are high in relation to income, there is a greater likelihood that food security could be an issue. In 2011, dwellings in Halifax had an average value of \$268,457 compared to \$201,911 in Nova Scotia as a whole and \$345,182 in Canada. When considering the average monthly payments, Figure 6 shows that homeowners in Halifax pay slightly less (\$1,133) when compared to Canada (\$1,141) and more than homeowners in Nova Scotia as a whole (\$876). Approximately 37% of the Halifax population lives in rented accommodation, which is higher when compared to Nova Scotia where 28.7% of the population rent their accommodation.<sup>(32)</sup>

11 Province of Nova Scotia. (2014). Nova Scotia Community Counts web page - data modeled from Statistics Canada, National Household Survey, 2011. Retrieved from <http://www.novascotia.ca/finance/communitycounts/profiles/community/default.asp?gnum=mun91&gview=3&glevel=mun>.

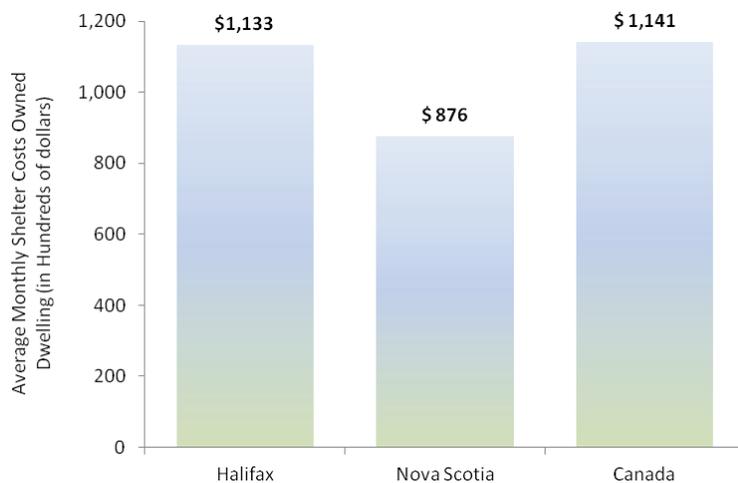


Figure 6: Average monthly payments for homeowners in Halifax, Nova Scotia, and Canada, 2011.<sup>(33)</sup>

The allocation of 30% or more of a household’s income to housing expenses is often used as a benchmark for assessing trends in housing affordability. Research findings indicate that in 2012, 26.1% of Canadians renting their own homes were food insecure compared to 6.4% of those who own their homes.<sup>(14)</sup> In 2011, just over a quarter (25.3%) of the population in Halifax was spending 30% or more of income on shelter costs; the Nova Scotia estimate was 22.4%. Research findings indicate when comparing homeowners to tenants in Nova Scotia, 15.0% of owners and 42.9% of renters paid 30% or more of their income on shelter costs.<sup>(32)</sup> The Voices for Food Security project (formerly the Nova Scotia Participatory Food Costing Project) has found that both income assistance recipients and those earning minimum wages struggle to afford a nutritious diet.<sup>(17)</sup> This is largely because a significant proportion of their income goes to housing or energy costs. Unlike food, housing and utilities are not flexible, but fixed costs which families must pay each month.

Employment however is not protective against food insecurity.<sup>(40-42)</sup> Recently released national data suggests that the majority of food insecure households in Canada (62.3%) have wage earners in the household.<sup>(15)</sup> Employed people may be food insecure because they have low incomes as a result of low-waged, short-term, or part-time employment or because they experience long bouts of unemployment. Along with others on low incomes, they also may experience food insecurity due to the inadequacy of federal and provincial income transfers.

### 3.3 POVERTY AND VULNERABILITY TO FOOD INSECURITY

Evidence from over 10 years of research by Voices for Food Security in Nova Scotia demonstrates that low income people on limited incomes struggle to afford a nutritious diet,<sup>(17,40)</sup> as defined by the National Nutritious Food that Basket tool. Nova Scotia leads all the provinces in rates of household food insecurity.<sup>(15)</sup> Socio-economic factors such as low wages, unemployment, or reliance on income assistance or minimum wage compound other factors that make certain households and populations vulnerable to poverty and food insecurity. This section compares the extent of low income in Canada, Nova Scotia and Halifax and considers the impact it has on food security. It also focuses on the conditions that affect food security for those whose main source of income is the minimum wage or income assistance.

SOME POPULATION GROUPS FACE A HIGHER RISK OF LIVING IN POVERTY: FOR EXAMPLE, OLDER SINGLE PEOPLE, SINGLE-PARENT FAMILIES, INDIVIDUALS RECEIVING SOCIAL ASSISTANCE, PEOPLE WITH DISABILITIES, NEW IMMIGRANTS, AND ABORIGINAL PEOPLE.

HUNGERCOUNT 2013<sup>(6)</sup>

## LOW INCOME HOUSEHOLDS

In 2010, 15.1% of the Halifax population in private households had low income status based on the after tax low income measure (LIM).

Figure 7 compares the percentage of low-income people in Halifax, Nova Scotia and Canada by family composition in 2001, 2006, and 2011 based on Low Income Cut Off-After Tax. Despite the higher median family income, 8.3% of the population in private households in Halifax had low incomes in 2011.<sup>(34)</sup> This number increased significantly for unattached individuals, where the estimate of households living below the LICO-AT was 24.8%.<sup>(34)</sup> Although the percentage of unattached low income individuals living in Halifax decreased from approximately 34% to 25% between 2006 and 2011, nearly one in four were living on low incomes in 2011. This was markedly higher than for households composed of married couples without children (2.5%), two-parent families with children (5.8%), or lone parent families (15.2%).<sup>(34)</sup>

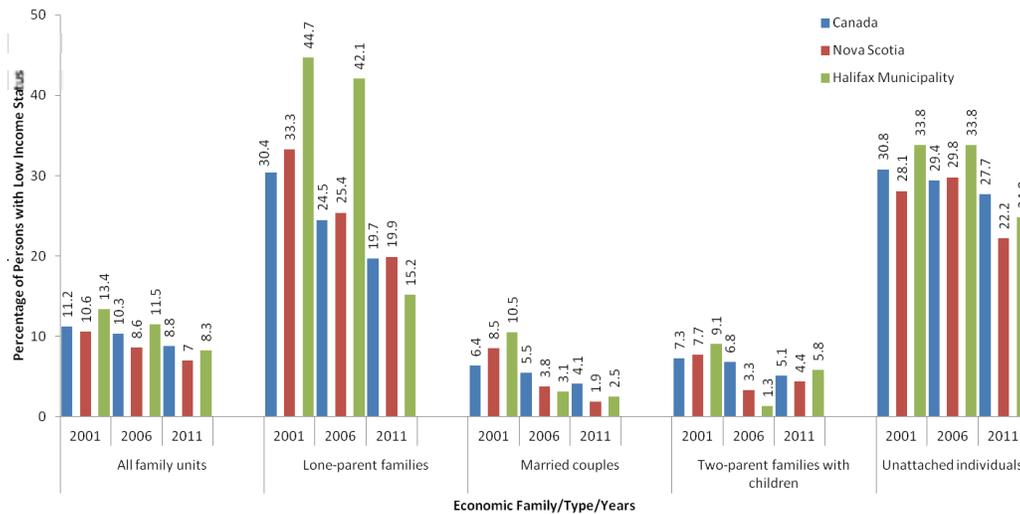


Figure 7: Percentage of persons in low income by family<sup>14</sup> composition based on low income cut-offs after tax (1992 base), Halifax and NS, Years 2001, 2006, 2011.<sup>15(34)</sup>

12 An economic family is defined as a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common law or adoption.

13 An economic family is defined as a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common law or adoption.

14 An economic family is defined as a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common law or adoption.

15 Statistics Canada. Table 202-0804 - Persons in low income, by economic family type, annual, CANSIM (database). Retrieved from: <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=2020804>.

## CHILDREN IN LOW INCOME FAMILIES

Household data or data by family composition does not on its own capture the large number of children living in poverty. According to the 2011 NHS, 17.7% of children under aged 18 and 20.3% under age 6 were living in low-income households in Halifax. This compares to 17.3% and 18.1% respectively in Canada and 20.9% and 23.1% in Nova Scotia as a whole (Table 3). Again, the data show that Halifax is more comparable to Canada than it is to Nova Scotia.<sup>(32)</sup>

Table 3: Percentage of persons with low income, by age and sex, based on the after tax low income measure (LIM)<sup>16</sup>, Halifax and NS, 2010.<sup>(32)</sup>

	Halifax			Nova Scotia		
	Male	Female	TOTAL	Male	Female	TOTAL
< 18 years	18.3	17.2	17.7	21.2	20.6	20.9
< 6 years	21.5	19.1	20.3	23.9	22.3	23.1
18 to 64 years	13.5	16.0	14.8	14.7	17.8	16.3
65 and older	9.9	14.2	12.5	14.6	20.9	18.0

The NHS data, however, is not as reliable as census or tax filer data for research that considers marginalized and low income people due to lower response rates. Using tax filer data, but the same LIM poverty measure as the NHS, *A Generation of Broken Promises: The 2014 Report Card on Child and Family Poverty in Nova Scotia* found that 18.6% of children under age 18 in Halifax lived in poverty compared with 22.2% in Nova Scotia and 19.1% in Canada.<sup>(47)</sup> Children living in female lone parent families were the most vulnerable to living in poverty. Indeed, national data from 2012 shows that 34.3% of female lone parent families in Canada were food insecure.<sup>(15)</sup>

## THE MINIMUM WAGE<sup>17</sup> AND FOOD INSECURITY

Analysis of the adequacy of minimum wage for select household scenarios between 2002-2012 using food costing data from Nova Scotia shows the positive effects of recent increases in the minimum wage rates based on the affordability of a nutritious diet for a single person.<sup>(17, 40-42)</sup> It also shows, however, that even with two minimum wage earners, a household with dependents would face an income deficit. The deficit would be even higher if they were to purchase nutritious food.

In 2011, about 5.5% of workers in Nova Scotia earned minimum wage.<sup>(46)</sup> The latest recommendation for an increase is expected to come into effect in April 2015 and will increase the minimum wage from \$10.40 per hour to \$10.60 an hour.

<sup>16</sup> This measure is different from the LICO-AT as it is half of the population median family income.

<sup>17</sup> The Nova Scotia minimum wage, governed by the provincial Labour Standards Code, establishes a minimum hourly wage that employers must pay. There are two levels of minimum wage—one for inexperienced workers (who have worked under three months with the employer or in similar work in the labour force) and a standard rate. Since 2011, the minimum wage has been based on the Low Income Cut-Off (LICO) for a single person working full-time (40 hours) living in Sydney. Minimum wage earners not working full-time, with dependents, or living in Halifax where the LICO is slightly higher than in Sydney, are by definition, living in poverty. Recommendations for increases are made by the Labour Standards Minimum Wage Review Committee and indexed to the consumer price index.

## INCOME ASSISTANCE AND FOOD INSECURITY

Income assistance is a system of income support administered by the Department of Community Services through the Employment Support and Income Assistance (ESIA) program for people who have little or no other source of income. As such, it is an indicator of the extent of poverty in a community. The income assistance caseload somewhat varies according to the unemployment rate and changes in ESIA policies. Many receive assistance because they are chronically unemployed, disabled, or face other serious barriers to employment.

A recent study has shown that almost 70% of Nova Scotia households relying on income assistance were food insecure in 2011.<sup>(15)</sup> There are several reasons for this. To be eligible for income assistance, applicants must have exhausted most of their liquid assets with an upper limit of \$1,000 in allowable assets. This means recipients have very limited or no savings and thereby no buffer against unexpected expenses. Income assistance regulations also limit and claw-back earnings from employment.<sup>(42)</sup>

Table 4 shows even though the increase in the caseload was higher in Halifax in 2011/12 (2%) than in the province as a whole (1%), the percentage of the population in receipt of income assistance in Halifax (3.9%) was lower than in the province (4.4%). This difference is statistically significant (Refer to Appendix E). In 2011/12, on average 28,813 households were living on income assistance in Nova Scotia and by 2014/15 the caseload had fallen by 2% to 28,223.<sup>(48)</sup> In Halifax, however, there was an increase in the caseload every year until 2014/15 when the caseload fell by 2%, still higher than 2011/12 (Table 4). It is possible these data reflect a fairly longstanding pattern of migration from the poorer rural areas of the province to Halifax or to other provinces in Canada.

Table 4: ESIA caseloads<sup>18</sup>: Halifax and Nova Scotia and year-over-year change 2011-2015.<sup>(48)</sup>

2011/12 Halifax	2011/12 Province	2012/13 Halifax	2012/13 Province	2013/14 Halifax	2013/14 Province	2014/15 Halifax	2014/15 Province
10,569	28,813	10,712	28,050	10,877	28,923	10,691	28,223
+ 2%	+1%	+1%	0%	2%	0%	-2%	-2%

Despite modest increases to the income assistance personal allowance and the development of Affordable Living and Poverty Reduction Tax Credits between 2010 and 2013, income assistance is not indexed and welfare incomes remain insufficient to mitigate concurrent increases in the cost of living, especially of food and housing.<sup>(33)</sup> Depending on family composition and size, in 2012 welfare incomes (income assistance plus all tax credits and benefits) were between 43.1% and 78.9% below the LICO-AT.<sup>(42)</sup>

18 Data supplied by request from the Nova Scotia Department of Community Services, March 2015.

## SUMMARY

In summary, 42.3% of the provincial population resided in Halifax in 2011. When compared to the rest of Nova Scotia, the population is slightly younger with a smaller proportion aged 65 years and older. Even so, there are population differences within Halifax. In rural areas of Halifax there are higher proportions of people aged 65 years and older than in the densely populated urban areas. Halifax also has a higher proportion of immigrants and visible minorities than the province as a whole, but a lower proportion of people who identified as Aboriginal. There are slightly fewer lone parent families in Halifax than the province as a whole. Similar to the rest of the Province, a high percentage of lone parent families are headed by women.

Overall, much of the demographic and socio-economic data demonstrate that Halifax is more similar to other urban census metropolitan areas (CMA) in Canada than to the rest of Nova Scotia. Halifax has a higher median income across a number of household configurations when compared with the rest of the province. The educational attainment was also higher in Halifax and there were lower rates of unemployment and income assistance. In general, the percentage of people living on low income in Halifax was lower than in the province as a whole. These data are positive contributors to building community food security as education and income are known to be important factors in attaining a healthy, just, and sustainable food system.

On the other hand, there are also a number of socio-economic conditions that cannot be ignored. The number of low income households, the proportion of children living in low income households, and the proportion of income spent on housing are still relatively high. In addition, people living on low wages (especially minimum wage) or on income assistance are far less likely to be food secure and are likely to find it very difficult to afford or access the kind of nutritious food that ensures a healthy diet. In addition, there has been minimal change in the number of people living on income assistance in Halifax since 2011/12.

# NOTES:

A series of horizontal dotted lines for taking notes, spanning most of the page width.



# FINDINGS RELATED TO THE SIX DETERMINANTS OF A HEALTHY, JUST, AND SUSTAINABLE FOOD SYSTEM

Throughout this section we will review the findings of the assessment and discuss how they link to the six determinants of a healthy, just, and sustainable food system. The report will look at where and how food is accessed; who produces, catches and harvests our food; and how the food is distributed, processed, prepared, acquired, marketed, sold, recycled, and disposed of. It also looks at the present food system environment in Halifax and the policies and programs that influence it.

Because the assessment seeks to set a baseline for a broad range of factors that contribute to a healthy, just, and sustainable food system, there are areas where there are gaps in the data. Some of the data reported require cautious interpretation regarding the current food system picture. Data used were the most recent available, which in some cases is quite dated (2006-2007). Despite these limitations, the data do provide a sense of the known information, and the gaps serve as a placeholder for future consideration.

## ACCESSIBILITY

### **Where and how do we acquire our food?**

Healthy, culturally appropriate, and sustainably produced food needs to be physically accessible to everyone in order to enhance community food security. The accessibility of food is also directly related to income, the affordability of food, the distance to food outlets, access to resources to produce food, and the availability of a sustainably produced food supply.

This section will report on how Halifax residents access food, based on availability and access to food resources. Despite the thematic divisions, it is recognized that a multitude of factors contribute to the accessibility of food, and in this sense any of these themes taken in isolation will not be the answer to achieving a healthy, just, and sustainable food system; rather it is the interplay of several factors that will achieve this goal.

### 4.1.1

## AVAILABILITY

The availability of food in Halifax is largely dependent on producers, harvesters, buyers, processors, and distributors. We reviewed the scope of food availability through conventional and innovative food outlets. Within this theme there are seven indicators that build a picture of the number and geographic scope of food access points throughout the Halifax region.

There are a number of food access points not captured in the report such as restaurants, convenience stores, and small retail establishments that specialize in unique products, for example local or organic foods, artisanal breads, and free-range meats.

Although there is increasing interest in growing one's own food, most people continue to depend on a variety of retail market options for food purchases. In the Halifax region there is a growing movement of mobile food vendors, food trucks, community supported fisheries, and community supported agriculture enterprises; all of which provide alternative options and increase food availability.

Charitable resources play a significant role in addressing the immediate needs of people who are hungry and food insecure. Despite this valuable service, these resources are, by design, a donor-reliant, short-term relief strategy and, thereby, do little to address the systematic causes of food insecurity. Although charitable resources are intended to be a short-term relief strategy, their necessity in filling gaps left by an insufficient social safety net is evident. The statistics related to food bank use presented below are believed to seriously underestimate the level of food insecurity as fewer than 1 in 4 people experiencing food insecurity use food banks.<sup>(14, 41, 49-50)</sup>

### Grocery stores

The definition of a grocery store and the data for this section are provided by the Food Action Research Centre (Food ARC)<sup>19</sup> based on data collected through the Participatory Food Costing Projects<sup>(17)</sup> in 2012, where a grocery store was defined as one that generally carries the 67 items<sup>20</sup> listed in the National Nutritious Food Basket (NNFB).<sup>21</sup>

By this definition, there were 37 grocery stores in Halifax in 2012. Recently, there has been an emergence of “non-traditional” grocery stores or “hyper markets”<sup>22</sup> such as those incorporated within major retail outlets like Wal-Mart and Target; however, not all of these food outlets would have all the items listed in the NNFB.

---

19 The Food Action Research Centre or FoodARC is a research centre at Mount Saint Vincent University committed to research and action to build food security in Nova Scotia and beyond. FoodARC's projects and activities are grounded in four pillars: research, building capacity, sharing knowledge advocacy and policy change.

20 It is not necessary have all 67 items available; there is room to allow for up to 5 missing items.

21 The NNFB describes the quantity (and purchase units) of 67 foods that represent a nutritious diet for individuals in various age and gender groups.

22 A store that combines a supermarket and department or retail store under one roof and carries a large variety of groceries and other wide-ranging items. Hypermarkets are considered a retailer that allows customers to do “one-stop” shopping, meaning they can fulfill all of their shopping needs at one time.

Figure 8 shows the location of 37 grocery stores and farmers' markets in Halifax. This figure gives an indication of the sparse distribution of stores in many areas of the municipality.

### Fast food outlets

Fast food outlets described in this report are limited to major chains. Small locally owned businesses such as pizzerias and fish and chip shops are not represented.

The exclusion of independently owned local food businesses, restaurants, and convenience stores has been recognized as a gap in our information. Mapping the location of these small businesses would be an important contribution to understanding the food system at the community level.

Map 2, in the appendix shows there are 227 fast food chain outlets in Halifax, with the majority clustered in the urban core, particularly in peninsular Halifax.<sup>23</sup>

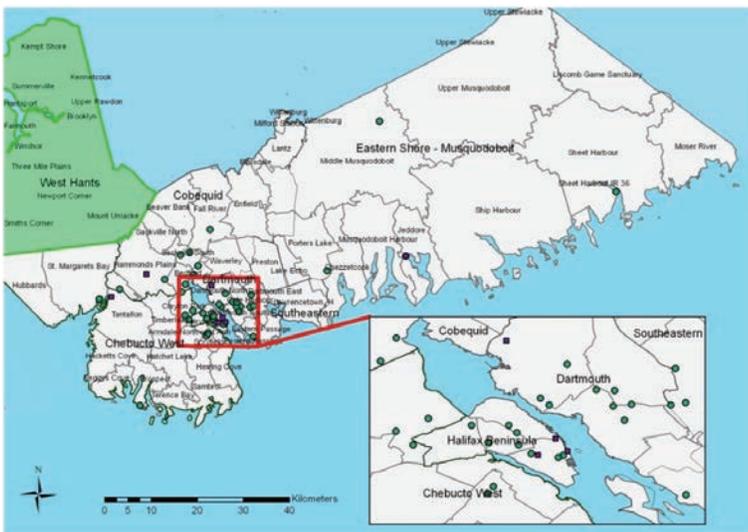


Figure 8: Locations of grocery stores and farmers' markets in Halifax, 2013.

<sup>23</sup> Data for this section were supplied by Dr. Sara Kirk, Dalhousie University

## Farmers' markets

Farmers' markets offer a venue for producers to sell their goods and services; they also offer an alternative food access point. The following is a list of farmers' markets in the Halifax region.

- Historic Halifax Farmers' Market, Downtown Halifax
- Seaport Farmers' Market, Downtown Halifax
- Alderney Farmers' Market, Downtown Dartmouth
- Musquodoboit Harbour Farmers' Market, Musquodoboit Harbour
- Tantallon Village Farmers' Market, Tantallon
- Partners for Care Market at QEII, Downtown Halifax
- Hammonds Plains Market, Hammonds Plains
- Sackville Farmers' Market, Sackville
- Seaforth Market, Seaforth
- Northwood Manor, Downtown Halifax
- Mic Mac Mall, Dartmouth
- Spryfield Urban Farm, Spryfield



## Food trucks

There has been a growing trend in mobile food vending since 2013. Recent estimates from the Food Truck Association suggest that there are 15 to 18 food trucks in Halifax. There are currently seven food parking sites available for motorized mobile canteens on municipal land and twelve sites for other mobile canteens.<sup>24</sup>

## Community Supported Agriculture (CSA) initiatives<sup>25</sup>

CSA memberships support the creation of stronger local food connections between buyer and producer. CSAs help to increase the availability of food and provide an avenue for farmers to bring their products to customers who purchase a share in that season's food crop. The model helps people to understand the realities of farming and seasonality, and in turn, the farmer benefits from having a guaranteed market and a source of income at the beginning of the season when it is most needed.

Appendix G lists twenty CSA initiatives with drop-off points within Halifax. While most CSAs provide fruit and vegetables there is a diverse range of products offered including meats, prepared meals and baked goods.

While we know the actual number of CSA farms that service the Halifax area, we have identified a gap in our knowledge related to the actual number of shares delivered. Anecdotally we believe that the number of shares is increasing, yet we do not have data to support this assertion. However, the scope of CSAs in relation to numbers and drop off points suggest that these enterprises are contributing to the expansion of access points for local food in Halifax.

<sup>24</sup> "Mobile Canteen" means any vehicle used for the displaying, storing, transportation or sale of food and beverages by a vendor which is required to be licensed and registered pursuant to the Motor Vehicle Act or propelled by human power whether required to be licensed or not, and includes a stand for food and beverages.

<sup>25</sup> Community Supported Agriculture (CSA) is a program that partners consumers directly with you, the producer, to sell products and build relationships. Customers buy annual shares or subscriptions from individual farmers, usually at the start of the season before the crops are even in the ground. In return, the farmer provides fresh produce on a regular basis.

### **Community Supported Fisheries (CSF)<sup>26</sup>**

Off the Hook is the only community supported fishery serving Halifax. In 2013 they had approximately 350 distinct customers. The following list shows the range of the seven access/pick-up points across Halifax:

- Halifax (Brewery Market)
- Halifax (Ecology Action Centre)
- Tantallon (Mariposa Picnic area)
- Bedford (Basinview subdivision)
- Dartmouth (Russell Street)
- Lower Prospect (East Coast Outfitters)
- Musquodoboit Harbour (Farmer's Market)

### **Pop-up fish and farm markets**

Pop-up fish and farm markets (including farm produce and fish trucks) have been described as “small, temporary markets that increase access to healthy, local foods in neighborhoods, support local farmers, and strengthen neighborhood food systems”<sup>(3)</sup> For this report we have expanded this definition to include supporting local fishers, and strengthening community food security.

Determining an accurate number of pop-up markets is a difficult because of their fluidity. Even though there are no concrete data, the identification of these businesses is important because their popularity would support a review of the barriers and enablers to their operation and continued existence in Halifax.

---

<sup>26</sup> Community Shared Fisheries are based on the Community Supported Agriculture (CSA) model. Customers' sign up for a share of the fishers' catch and receive a regular delivery of fish for a particular length of time.



## URBAN ORCHARD

The development of urban orchards is included as an action item to be implemented through Halifax's recently adopted Urban Forest Master Plan (UFMP). The UFMP was developed in cooperation with Dalhousie University's School for Resource and Environmental Studies.

In October 2013, a meeting hosted by Halifax Mayor Mike Savage gathered ideas on improving health in the city by 2020. In January 2014, the "Mayor's Conversation on a Healthy and Liveable Community" staff report<sup>(46)</sup> was endorsed by council. The report recommended that council pursue the development and implementation of an urban orchard pilot project.

The urban orchard was planted on October 18th, 2014 on the Dartmouth Common.

### 4.1.2

## COMMUNITY FOOD RESOURCES

The following section looks at the various service organizations within Halifax, providing access to food and food resources.

### **Inventory of community food resources**

Currently, no complete inventory of community food resources exists. A compilation of a Halifax region-wide inventory of food resources would be an extensive process, yet such a development would allow for a benchmark of the current food assets from which future targets could be set. There are some communities within the municipality that have drafted community-specific inventories, such as the Food Security Inventory for Dartmouth. Ideally an inventory could include community food resources such as food banks and community kitchens, in addition to information about other resources such as local farms, community volunteer groups, faith-based organizations, or senior centres offering meal and social programs.

### **Organizations providing community kitchen programs**

Community kitchen programs provide the opportunity for people to gather, learn food skills, share meals, build community connections, and offer social support.

Data are not available on a regional scale, nonetheless, there are community kitchen programs that exist as part of the programming of community organizations such as family resource centres, youth care facilities, and others. These programs tend to be intermittent and may be highly dependent on access to funding.

### **Meals delivered by Meal on Wheels<sup>27</sup> and Frozen Favorites<sup>28</sup>**

In 2013, the Meals on Wheels program<sup>29</sup> delivered approximately 23,380 meals and Frozen Favorites delivered 10,200 meals.

Meals on Wheels programs delivered in the communities of Porters Lake, Head of Jeddore, Musquodoboit Harbour, Ostrea Lake, Meaghers Grant, Sheet Harbour, Central Halifax, Fairview, Spryfield, Rockingham, Dartmouth<sup>30</sup>, Bedford, and Sackville.

The Frozen Favorites program deliver weekly to the areas of Fairview, Clayton Park, Bedford, Sackville, and central Halifax. The service extends to more remote areas of the Halifax region on a monthly basis.

The Wheels to Meals program is designed to bring seniors together for a meal by providing transportation to community and faith-based centres. Typically there is a cost associated with the program, which differs depending on the community. For example, in 2013, Wheels to Meals served 2,100 meals in Sheet Harbour, and in Fairview approximately 100 seniors were transported each week to a local church where they enjoyed a meal together. These programs support seniors' nutritional health and provide opportunities to socialize.

---

27 Meals on Wheels is a meal delivery service that increases access to food for seniors, disabled individuals and persons recovering from illness/surgery. It is a charity run by volunteers and supported by the United Way. The frequency of meal delivery varies depending on the location within the municipality. Meals are \$7.00 and a start-up program fee of \$5.00 is required. For some, the meals may be covered by the Department of Community Services or Veterans Affairs.

28 Frozen Favorites is a program, offered by the Victoria Order of Nurses (VON), for seniors, persons recovering from illness, caregivers and disabled members of the community. There is a \$7.00 cost per meal.

29 Data was available for only 4 of the 5 Meals on Wheels programs in the Halifax region.

30 This area includes Dartmouth North, Mic Mac Mall area, South, Woodlawn area, Portland Hills, and towards Waverley.



### **School breakfast programs**

Within Halifax there are 165 schools distributed among two school boards, the Halifax Regional School Board and Conseil Scolaire Acadien Provincial, and 18 private schools. Of the 165 schools, 62% have breakfast programs that served over 1.2 million meals in the 2013-14 school year.<sup>31</sup> (Refer to Maps 3-5, pages 133-134)

The Provincial School Breakfast program is based on a principle of universal distribution where every student in the school is able to participate. The breakfast program ensures healthy food is available to support student learning and health. There is some research to suggest that school food supplementation can moderate the association found between adolescents in food-insecure households and scholastic performance.<sup>(51)</sup>

### **Human milk banks**

In 2013, there were no human milk banks in Halifax although informal breast milk sharing arrangements exist. Halifax's Breastfeeding Community of Practice<sup>32</sup> has a Milk Bank Working Group seeking the reestablishment of a human milk bank to provide safe, screened, pasteurized human breast milk to infants (especially very ill newborns). This work aligns with one of the actions outlined in *Thrive: A Plan for a Healthier Nova Scotia*.<sup>(52)</sup>

### **Charitable food services**

A recent pan-Canadian study reported that there are 53 agencies and organizations involved in offering charitable food assistance<sup>33</sup> in the Halifax, Dartmouth and Bedford communities.<sup>(50,52)</sup> These findings provide a sense of the diversity in community involvement in charitable food assistance, where traditional soup kitchens, drop-in centres, food banks associated with churches, as well as health centres, educational agencies, and social service agencies provide food to those in need (Refer Appendix H). It was reported that most agencies provided either a charitable meal, snack or grocery program, and 41% provided both types of assistance.<sup>(50)</sup>

Figure 9, shows the inception of the agencies that remain open and continue to be involved with charitable food assistance in Halifax, Dartmouth, and Bedford.<sup>(50,52)</sup> It is not known how many agencies opened and closed during this time period, therefore statements related to the degree to which the charitable food sector has increased or decreased cannot be made with certainty.

31 Primary data collection by Rebecca Hare, Capita Health dietetic intern 2013.

32 The Breastfeeding Community of Practice is a volunteer peer-to-peer-network driven by community members with a shared passion for breastfeeding.

33 Where charitable food services are defined as agencies that provide free food or food for a nominal fee (considered to be \$1-\$2 dollars) in the form of groceries or prepared meals and snacks. It does not include agencies that only offered food to people who were enrolled in a particular program, such as a training program, or living in a particular place like shelters or group homes. It also does not include programs for children like school food and breakfast programs.

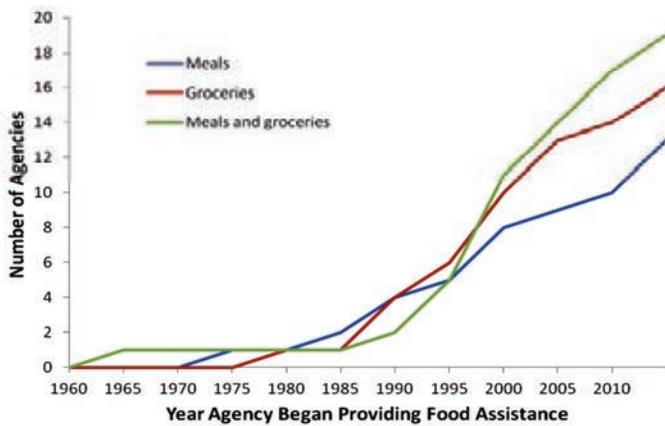


Figure 9: History of charitable food assistance provisioning by agencies running meal programs, grocery programs or a combination of these, in Halifax, Dartmouth, and Bedford.<sup>34</sup>

The number of agencies providing charitable food assistance speaks to the level of need in the community and compels us to consider how charitable food assistance is potentially masking the true number of food insecure households. Some Canadian research has found that only 1 in 4 food insecure households will seek charitable food assistance.<sup>(15)</sup>

Despite the growth in the number of agencies involved in charitable food assistance, these numbers do not always translate into increased access. A comparison of figures Figures 10 and 11 clearly show that access to charitable food is largely dependent on the day of the week. This would suggest that access is highly dependent on program scheduling and capacity in addition to location.



Figure 10: Agencies with charitable food provisions available during the weekdays in Halifax and Dartmouth, 2013.<sup>35</sup>

Figure 11: Agencies with charitable food provisions available during the weekends in Halifax and Dartmouth, 2013.<sup>36</sup>

34 Tarasuk, V., Dachner, N., Hamelin, A., Ostry, A., Williams, P.L., Poland, B. & Raine, K. A survey of food bank operations in five Canadian cities. (under review).

35 Tarasuk, V., Dachner, N., Hamelin, A., Ostry, A., Williams, P.L., Poland, B. & Raine, K. A survey of food bank operations in five Canadian cities. (under review).

36 Tarasuk, V., Dachner, N., Hamelin, A., Ostry, A., Williams, P.L., Poland, B. & Raine, K. A survey of food bank operations in five Canadian cities. (under review).

### The use of food banks

HungerCount 2013<sup>37</sup> reported that 21,760 people visited a food bank in Nova Scotia. Although there was a decrease of 7.6% in food bank use since 2012, overall there has been a 28.6% increase since 2008.<sup>(6)</sup> In Halifax, there are 43 food banks registered with Feed Nova Scotia. In March 2013, Halifax food banks served 8,555 people of whom 2,660 were children.<sup>(5)</sup> Figure 12 shows the food bank use across Nova Scotia since 2008.



Figure 12: Numbers of people visiting a food bank in Nova Scotia, March 2008-2013.<sup>38</sup>

Table 5 shows the most recent data on the frequency of food bank use by clients in 2013 as reported in Feed Nova Scotia’s annual report<sup>(5)</sup>. The report indicated that the largest percentage of users (36%) visited the food bank one to three times a year, suggesting that the food bank served as an emergency support only. Conversely, the next highest frequency of use showed that 27% visited the food bank more than 12 times per year. This would suggest that the challenges for these individuals and families to consistently meet their food needs are immense.

Table 5: Client use of food bank in Halifax, 2013.<sup>39</sup>

Frequency (visit/yr)	% of total clientele
1-3	36
4-6	18
10-12	9
More than 12	27

Generally, food banks can only be accessed once per month.<sup>40</sup> The limits placed on the frequency of access can make this an insufficient food resource. Furthermore, the donor-reliant nature of the food banks may limit their capacity to not provide enough food to meet each household’s need and they may not have the type of foods that the family wants or needs.

37 The Hunger Count is an annual report based on a national survey completed by Affiliate Members, who collect data on food bank usage at their facilities during the month of March.

38 Food Banks Canada (2013). HungerCount 2013. Retrieved from <http://www.foodbankscanada.ca/FoodBanks/MediaLibrary/HungerCount/HungerCount2013.pdf>.

39 FEED Nova Scotia (2014). Hunger in Nova Scotia. Retrieved from [http://www.feednovascotia.ca/hungerfacts\\_stats.html](http://www.feednovascotia.ca/hungerfacts_stats.html).

40 Food banks generally have policies that limit the number of times an individual can use the resource.



## THE DARTMOUTH NORTH COMMUNITY VAN

The Dartmouth North Community Van was purchased by The Public Good Society of Dartmouth and began operating in January 2012. The van is available for use by non-profit organizations located in the Dartmouth area.

Recently, with the support of a Nova Scotia Moves grant, a new program has been established where individuals receiving income assistance are transported to local, affordable grocery stores once a month. This program was piloted in partnership with Dartmouth Mental Health and Dartmouth Family Centre. Participants using the program feel they are able to save as much as 50% on their grocery bills, allowing them the opportunity to make healthier food choices.

The community van is used to support this program by providing free transportation for those who attend. Periodically, the East Dartmouth Community Health Team provides cooking classes for clients who attend local food banks.

### SUMMARY

The accessibility of food seems to be growing in urban areas, while access is more limited in Halifax's rural communities. There are a growing number of alternative food options to the traditional large scale grocery store. While this assessment presented data on many of these enterprises, there are others not included in the data, such as small scale grocers (e.g., meat markets) that carry a small supply of groceries, specialized retailers such as bakeries, delis, and convenience stores offering a variety of food products. The reach of innovative food retail access points is not fully understood or realized.

Charitable food outlets seem to continue to hold prominence in the community as an important strategy to address food insecurity. Alongside the charitable food sector, community organizations, and researchers are involved in seeking more sustainable approaches to improving food accessibility. For example, Food Action Research Centre (FoodARC) research, such as the food costing data, has been used to advocate for improvements to income assistance and minimum wage. There are many community organizations working to increase food access by providing transportation, developing cooking and gardening programs or offering spaces for people to come together to grow, cook, prepare, and share food. Collectively these initiatives and advocacy efforts help to build skills and community connections while increasing access to food.

### **Does the food system meet our needs?**

We define adequacy as the ability of every individual to acquire sufficient quantities of safe, culturally appropriate, nutritious, and sustainably produced food without resorting to emergency or charitable food sources. The food available will be of the quality and quantity to promote health and manage chronic disease and breastfeeding is protected and promoted.

Food adequacy is complex and difficult to measure because of the interplay of many social, economic, and environmental influences. Ensuring a healthy, just, and sustainable food system requires an adequate quantity and quality of food to meet the needs of everyone. When this is achieved the food system is strengthened because all individuals have economic and physical access to food that meets their nutritional, cultural, and personal needs.

A measurement of the adequacy of the food system is also influenced by the ever-changing complement of vendors, businesses, and socio-economic conditions. The data presented in this report are taken from a point in time (December 2013 to June 2014); it is recognized that the picture can and will change.

#### 4.2.1

### **CULTURAL APPROPRIATENESS**

Community food security considers the degree to which people can obtain the foods they feel are personally and culturally appropriate, as defined by “taste, tradition, culture, religion, or spiritual practice.”<sup>(3)</sup> Halifax is a growing multicultural region and increases in the diversity of food choices are reflective of this trend.

In recognizing Halifax’s cultural diversity and the significant role food plays in cultural identity, the HRM Cultural Plan (March 2006), identified in the RP+5 Regional Municipal Planning Strategy,<sup>(54)</sup> seeks to support culinary celebrations and culture through new and existing community festivals. The plan encourages the promotion of ethnic food culture and Halifax as a culinary destination. An expanded regional farmers’ market and support for events that have a local food and drink focus are other dimensions of the cultural plan.

#### **Number of ethno-cultural food businesses at farmers’ markets**

The vendor profile of a farmers’ market can change on a regular basis, thus providing an understanding of the ethnic and cultural diversity within the market environment is challenging. Anecdotally, there seems to be an increase in the number of ethnically and culturally diverse foods offered at local markets.

Interviews and a website scan of seven farmers’ markets in February 2014<sup>41</sup> found that there is a wide diversity of ethno-cultural foods and products available. Five of the seven markets reported that the market included vendors offering culturally diverse foods. In total, 43 vendors reported offering a variety of products like baked goods (n=7), cheese (n=1), meat (n=1), prepared foods (n=32) and other (n=2). Of the 43 vendors,

<sup>41</sup> Primary data collection by the Understanding Communities Unit, Public Health-Capital Health.

24 different countries and geographical areas are represented by the products available. Appendix I provides details of the number of vendors, location, and origin of their main products. This provides a baseline from which the growth in the availability of ethnic and culturally diverse foods can be measured. (See Appendix I for details)

#### 4.2.1.2

#### Number and location of ethnic food stores

The inventory of ethnic food stores is primary data collected for this report. The terms used by Largent<sup>(55)</sup> to define various food stores was adapted for this report. Recognizing the subjectivity in defining “ethnic” in a multicultural society, this report defines the ethnic food stores as follows:

- Ethnic:** A store that primarily sells food from one or more ethnicity
- Hybrid Ethnic:** A store that sells food from one or more ethnicity in even measure with other foods
- Traditional:** A store that sells some ethnic foods (perhaps limited to no more than one aisle) and a substantial amount of other foods, like Sobeys’s or Superstore

Based on Largent’s definitions, there are a total of 64 ethnic retail food stores in Halifax, including several large grocery stores that carry a selection of culturally diverse foods. Figure 13 below shows store locations included in the scan, many of which are clustered in the Halifax and Dartmouth areas. See Appendix J for a detailed list.

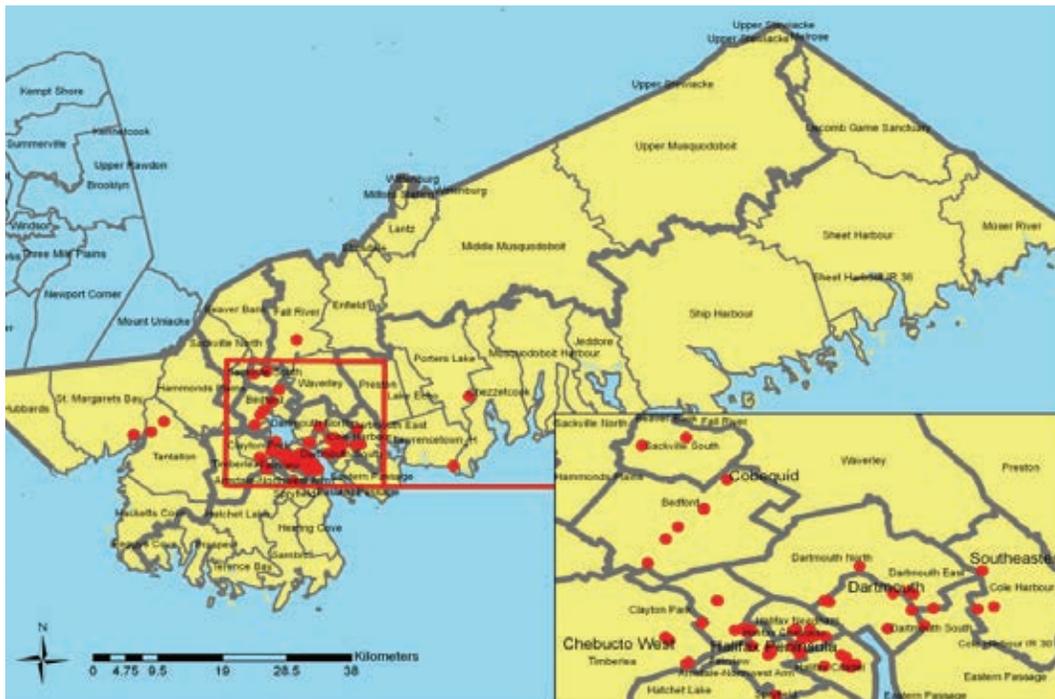


Figure 13: Locations of ethnic, hybrid ethnic and traditional food stores in Halifax, 2014.<sup>42</sup>

<sup>42</sup> Alisha Capelin and Nicole Meister. Mount Saint Vincent University, Applied Human Nutrition primary data collection Feb-Mar 2014.



## DEEP ROOTS COMMON ROOTS URBAN FARM

The Deep Roots Program: Common Roots Urban Farm is a job skills program that provides individuals who are new to Canada with the skills and knowledge needed to work in the farming sector in Nova Scotia. The program provides an opportunity to learn about seasonality in Nova Scotia, approaches to organic farming, and provides access to individual garden plots where participants can grow food for themselves and their families. The six participants of the 2014 season all had experience farming Bhutan. There is also a demonstration plot to experiment using growing methods from Bhutan in Nova Scotia, which provides other farm participants with the opportunity to learn about Bhutanese vegetables, farming practices, and food, while growing a strong, diverse community.

### 4.2.2

## HEALTH

Nutritious foods and healthy eating are key contributors to normal growth and development. Good nutrition supports the prevention and management of chronic diseases, such as, diabetes, heart disease, high blood pressure, and obesity. Breastfeeding is an important contributor to infant and maternal health.<sup>(56)</sup>

Many serious health problems can result from the inability to purchase or access adequate, nutritious food. Emotional and psychological stress related to the inability to access or afford a nutritious diet can contribute to or exacerbate existing health problems. Nutritious food can lower immunity and increase the risk of poorer health outcomes and chronic diseases such as hypertension. It has been estimated that independent of any other risk factor, healthy eating can prevent up to 30% of heart disease.<sup>(57)</sup>

Food insecurity can affect the management of chronic disease conditions and make it more challenging to maintain good health.<sup>(58-62)</sup> Food insecurity can also impact maternal and infant health as it has been linked to low birth weight babies,<sup>(63-64)</sup> and, in pregnancy, inadequate maternal nutrition can be related to poor birth outcomes such as neural tube defect.<sup>(65)</sup>

## Rates of chronic disease

Chronic conditions that have associations with a nutritious diet, either as a preventative measure or in terms of disease management are outlined in Table 6. Generally, the rates of adult and childhood obesity, diabetes and high blood pressure in Halifax are higher than the national rates and lower than the provincial rate. One exception would be the self-reported rate of overweight and obesity among the segment of the population aged 12-17, where the rate in Halifax at 34.6% is higher compared to Canada (21.8%) and Nova Scotia (31.5%) as a whole.

Table 6: Rates of Chronic Disease in Halifax Census—Metropolitan Area, Nova Scotia, and Canada, 2011-2012.<sup>(8-9)</sup>

Chronic Condition* CCHS 2011-12	CMA <sup>37</sup>	Capital Health	Nova Scotia	Canada
Self reported overweight or obese BMI age 18 and older	57.1%	—	60.8%	52.5%
Self reported overweight or obese BMI <sup>38</sup> age 12-17	34.6%	—	31.5%	21.8%
Self reported diabetes <sup>39</sup> age 12 and older	6.9%	—	8.6%	6.5%
Self reported high blood pressure age 12 and older	17.7%	—	22.6%	17.4%
Heart disease <sup>40</sup> ** age 12 and older	—	3.9%	5.8%	4.9% **
Stroke** age 12 and older	—	1.1%	1.4%	1.2%**

\* CCHS survey 2011-2012 Canadian Community Health Survey, Statistics Canada, 2010/2011. CANSIM table no.: 105-0502, 105-0592 data.

\*\* CCHS survey 2011-2012 Chronic Disease InfoBase Data Cubes. 2012. Canadian Community Health Survey, Statistics Canada, 2011/2012. CCHS Disease by Geography, Age Group and Sex.

Cancer is a chronic condition impacted by diet, both in terms of prevention and management. Common cancers related to nutrition include colorectal, pancreatic, stomach, bladder, breast (females), and prostate (males).<sup>(10-11)</sup> Appendix K compares the incidence rates of cancer in the Capital Health District and Nova Scotia and shows that generally the rates are higher in Capital Health District for colorectal, breast, prostate, and stomach cancers than the rest of the province.<sup>(11)</sup>

## Low birth weight<sup>47</sup>

The Reproductive Care Program of Nova Scotia<sup>(67)</sup> reported 8,816 births in 2011 (with known birth weight). Of those, 5.5% were below 2,500 grams<sup>(68)</sup>, and thus considered to be a low birth weight. The proportion of low weight births among all births in Nova Scotia for the same time period was 6.0%.<sup>(67)</sup> It is important to note that there are multiple causes of low weight births and maternal nutrition is just one of many possible contributors.

43 Halifax Census Metropolitan Area (Halifax CMA includes HRM and the boundaries and population characteristics are very similar).

44 Body mass index (BMI) is calculated by dividing the respondent's body weight (in kilograms) by their height (in metres) squared. The index is calculated for the population aged 18 and over, excluding pregnant females and persons less than 3 feet (0.914 metres) tall or greater than 6 feet 11 inches (2.108 metres).

45 Defined as having been diagnosed by health professional as having Type 1 or Type 2 Diabetes and includes females 15+ who report gestational diabetes.

46 Includes congestive heart failure, angina, or heart attack.

47 The first weight of the fetus or newborn obtained immediately after birth, expressed in grams, which falls below 2,500 grams.

## Breastfeeding

Breastfeeding is the optimal method of feeding infants and supports all elements of community food security because it is a readily available, local food supply. Exclusive breastfeeding during the first six months, and continued breastfeeding for up to two years (or beyond) is recommended by Health Canada and the World Health Organization for the nutritional and immunological growth and development of infants and toddlers.<sup>(69)</sup> It provides numerous health benefits for both child and mother. For example, breastfeeding protects against gastrointestinal and respiratory infections in infants<sup>(70)</sup> and is associated with a reduced risk of being overweight or obese later in life.<sup>(71,72)</sup> For mothers, a history of lactation is associated with a reduced risk of breast cancer.<sup>(73-74)</sup> In addition to the health benefits, breast milk is the best example of locally produced food: breastfeeding protects the environment by reducing the production, distribution, and disposal of infant formula and its packaging.

### *Breastfeeding initiation*<sup>48</sup>

In the Capital Health District about 85% of women surveyed in 2012 initiated breastfeeding. This is slightly lower than the provincial rate of approximately 87% and the national rate of 89%.<sup>(12)</sup>

### *Exclusive breastfeeding*<sup>49</sup>

Exclusive breastfeeding occurs when no food or liquid other than breast milk, has been given to the infant from birth.

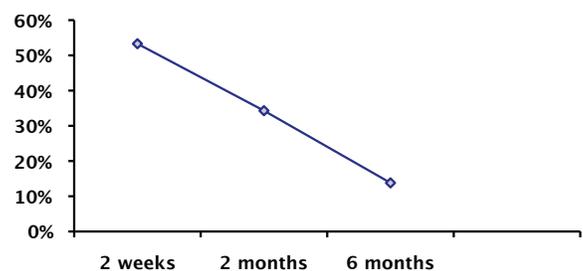
Local research reported on the proportion of mothers exclusively breastfeeding in Capital Health at two weeks, two months and six months post partum. Figure 14 shows the steady decline in exclusive breastfeeding where at six months the proportion of women exclusively breastfeeding<sup>(13)</sup> is well below the national average.<sup>(12)</sup> (Personal communication with C. Dahoo Public Health-Capital Health, 2014)

Two weeks—53.3%

Two months—34.3%

Six months—13.8% compared to the National average of 26%

*Figure 14: Proportion of exclusive breastfeeding at three time intervals in Capital Health, 2012.*<sup>50</sup>



48 Based on information provided by females aged 15 to 55 who had a baby in the last 5 years. Initiated breastfeeding refers to mothers who breastfed or tried to breastfeed their last child even if only for a short time.

49 Occurs when no food or liquid other than breastmilk, not even water, has been given to the infant from birth by the mother, health care provider, or family member/supporter. For this project the definition of breastmilk included breastfeeding, expressed breastmilk or donor milk and undiluted drops or syrups consisting of vitamins, mineral supplements or medicines. Finally, supplementation was defined as feeding any food or liquid other than breastmilk.

50 Public Health, Capital Health, (2012). Breastfeeding exclusivity.

## **Fruit and vegetable consumption**

Fruits and vegetables are an important source of vitamins, minerals, and fibre, and the benefit of eating a wide variety is well documented. Sufficient intake reduces the risk of diabetes, heart disease,<sup>(75-76)</sup> stroke<sup>(77)</sup> and lessens the risk of certain cancers such as oral, gastric, and colorectal cancers.<sup>(78-80)</sup>

The Canadian Community Health Survey (CCHS) 2010-2011 defined healthy fruit and vegetable intake as five or more servings per day.<sup>(14)</sup> Eating Well with Canada's Food Guide<sup>(81)</sup> recommends a range of fruit and vegetable servings from four to ten (depending on age and gender).

### *Frequency of fruit and vegetable consumption, five times or more per day*

In the Halifax region, 38.2% of residents aged 12 and over report that their consumption of fruits and vegetables met their daily requirements as defined by CCHS (five times or more). This rate is higher than the provincial rate of 34.0%. Overall, the percentage of females in all age groups (except 12-19 years) reporting the consumption of the daily requirements of fruits and vegetables was higher than males (32.6% for males as compared to 39.3% for females).<sup>(14)</sup>

### *Fruit and vegetable consumption by income*

Individuals who reported a total household income of less than \$20,000 were most likely to not meet their daily requirements of fruits and vegetables (Appendix L).

## 4.2.3

## **AFFORDABILITY AND SUFFICIENCY**

In terms of adequacy, the following indicators look at affordability and sufficiency of nutrition intakes related to achieving and maintaining good health. Affordability considers the interface between access to healthy, safe, culturally appropriate food and income level. Low income households are more susceptible to food insecurity compared with higher income households, and there are many social and economic factors that contribute to this issue. It is documented that the food budget is often considered the most vulnerable factor when people in low income households are left to choose between paying for shelter, heat, lights or food.<sup>(17)</sup> Across Canada, many provinces and regions conduct annual or biennial food costing to estimate the cost and affordability of a basic nutritious diet. The inability to access nutritious, safe, acceptable foods is considered being food insecure.

### **Percentage of the population that is food insecure<sup>51</sup>**

Household food insecurity is the inability to acquire or consume an adequate quality diet or a sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.<sup>(15, 82)</sup> Often it is associated with the financial ability to access adequate food. Appendix M shows a copy of the Household Food Security Survey Module (HFSSM) questionnaire that is used by CCHS to determine whether households are food insecure.

<sup>51</sup> This variable is based on the CCHS Food Security module, a set of 18 questions and indicates whether households both with and without children were able to afford the food they needed in the previous 12 months. The levels of food security are defined as: 1- Food secure: No, or one, indication of difficulty with income-related food access; 2- Moderately food insecure: Indication of compromise in quality and/or quantity of food consumed; 3- Severely food insecure: Indication of reduced food intake and disrupted eating patterns.

In 2012, 17.5% of Nova Scotia households experienced food insecurity compared to the national rate of 12.6%.<sup>(14)</sup> Food insecure adults report poor health, including mental, physical and oral health, and chronic conditions such as diabetes, heart disease, hypertension, depression, and fibromyalgia.<sup>(82-85)</sup> Household food insecurity also affects people’s ability to manage chronic health problems.<sup>(10,15,57-61)</sup>

Household food insecurity is a serious and growing problem in Nova Scotia and in Halifax. In 2012, it was reported that Halifax recorded the highest rates of food insecurity among 33 Census Metropolitan Areas (CMA) with almost 20% of the population considered to be food insecure.<sup>(15)</sup> This is a statistically significant increase since 2007-08 when 13% of the population was food insecure. Figure 15 provides a picture of household food insecurity by CMA across Canada.

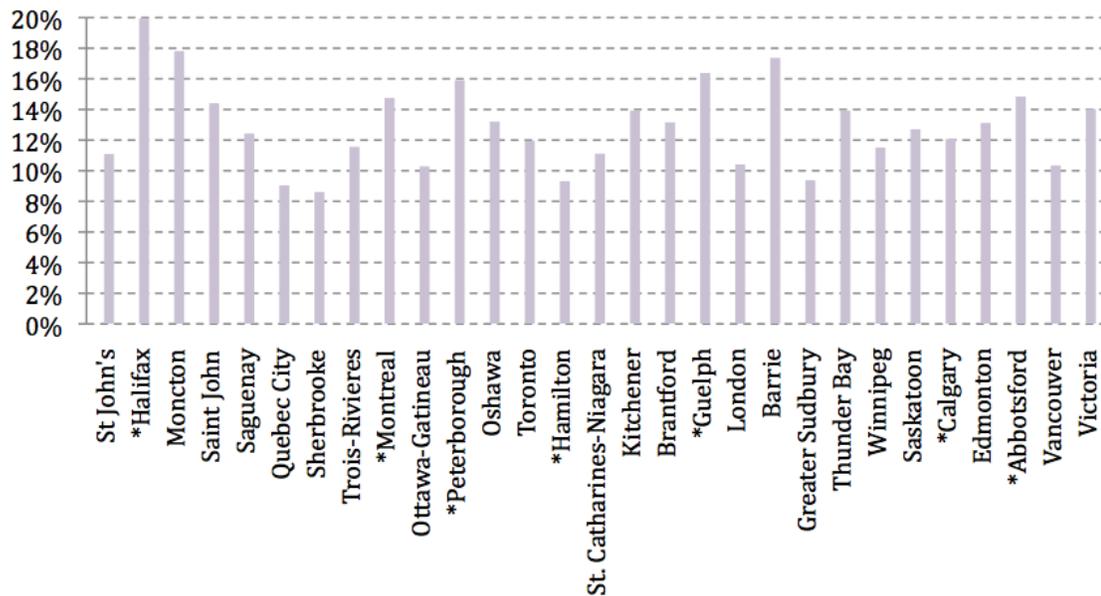


Figure 15: Prevalence of household food insecurity by Census Metropolitan in Canada, 2011-12.<sup>52</sup>

52 Tarasuk, V., Mitchell, A., & Dachner, N. (2014). Household food insecurity in Canada, 2012. Retrieved from [http://nutritionalsciences.lamp.utoronto.ca/wp-content/uploads/2014/05/Household\\_Food\\_Insecurity\\_in\\_Canada-2012\\_ENG.pdf](http://nutritionalsciences.lamp.utoronto.ca/wp-content/uploads/2014/05/Household_Food_Insecurity_in_Canada-2012_ENG.pdf).

### Affordability of nutritious food

Food costing involves the collection of grocery stores prices for milk, meats and alternatives, bread, fruits and vegetables, and other basic foods that make up the NNFB<sup>53</sup>. In Nova Scotia, the Nova Scotia Participatory Food Costing Project monitors the cost and affordability of a healthy diet and provides valuable data to enhance the understanding of community food security throughout the province.

In 2012, a NNFB for a reference family of four<sup>54</sup> in the Capital Health district would cost \$823.35 per month (refer to Figure 16). As the Capital Health district includes the West Hants municipality and the Town of Windsor, the data could not be presented for the Halifax region only.

The Participatory Food Costing Project applies the cost of a basic nutritious diet as defined by the NNFB to a variety of household compositions and income scenarios. Through the applications of income scenarios and household compositions to the cost of food, we know that, in Nova Scotia, a reference family of four receiving income assistance would run a monthly deficit of \$758.33 if they purchased a NNFB.<sup>(17)</sup> Further research shows that despite family composition (dual parent, single-led household or individuals), people receiving income assistance are not able to afford a NNFB.<sup>(16-17)</sup> Minimum wage earners also struggle to purchase an NNFB.<sup>(17, 40-41)</sup>



Figure 16: Cost of a National Nutritious Food Basket for a reference family of four, in Capital Health District, 2002-2012.<sup>55</sup>

6  
NUMBER OF FOOD COSTING  
DATA COLLECTIONS.  
THIS DATA HAS ALLOWED  
FOR FOOD COSTS AND  
AFFORDABILITY  
TRENDS TO EMERGE  
OVER TIME. (17)

53 The NNFB describes the quantity (and purchase units) of 67 foods that represent a nutritious diet for individuals in various age and gender groups.

54 Reference family of four is two adults, male female (31-50) and 2 children a girl (7 yrs) and a boy (13 yrs).

55 Participatory Food Costing Reports 2002-2012.

Figure 17: Monthly financial impact of purchasing a National Nutritious Food Basket for a reference family of four receiving income assistance in Nova Scotia, 2002-12.<sup>56</sup>

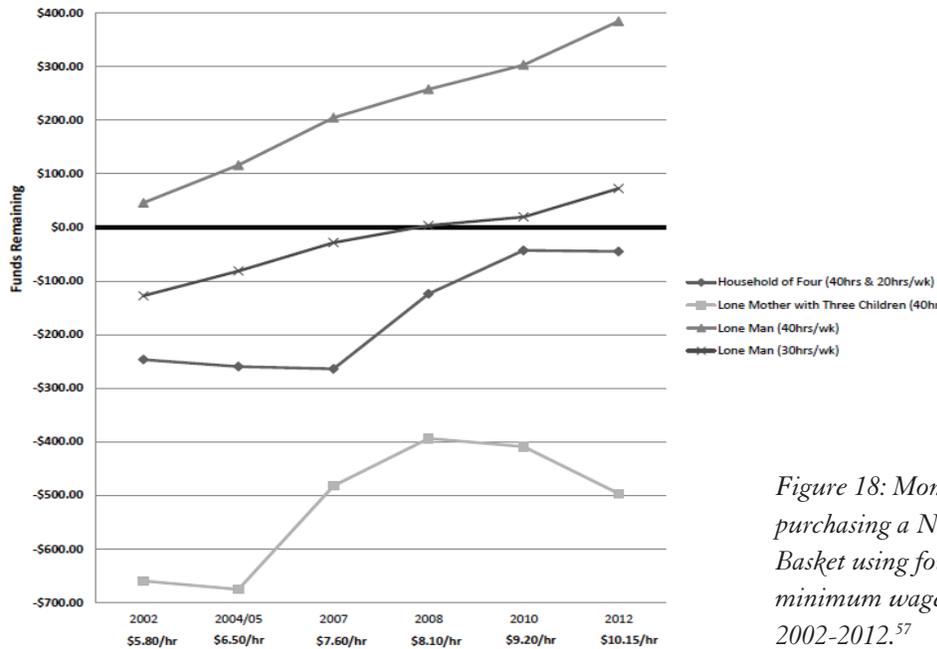
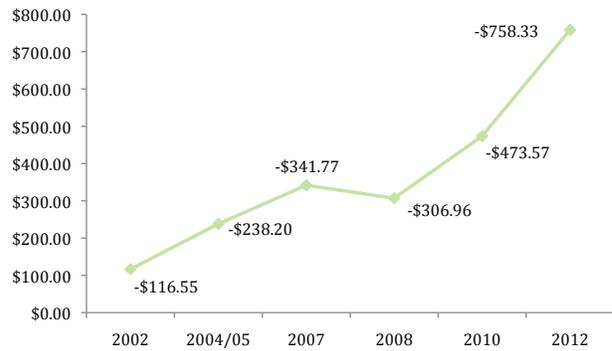


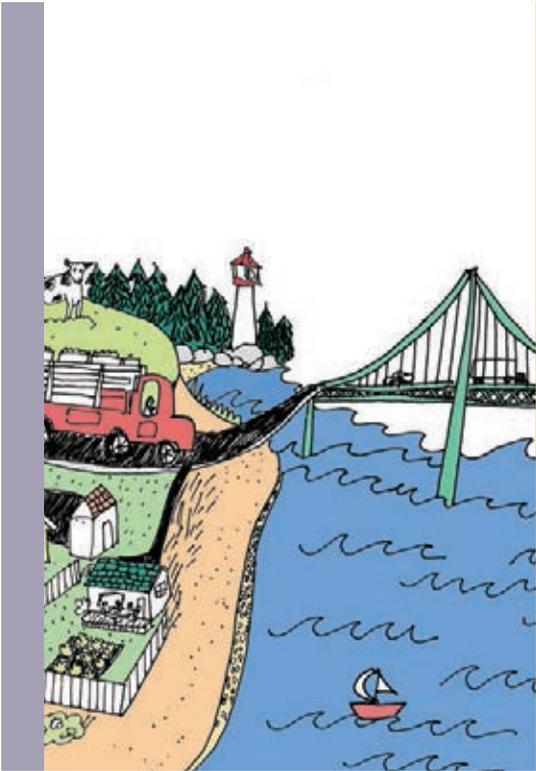
Figure 18: Monthly financial impact of purchasing a National Nutritious Food Basket using four different scenarios of minimum wage earners in Nova Scotia, 2002-2012.<sup>57</sup>

The cost of the NNFB has been steadily increasing since food costing was first done in Nova Scotia in 2002. For people receiving income assistance, the personal allowances have not kept pace with the cost of the NNFB which has increased more than four-fold between 2002 and 2010.<sup>(17)</sup> (Refer to Figure 17)

The food costing evidence suggests that the cost of a NNFB is more attainable for minimum wage earners, arguably due to the incremental increases to minimum wage over the years. Figure 18 shows the effect of a change in the minimum wage on monthly household deficits, across a range of household scenarios. The graphs show that all household groups, with the exception of lone males, are in a deficit. Lone mothers on minimum wage supporting three children experience the most significant monthly deficit. Although the data shows that this family has a smaller monthly deficit in 2012 than in 2002, the shortfall is still significant and the situation may be worsening as seen by the declines in funds remaining since 2008.

<sup>56</sup> Participatory Food Costing Reports 2002-2012.

<sup>57</sup> Williams et al. 2012, CJP, 103<sup>(3)</sup>:183-8.



## DARTMOUTH NORTH COMMUNITY FOOD CENTRE

Many members of the Dartmouth North community are affected by food insecurity; often they cannot easily access foods that are important to their health. A community food centre will increase food access in a dignified and welcoming space, moving away from a charity model and supporting individual agency. The community said that food access in the form of a low-cost produce market, community kitchens, garden space, and community events such as picnics are needed most. This space allows community members to drop-in, meet neighbours, participate, volunteer, and work, making food access normal and celebratory.

### Price of local compared to imported food

As a proxy measure, the provincial data generated by the Nova Scotia Participatory Food Costing Project<sup>(17, 18, 86)</sup> in 2007, 2008 and 2010 examined the availability of locally produced food items on the NNFB and the comparative cost of locally produced to imported foods. Provincial level data is available through the Nova Scotia Participatory Food Costing Project; however, these findings have not been reported at a municipal level. The research found that on average 23% of the items on the NNFB list were locally produced and the locally produced foods were the lowest priced 75% of the time.<sup>(18)</sup> Milk and alternatives and meat and alternatives were the food groups with the largest availability of local products. These research findings provide insight into the types of locally produced products available.

### SUMMARY

The presence of culturally appropriate foods seems to be growing in Halifax with access points in large grocers, farmers' markets, and independent small retail stores. Little is known about the adequacy of traditional aboriginal foods in Halifax, and this marks a gap in our knowledge. The adequacy of the food system was measured in terms of the ethnic and cultural diversity of the foods available, the sufficiency of these foods with respect to prevention and management of chronic disease, and the impact of household incomes on the ability to obtain an adequate diet. The data show that in Halifax, nutrition-related chronic conditions such as obesity, diabetes and high blood pressure remain higher than the national rates. Furthermore, the data show that household food insecurity has increased significantly in the Halifax region; it is the highest of 33 other Canadian cities measured in a recent study.<sup>(14)</sup>

### **How we learn about and apply our knowledge of the food system**

Knowledge is defined in this report as opportunities for individuals to gain skills, awareness, familiarity and understanding of food and the food system, including where, how, and by whom food is produced and distributed. Agency enables individuals to act upon this knowledge to enhance personal and community food security.

The acquisition of food knowledge and skills is considered a determinant of food security; however, knowing what foods to eat and healthy ways to prepare them needs to be matched by environments and resources supporting the knowledge and skills. The indicators in this section contribute to our understanding of the scope of programs and resources available to share knowledge, teach food skills, and potentially increase individual and collective knowledge and agency within the food system.

A synthesis paper prepared for the Healthy Living Issue Group of the Pan-Canadian Health Network focused on cooking and food preparation skills. They reported that food choice and consumption patterns have changed with increased purchasing and consumption of processed, pre-packaged foods. These foods have become normalized in our society and as a result there is the potential that cooking and food preparation skills will be lost.<sup>(87)</sup> The potential interruption in the transference of food related skills between generations is significant in realizing a healthy, just, and sustainable food system because processed, pre-packaged, foods are typically higher in fat, sodium, and sugar than foods prepared from scratch at home.

Currently the degree to which this information is applicable to the Halifax region is not known. Generally it is believed that the use of processed, pre-packaged food has increased; however, whether this has contributed to a loss in cooking skills and knowledge is not known.

#### 4.3.1

### **EDUCATION PROGRAMS**

Community food security is enhanced when people have the opportunity to come together around food. Learning food skills in a kitchen, on the water, or in the garden helps connect us to our food and the environment. Local food production is strengthened by generational wisdom and the knowledge gained through more formalized education and training.

#### **School gardens<sup>58</sup>**

School gardens provide hands-on learning opportunities for children and youth. Several organizations have been actively involved in the establishment and evolution of school gardens in Halifax: Health Promoting Schools committees, Ecology Action Centre, Nova Scotia Department of Agriculture, Clean Nova Scotia, and community groups like Take Action Society<sup>59</sup>. Many of these organizations have worked with educators to integrate the school garden into curriculum outcomes in math, science, art, literature, physical education, and health.

<sup>58</sup> School gardens existing on public or private school land and managed by the school.

<sup>59</sup> “The Take Action Society” is a non-profit organization leading positive change in the community of Dartmouth North. Through the children of this community, positive change has included an outdoor classroom and community garden, a positive play area, “Placemaking”- a community street art project and annual community clean-ups.

In 2014, 42 out of 165 schools<sup>60</sup> in the Halifax region had a garden. Maps 6-8 on pages 134-35 show the location of the gardens in Halifax electoral districts by school type (elementary, junior high, and senior high).<sup>61</sup>

In addition to school gardens, there are at least four teaching/educational<sup>62</sup> gardens. These gardens are open to members of the broader community so that they can learn to grow food and care for a garden.

### **Schools offering food skill development programs<sup>63</sup>**

In Halifax, 74% of junior and senior high schools offer food skill development programs like family studies and food science. There are five private schools that have similar programs.

### **Fishery, agriculture, and food production training programs**

There are three 4-H clubs<sup>64</sup> with a total of 95 members (2014) in the communities of Upper Musquodoboit (Musque Maple Leaf), Cole Harbour/Eastern Passage (4-HRM), and Middle Musquodoboit (Riverside). Provincially, the 4-H clubs fall under the jurisdiction of the Department of Agriculture. The motto of the 4-H movement is 'To Learn To Do By Doing' and, as a result of their agricultural origins and history, the clubs continue to teach children and youth many of the skills related to the agriculture industry.

At the university level, the Canadian Institute of Fisheries Technology (CIFT) at Dalhousie University is a resource centre for research in food science and process engineering, with an emphasis on seafood. Areas of focus include aquaculture development, biotechnology, fish/food process engineering, marine oils and nutrition, physical properties of foods, process chemical science, seafood biochemistry, and toxicology.<sup>65</sup> Dalhousie University offers undergraduate and graduate degrees in Agriculture, Food Science, Marine Science and Environmental Sustainability.

Though not located in the Halifax region, both the Faculty of Agriculture at Dalhousie University and Perennia<sup>66</sup>, a Crown Agency offering extension and advisory services, support agricultural training for the entire province. The Faculty of Agriculture at Dalhousie University offers a wide range of academic programs in food production at the diploma, undergraduate and graduate degree level. In addition, through the Extended Learning Department, the Faculty offers other non-academic training programs to adult and non-traditional learners. The Faculty also hosts the Organic Agriculture Centre of Canada and offers several online training programs. Perennia supports the agriculture industry by providing knowledge and advice on issues pertaining to agriculture, aquaculture, food production, and food safety.



<sup>60</sup> Includes schools with the Halifax Regional School Board (HRSB), Le Conseil Scolaire Acadian Provincial (CSAP) board and private schools.

<sup>61</sup> Schools with primary-nine and 7-12 configurations were mapped according to the highest grade levels.

<sup>62</sup> A teaching garden is defined as a garden whose primary function is knowledge sharing. Individuals and groups may participate in garden activities once or on an ongoing basis with the goal of learning more about gardening, community and/or food.

<sup>63</sup> Information from the CSAP schools was not available.

<sup>64</sup> <http://shumil4h.com/projects/> accessed January 5th 2014.

<sup>65</sup> <http://www.foodtechcanada.ca>.

<sup>66</sup> Perennia is a provincial owned corporation that provides knowledge translation and transfer services in agriculture, food production and food safety.

### Commercial or academic food training programs

The Akerley campus of the Nova Scotia Community College offers three food training programs. Two of these are year-long certificate programs (Boulangier and Baking Art, and Baking and Pastry Art) and the other is a two year diploma. Mount Saint Vincent University provides undergraduate and graduate degrees in Applied Human Nutrition and a Dietitians of Canada accredited internship education program with opportunities for students to undertake training specific to food security and food systems.

The Department of Agriculture promotes food safety and offers food handling courses within the Central Region.<sup>67</sup> From 2008-2013 the trainers conducted 249 food handling courses.

### Community food skill development programs

The availability of community-based food skill development programs appears to be growing; however, there are few data to support this assertion. The lack of data may be explained by the uncertainties of secure funding, resource capacity, space, and volunteer availability, resulting in a patch work of ad-hoc programs ranging from one day sessions to year-long programs. Some examples of well-documented programs are as follows.

**Feed Nova Scotia's Learning Kitchen** is a 16-week training program that equips students with the life skills needed to succeed in the work force. In 2012-2013, 29 students completed the program by working under a Red Seal chef. As part of the curriculum, students supported their community and honed their newfound skills by preparing approximately 600 meals per day for local soup kitchens and shelters. The program was introduced in 2005 and each year there are 36 students selected for the program (Personal communication, FEED Nova Scotia, 2014).

**Halifax Recreation**—provides cooking classes for children and youth as part of their recreation program. These programs are typically 8 weeks and have a registration fee.

**Dartmouth Community Health Team with and the IWK** run a 'Kids in the Kitchen' program.<sup>68</sup> This program provides an opportunity for children to learn about nutrition and basic food preparation and cooking skills.

**The Community Health Teams in Dartmouth and Spryfield** regularly offer scheduled programs that teach food skills like planning, food purchasing, healthy food choices and cooking skills.

**Sobeys and Superstore** continue to include a variety of cooking classes in their monthly schedules; sometimes these programs have an associated fee.



<sup>67</sup> Central region would include the Capital Health District Health Authority (DHA 9) and parts of Annapolis Valley (DHA 3) and Cumberland-Colchester-East Hants (DHA 4).

<sup>68</sup> Young children (age 5-8) were invited to come to the community center and cook with a dietitian. There were three sessions that included four classes/session.



## TRANSITION BAY

The Transition Movement is a global network of grassroots communities in 43 countries—people taking positive, creative action to build local resilience.

Transition Bay St Margaret's holds skill and training events, educational workshops and other gatherings on the themes of community resilience. Transition Bay has also initiated or assisted in a range of projects including the Tantallon Village Farmer's Market, community gardens and neighbourhood cooperative

greenhouses, innovative transportation models, and local currencies. Volunteers range from youths to elders.

Food production and food security is the first and foremost way most people relate to Transition Bay and the majority of the programs relate strongly to food. Food cuts across all boundaries and unites all people.

Learn more about local events and watch delightful videos at: [www.transitionbay.ca](http://www.transitionbay.ca)

### **Breastfeeding support**

The Breastfeeding Community of Practice has developed a community resource to support breastfeeding families in Halifax. The breastfeeding helping tree<sup>69</sup> provides a comprehensive list of organizations, businesses and resources that support breastfeeding.

### **SUMMARY**

There are a number of programs and opportunities to gain knowledge about the food system, mainly education programs at universities and schools, as well as some community-based food skill programs. There are also a number of food resources, although the extent of the work and the reach in community is ever changing. Nonetheless, there seems to be a strong foundation upon which food related skills and knowledge could be furthered.

One limitation to these data, and an important point to consider, is that although this report mainly focuses on formalized food skills and training courses in Halifax, there is a multitude of training programs and courses offered outside the Halifax region that are still accessible to residents. Another consideration to note is that the presence of skill-building and training programs does not imply that these resources are accessible to everyone. Often cost, time commitments, competing priorities, location, interests, and abilities are prohibitive, particularly for those vulnerable to food insecurity.<sup>(87)</sup>

Although we seem to have a developing picture of the level of knowledge and skill based programs and training available, there is a gap related to the agency resulting from these resources. Anecdotally, we know that there is a greater awareness related to local food as seen by the increase in farmers' markets, community gardens, 'buy-local' media and the inclusion of local foods in institutional procurement policies. We are less certain about how decreases in social isolation, increases in feelings of belonging, increases in awareness, knowledge and skills, and opportunities to act were impacted by the involvement in knowledge building activities or contributed to a sense of agency or the power to act.

---

<sup>69</sup> The helping tree is available at <http://www.breastfeedingcop.com/helping-tree.html>.

**How our food system operates from land and sea to table**

A healthy, just, and sustainable food system is economically, environmentally and socially viable for everyone, including farmers, fishers, workers, and community members. Most food consumed in Nova Scotia travels long distances. The dominant systems guiding our commodity-based food supply are designed to optimize resource use, reduce costs to consumers, and maximize profits, with little consideration of social, ecological and health consequences.

We define local food as foods that are grown or produced within the province of Nova Scotia and, where possible, the data are presented based on the geographic boundaries of Halifax. It is noted that there are local farmers, fishers and other producers who export their products nationally and internationally and that the food system in Halifax is influenced by what is happening in the rest of Nova Scotia and beyond. Therefore, a geographically bound picture of the food system in the Halifax region is difficult to determine. The intent of this section is to capture a general sense of the Halifax regional food economy and supportive infrastructure that give strength to the the local food system.

The food system is always vulnerable when reliant upon large volumes of imports. Currently, we have access to a wide range of imported foods, and we have research and experience to recognize that this practice may not be sustainable as climate change, transportation issues, and global security can potentially alter the sustainability of imported food.<sup>(26)</sup> More local production, harvesting, and supportive distribution pathways are conduits to strengthen community food security, and by extension increase the resiliency of the local food system.

Community food security relies heavily on the capacity and vitality of the local food economy to meet the needs of Halifax residents, including the producers, fishers, and farmers of local food. This section will explore some of the supply chains that exist within the regional food system as well as the people who work within them.

**4.4.1****AGRICULTURE**

The agricultural industry in Halifax is primarily located in the Musquodoboit Valley. A report to Halifax Council in 2009<sup>(25)</sup> made several recommendations to increase local food availability and recognize the importance of agriculture in the municipality. Some of these actions included local food procurement in catered municipal meetings, protecting rural agricultural lands, and supporting urban agriculture through community gardens. The following indicators will delve into the current state of the agriculture industry in the Halifax region.

**Farms in Halifax**

In the last census, Nova Scotia was the only province to report an increasing number of farms. In 2011, there were 3,905 farms in the province, representing a 2.9% increase since 2006.<sup>(20)</sup> However, it is unknown if we are seeing proportional increases in Halifax.

According to the 2011 census, there were 164 farms<sup>70</sup> run by 235 operators, in the rural areas of Halifax.<sup>(21)</sup> The latest available statistics (2013-2014) from the Nova Scotia Department of Agriculture found that there are 92 registered farms in Halifax County. (Personal communication: G. Post, Nova Scotia Department of Agriculture, 2014). It is important to note that farm registration is voluntary and has an associated fee for the provision of certain benefits to the farmer. As a result, many smaller farms do not register. Therefore, discrepancy exists between the number of census farms and the number of registered farms.

A breakdown of farm type by principal commodity for 2012, where beef (n=30) dairy (n=10), and other (n=9) are most prevalent, is found in Appendix N. Through the provincial farm registration, farmers select only one commodity. As a result mixed commodity farms are reduced to a single crop, and this is reflected in the statistics.

Farms reporting through Statistics Canada are not required to state a primary commodity as is the case with the provincial statistic reported above. The data in Tables 7 and 8 show the number of farms and the reported commodities produced or raised within the Halifax municipality.<sup>(21)</sup>

Table 7: Number of farms by crop type, Halifax, 2011.<sup>71</sup>

<i>Farms: crop type</i>	<i>Number of farms reporting</i>
Hay and field	124
Fruit, berries, and nuts	33
Vegetables (excluding greenhouse)	20
Vegetables (greenhouse)	5

Table 8: Number of farms by livestock type, Halifax, 2011<sup>72</sup>

<i>Farm: livestock type</i>	<i>Number of farms</i>
Cattle	56
<i>Beef</i>	34
<i>Dairy</i>	16
Pigs	8
Sheep	6
Poultry (broilers, roasters, cornish)	32
Poultry (turkeys)	4
Poultry (other)	6
<i>Table eggs</i>	19
<i>Hatching eggs</i>	3

70 A census farm refers to a farm, ranch or other agricultural operation that produces at least one of the following products intended for sale: crops, livestock, poultry, animal products, greenhouse or nursery products, Christmas trees, mushrooms, sod, honey or bees, and maple syrup products.

71 Statistics Canada (2011). Census of agriculture, retrieved from <http://www.statcan.gc.ca/ca-ra2011/index-eng.htm>.

72 Statistics Canada (2011). Census of agriculture, retrieved from <http://www.statcan.gc.ca/ca-ra2011/index-eng.htm>.

### Certified organic farms<sup>73</sup>

Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people.<sup>(88)</sup> “The principal goal of organic production is to develop enterprises that are environmentally sustainable and harmonious.”<sup>(88)</sup> There are farms that use organic, low input or humane practices, but have chosen not to seek certification due to cost, time, or other factors.

There are 89 certified organic farms in Nova Scotia,<sup>(90)</sup> three of which are located in the Halifax region.

Acadian Seaplants Limited<sup>74</sup> is the only manufacturer of organic agricultural inputs in Halifax. They manufacture natural plant and crop input products, animal feed supplements, cultivated sea-vegetables and functional ingredients derived from select species of marine plants.

### Age of farmers

The average age of a farmer in Halifax is 54.6 years which is slightly younger than the provincial average age of 56.4 years but slightly older than the national average of 54 years.<sup>(21)</sup> This number reflects the low numbers of young people choosing farming or experiencing difficulty entering farming as a career.

The breakdown of farmers by age in Halifax can be seen in Figure 19, which shows that 57.4% or 135 farmers are aged 55 and over.<sup>(21)</sup>

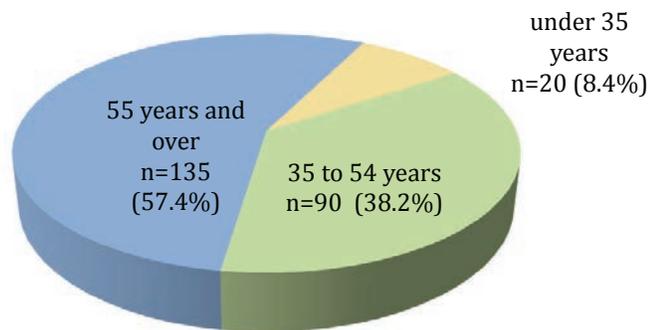


Figure 19: Farm operators by age in Halifax, 2011.<sup>75</sup>

73 “Organic” food is the product of a type of agriculture that promotes the long-term health of soil, plants and animals. A product can be certified if it is produced using the methods outlined by the Canadian Organic Standards.

74 <http://www.acadianseaplants.com/edible-seaweed-nutritional-supplements-ingredients/botanical-ingredients>.

75 Statistics Canada (2012). Farm and farm operator data: 2011 census of agriculture. Retrieved from <http://www29.statcan.gc.ca/ceag-web/eng/index-in dex;jsessionid=9E155F6067AB49AE768E3D6844053175>.

### **Economic viability of farms: gross farm sales and expenses**

The ability to track gross farm sales over time could serve as a barometer to measure the state of the agricultural industry; however, Halifax-specific data were not available. This marks an opportunity for future consideration.

At the provincial level, Nova Scotia's gross farm receipts<sup>76</sup> in 2010 were \$594.9 million, representing an increase of 9.1% from 2005. In comparison, nationally, there was a 3.9% increase in the same time period suggesting that the agricultural industry in Nova Scotia experienced some economic growth.<sup>(21)</sup>

Farm operators in Nova Scotia spent an average of 84 cents in expenses (excluding depreciation) for every dollar of receipts in 2010, about three cents less than they spent in 2005.<sup>(21)</sup>

### **Percentage of food dollar that returns to farmer<sup>77</sup>**

In 2010, the percentage of the food dollars that returned to Nova Scotia farmers was calculated at the provincial level. The findings reported that approximately 13% of food dollars went back to Nova Scotia farmers in 2008; whereas, in 1997, farmers received 17% of the food dollar.<sup>(26)</sup> More recently, estimates show that the percentage of the food dollar has increased to 15% through to 2013. (Personal communication with E. Walker, Department of Agriculture, 2015)

#### 4.4.2

### **URBAN AGRICULTURE**

Urban agriculture is defined as the practice of processing and cultivating food in the urban area.<sup>78</sup> It enables residents to grow food and increase awareness of the food system and food security. Urban agriculture can support a healthy, just, and sustainable food system by fostering learning, building community and business opportunities, increasing land areas available for food production and establishing infrastructure for neighbourhood-level food systems.<sup>(3)</sup>

#### **Urban farms**

There are three urban farms in Halifax: Spryfield Urban Farm, Cole Harbour Heritage Farm Museum, and Common Roots Urban Farm. Collectively, these encompass approximately 9.5 acres.



<sup>76</sup> The Census of Agriculture measures gross farm receipts for the calendar or accounting year prior to the census. Gross farm receipts (before deducting expenses) in this analysis include: receipts from all agricultural products sold and program payments and custom work receipts. The following are not included in gross farm receipts: sales of forestry products (for example: firewood, pulpwood, logs, fence posts and pilings), sales of capital items (for example: quota, land, machinery), receipts from the sale of any goods purchased only for retail sales.

<sup>77</sup> Percentages were calculated by looking at the amount of money spent on food by Nova Scotians and the farm cash receipts.

<sup>78</sup> Supporting Agriculture in Halifax Regional Municipality (2009) Retrieved from:<http://www.halifax.ca/council/agendasc/documents/1011091016report.pdf>.

### **Residential and urban chickens**

It is estimated there are three chicken keepers on the Halifax peninsula and “dozens in other more rural parts of Halifax”<sup>(91)</sup> but there is no official list. Urban chicken-husbandry has been a topic of public discussion in the recent past. Part of the complexity of this issue lies in the many by-laws varying by neighbourhood. This results in uncertainty. To mitigate this issue, Halifax has posted areas that have and do not have by-laws that prohibit chickens.<sup>79</sup>

### **Urban beekeeping**

In 2013, there were approximately 40 beekeepers and 250 colonies in the Halifax region. Of these, approximately 75% of the beekeepers had fewer than five colonies with most having one or two, and 25% of the beekeepers having five or more colonies.” (Personal communication: Joanne Moran, Department of Agriculture, 2013). According to the Canadian Honey Council, one colony can produce more than 100 pounds of honey.<sup>(92)</sup>

### **Rooftop gardens**

There is no known list of rooftop gardens in Halifax; however, anecdotally, some are known to exist. This is a potential area for future research.

#### 4.4.3

### **COMMUNITY FOOD INFRASTRUCTURE**

The following indicators look at the current and potential capacity and support for community food infrastructure. There are no indicators related to the local food consumption patterns, and this marks a potential research area in future. There is some evidence to suggest that demand for local food is increasing, as evidenced by the increasing number of farmers’ markets, community gardens and innovative food businesses reported in the accessibility section of this report.

### **Community gardens**

There is a variety of community garden models found throughout the Halifax region, including teaching gardens, urban farms, allotment gardens, collective gardens, community organization run, and/or university/college gardens.<sup>80</sup>

The approximate size of each of the gardens in the region is listed in Appendix M. The three urban farms (which include teaching and community gardens) cover approximately 9.5 acres and the remaining 41 gardens<sup>81</sup> (inclusive of allotment, collective and community gardens) encompass another three acres. This does not include the 42 school gardens and some known gardens for which data were not available. Of the 41 gardens inventoried, there were eight community gardens for which we were unable to obtain data related to the size of the space.

<sup>79</sup> <http://www.Halifax.ca/commcoun/pcc/documents/Chickens415.pdf>.

<sup>80</sup> Allotment: garden in which each person receives their own plot. There may or may not be a fee for the plot, depending on the garden. There can be other areas/tasks of the garden that may be cooperatively managed. (Chapman, 2009). Collective: members garden collaboratively on a single plot of land. Members may share all produce equally, or they may share produce according to hours worked in the garden. (Chapman, 2009) University/College: gardens existing on university or college land and managed by groups affiliated with the university or college. Community Organization: gardens managed by community organizations such as family resource centers, community resource centers, daycares, and recreation centers. The garden may be organized in allotments or collectively.

<sup>81</sup> Hare, Rebecca (2013) primary data collection on the number of gardens and their respective growing area.

Halifax supports gardens and food growing through the city’s policy statement on community gardens, the Halifax Community Grants Program, Respecting the Community Garden Program (Administrative Order 2014-009-OP), and the Tax Exemption for Non-Profit Organizations Program (By-law T-200). Collectively, these commitments allow residents to access land and provide links to resources for those wishing to start or participate in a community garden.<sup>(93-94)</sup> As part of the Urban Forest Master Plan, the municipality has partnered with Halifax Diverse and Dartmouth Common Community Garden to develop an urban orchard- the first and only urban orchard in the Halifax region. The city is now working with other community gardens to establish other urban orchards on city land.

### Attendance at farmers’ markets

Farmers’ markets provide a venue where producers, harvesters, and processors sell directly to the consumer. The markets are places for social interactions and opportunities learn about where our food comes from.<sup>(26)</sup>

Results from the Farmers’ Markets Nova Scotia Economic Impact Study reporting on a typical market day between July 12, 2013 and August 30, 2013, show that the four participating markets had between 486 and 9,482 people in attendance.<sup>(24)</sup> (See Table 9). The attendance data do not include any information on the demographics of the people attending farmers’ markets and this is recognized as a gap in data.

Table 9: Attendance at farmers’ markets in Halifax, typical market day (July 12, 2013-August 30, 2013).<sup>82</sup>

<i>Market</i>	<i># of shoppers on day of study</i>
Halifax Seaport Market	9,482
Musquodoboit Harbour Farmers’ Market	486
Tantallon Farmers’ Market	549
VG Partners for Care Farmers’ Market	641

### Revenue generated at farmers’ markets

At 43, Nova Scotia has the highest number of farmers’ markets per capita in Canada (Personal Communication K. Butler, FMNS, 2014). Farmers who sell directly to consumers via farm gates, farmers’ markets, and community supported agriculture businesses receive a larger (and fairer) portion of food profits.<sup>(90)</sup>

The Farmers Markets’ Nova Scotia Economic Impact Study<sup>(24)</sup> included four Halifax farmers’ markets. The following table outlines the results from a “typical” market day from July 12, 2013 to August 30, 2013.

82 Crawford, K. & Butler, K. (2014). Nova Scotia farmers’ markets economic impact study 2013: Cultivating community economy. Retrieved from <http://farmersmarketsns.files.wordpress.com/2014/03/report-screen.pdf>.

Table 10: Average money spent at farmers' markets in Halifax, typical market day, July 12, 2013–August 30, 2013.<sup>83</sup>

Market	Average spent at market per customer	Total spent on one day at market	Hours
Halifax Seaport Market	\$25.29	\$239,799.78	6 days/week open year round
Musquodoboit Harbour Farmers' Market	\$16.43	\$7,984.98	Sundays–June–Dec Every 2nd Sunday–Jan–May
Tantallon Farmers' Market	\$17.49	\$9,580.05	Tuesdays, May–Oct
Victoria General Partners for Care Farmers' Market	\$10.04	\$6,435.64	Fridays, open year round

\*\*\* Please refer to the accessibility section for more information on the numbers of community supported agriculture and community supported fisheries, farmers' markets, food trucks and pop up markets.

### Homeowners that grow fruit or vegetables

Household food production can range from growing herbs and small vegetables in pots on window sills, to planting fruit, vegetables and herbs in the ground or raised beds. It can also include vertical gardens on balconies, rooftop gardens or the use of personal greenhouses to grow fruit and vegetables. Household food production has long been part of the Halifax urban fabric.

Currently, we do not have data for this indicator. Anecdotally, the number of households growing food is thought to be increasing. This gap in knowledge represents a potential opportunity to better understand the extent of household gardening in Halifax.

### Greenhouses

Greenhouses are valuable infrastructure. In Halifax, there is no available inventory of greenhouses, thus the numbers presented may not accurately reflect the extent of this resource. While there is believed to be a growing interest in home-based greenhouses, there is a gap in the data available to support this assertion. This assessment identified four community-run greenhouses in Halifax and two owned by the city.

- Hope Blooms—Brunswick Street, Halifax
- Ecology Action Centre/Imagine Bloomfield—Almon Street, Halifax
- Transition Bay—St. Margaret's Bay (privately owned but co-operatively managed)
- Food is Sacred Co-op—Spryfield-Jollimore area (privately-owned but co-operatively managed)
- Halifax Parks and Recreation—Caledonia Road, Dartmouth
- Halifax Parks and Recreation—Sackville Street, Halifax

The Halifax facilities are run by the Parks and Recreation department. They are responsible for the planting and maintenance of the city's flowerbeds, care of the sports fields, and other recreation settings throughout the city.

<sup>83</sup> Crawford, K. & Butler, K. (2014). Nova Scotia farmers' markets economic impact study 2013: Cultivating community economy. Retrieved from <http://farmersmarketsns.files.wordpress.com/2014/03/report-screen.pdf>.

## FISHERIES

Throughout Halifax there are several fishing communities, including but not limited to, the areas along the Eastern Shore, Eastern Passage, Herring Cove, and Sambro. Even though fishing communities and processing facilities represent a significant part of the Halifax seascape, there was an identified gap in the Halifax-specific data on the scope of the industry. One possible explanation is related to the federal and provincial jurisdictions that regulate the industry. The broad geographic definitions of fishery zones (See Appendix P) do not easily align with any particular municipality within the province and limit the ability to understand the current state of the fishing industry specific to the Halifax region.

### FISH PRODUCTS FROM NOVA SCOTIA ARE SENT TO 85 COUNTRIES AROUND THE WORLD.

All fisheries operate and distribute in different manners. Some deal directly with grocery stores, some may sell to a company that distributes to a local grocery store, and others will provide additional services, such as cooking their own fish before selling it to a grocery store or business.

One local fishery buyer and processor who was interviewed stated that approximately 70% of the fish brought to their business was exported to the United States and sometimes sent to other countries. About 15% of the fish brought in was distributed to other parts of Canada; namely, Toronto and Montreal. The remaining 15% stays locally, and of that, 50% is supplied directly to restaurants and the other 50% is sold to distributors that supply and sell to grocery stores. These are figures based on an average year, and are subject to change based on supply and demand, and types of fish (Personal communication: K. Myers, 2014).

In 2012, \$913 million dollars worth of fish and seafood was exported from Nova Scotia, making it Canada's leading fish and seafood producing province in terms of export value.<sup>84</sup> The United States is Nova Scotia's primary market, but products are sent to 85 countries around the world.<sup>(96)</sup>

#### Types of fisheries

The categorization of the fishery industry is determined by the federal Department of Fisheries and Oceans. There are commercial and recreational fisheries and within each are sub-categories to describe the type of fishery. For example the commercial fishery, the focal point for this report, includes groundfish, shellfish, pelagic<sup>85</sup>, and aquaculture<sup>86</sup>. In Nova Scotia, shellfish is the largest source of revenue valued at 719 million in 2013.<sup>(96)</sup>

<sup>84</sup> Landed value means the value garnered for fish and seafood on the day they are offloaded from a vessel. Export value is the total cost of the fish and seafood after it is processed and sold internationally.

<sup>85</sup> Fish that range through the water are considered pelagic to differentiate them from "groundfish" which feed and dwell near the bottom. Pelagics mainly feed in surface or middle depth waters. These fish generally travel in large schools and include such species as blue fin tuna, swordfish, mackerel, capelin and herring.

<sup>86</sup> Aquaculture is the farming of fish, shellfish and aquatic plants in fresh or salt water. (<http://www.dfo-mpo.gc.ca/stats/aquaculture-eng.htm>).

### Landings<sup>87</sup> by species

In 2012, the top landings by species in Nova Scotia were lobster, Queen-Snow crab, sea scallops, *Pandalus borealis* shrimp and haddock.<sup>(97)</sup> Generally, groundfish landings have declined in Nova Scotia since the 1990s with haddock being the only species showing signs of recovery.<sup>(97)</sup> In 2012, the Nova Scotia sea fisheries recorded total landings of 219,744 metric tonnes that included groundfish, pelagic and other finfish and shellfish, valuing \$694 million.<sup>(98)</sup>

The most recent data on landings of groundfish in Halifax are shown below:<sup>(99)</sup>

Table 11: Type and weight of ground fish landings in Halifax, 2010.<sup>88</sup>

Species	Landings (kg)
Atlantic Cod	246,798 kg
Haddock	134,047 kg
White Hake	153,001 kg
Red Hake	118,384 kg
Silver Hake	7,306,986 kg
Atlantic Halibut	555,266 kg
Turbot ( <i>Greenland Halibut</i> )	5,160 kg
Dogfish	477 kg

### Fishers in Halifax

We were not able to obtain specific data for the Halifax Region. As a proxy measure to provide a scope of the industry, the federal Department of Fisheries and Oceans reports that there were 4,891 licenses held in 2012 compared to 5,305 licenses in 2010 in the Nova Scotia maritime region, which includes Halifax.<sup>(22)</sup> In 2007, there were 8,600 fishers in Nova Scotia.<sup>(100)</sup> A 2009 report that investigated the employment trend in the Nova Scotia fisheries from 1997-2007 showed that there was a long-term decline in the labour force, although there was some recovery between 2002 and 2005.<sup>(100)</sup>

87 Landings are defined as the part of the catch that is put ashore.

88 Nikoloyuk, J. & Adler, D. (2013) Valuing our fisheries: Breaking Nova Scotia's commodity curse. Retrieved from <https://www.ecologyaction.ca/files/images-documents/file/Marine/Valuing%20our%20Fisheries%20FINAL.pdf>.

### Average age of fishers in Halifax

The age of fishers can serve as an indicator of the future socioeconomic stability of the industry. Although data related to the average age of fishers in Halifax could not be accessed, a 2009 report found that the proportion of middle aged fishers (age 25-44) making up 45% of all fishers has remained fairly stable over time, whereas younger fishers (age 15-24) have been in decline since the ground fishery collapse in the 1980's. They made up only 10% of the population of fishers in 2008, whereas, the proportion of older fishers (ages 45-64) had grown.<sup>(22)</sup>

#### 4.4.5

### LABOUR

The protection of farming and fishing industries is vital in achieving a secure, healthy, just, and sustainable food system. In addition to the aging workforce, the out migration of young people from coastal communities<sup>(100)</sup> and rural areas, is impacting the fishing and farming labour markets. The labour demands in these industries are subject to fluctuations depending on the season. It is possible that recent changes to employment insurance<sup>89</sup> may continue to increase the outmigration.

It is recognized that the data presented here represent a small portion of the labour market related to the food system. Notable omissions include the food services and restaurant sectors, and the food processing, transportation, and distribution industries.

### Hours worked on the farm

In Halifax, 25% of farmers worked over 40 hours per week on the farm. (Figure 20). The number of hours worked per week provides some context to the time required to run a farm. The level of commitment needed depends on many factors including number of farm workers, size of the farm, and type of livestock or produce.

In the Halifax region, 44.7% of farmers participate in paid work outside the farm and 38% are working in paid jobs in excess of 40 hours per week.<sup>(21)</sup> (Refer Figure 21) The high number of farmers that need to work away from the farm may result in lower crop production and possibly speaks to the challenge to make a living solely based on farming.

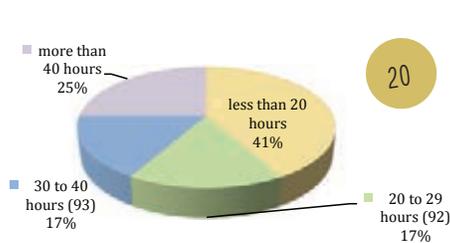


Figure 20: Average number of hours worked on the farm per week, in Halifax, 2011.

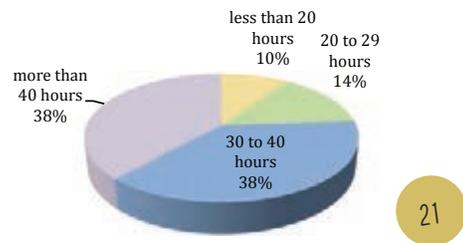


Figure 21: Number of paid hours (non-farm work) per week in Halifax, 2011.

<sup>89</sup> Changes to the Employment Insurance took effect in January 2013 <http://www.servicecanada.gc.ca/eng/sc/ei/ccaj/vignettes.shtml>.

#### 4.4.6

### **DISTRIBUTION**

The distribution indicator refer to the movement of food from the location where it is produced or processed to the consumer. Food system distribution practices can have a direct influence on the accessibility and availability of local food.

Often the main distribution system is characterized by low cost, large volumes and consistent quality. The result is a dependency on producers outside the local area that can meet these requirements and provide a constant supply year round. This practice creates barriers for local producers who may not be able to meet the criteria for large volumes and consistent supply, as well as consumers who wish to buy seasonal, locally produced food.

#### **Wholesalers/food distributors**

Foodservice distributors are wholesalers who supply foods and other items to businesses and institutions that prepare and serve food, such as provincially and federally funded institutions, restaurants, hotels, convenience stores, and independent retailers. Foodservice distributors can be classified as a master distributor<sup>90</sup> or a commodity distributor.<sup>91</sup> A master distributor carries a wide variety of food and non-food items, while a commodity distributor focuses on a particular type of commodity, such as dairy, seafood, produce, bread or protein.

As products are distributed on a provincial scale, we cannot limit this discussion simply to Halifax. In Nova Scotia, there are three master distributors that operate province-wide, Sysco Foods, Gordon Food Services Atlantic, and OH Armstrong. There are 17 commodity distributors operating in the province: two for bread, four dairies, four for produce, five for protein (beef, lamb, pork, poultry), and two for seafood.<sup>(101)</sup>

#### 4.4.7

### **PROCESSING**

Processing involves the packaging and preparation of a raw food product for distribution and sale and increasing the capacity of local processing increases community food security because it enables local products to be brought to a local market.

#### **Certified commercial grade kitchens**

Commercial kitchens can be difficult to define as they vary in use, capacity, and licensing. Generally, a commercial kitchen could be defined as a space with the necessary licensing requirements allowing food to be made and served.

---

<sup>90</sup> A master distributor supplies foods and other items (such as paper and chemical supplies), may have its own food brands or private labels, and may even process its own foods.

<sup>91</sup> A commodity distributor primarily supplies a particular food commodity group such as produce, dairy, bread, protein, or seafood, but in some instances may supply a limited line of additional food products.

There is no information available that would specifically identify the number of commercial kitchens in the Halifax region. Through the Department of Agriculture, applications for foodservice establishments and licenses are based on whether they will operate as an eating establishment or a food shop. Any group serving food to the public must meet the requirements of the Nova Scotia Food Safety Regulations<sup>(102)</sup> and the Nova Scotia Food Retail and Food Services Code.<sup>(103)</sup> In this process commercial kitchens in community centres or faith centres would be classified as an eating establishment.

### **Fish processing facilities**

The fish processing industry is a major source of direct and indirect employment and income and one of Nova Scotia's leading sources of export earnings.<sup>(23,96-98)</sup> The processing sector is responsible for producing a wide range of fresh, frozen, and value added products in Nova Scotia. There has been a decline in the industry since 1997.

In 2006, Halifax had a total of 22 fish processing plants, 18 relied on capture for the raw material, two processed raw material from aquaculture and two were inactive.<sup>(23)</sup>

### **Abattoirs<sup>92</sup>, meat plants, dairies, and other processors**

There are both federally<sup>93</sup> and provincially<sup>94</sup> registered meat processing plants in Nova Scotia. These facilities differ in the jurisdictional oversight and licensing rigour. For example, meat processed in a federal plant can be transported to markets throughout the country, whereas products from provincially inspected plants are limited to markets within the province.

There are 28 provincially registered and three federally registered abattoirs in Nova Scotia. Halifax has only one processing plant, Eastern Meat Purveyors, which has a federal registration. The small number of meat processing plants makes sense, because of the low number of meat producing farms in the Halifax region.

There are four milk processors in Nova Scotia<sup>(101)</sup>, two of which operate in Halifax—Farmers (Agropur) and Baxter's (Saputo). Despite recent shifts in ownership to larger companies located outside Nova Scotia, the facilities continue to process local milk.

Dover Flour, Canada Bread (formerly Ben's) and a host of other small bakeries and food processors are all based in Halifax. Currently we do not have a comprehensive inventory of the number of small scale food processors in the Halifax region.

---

92 An abattoir is a place in which animals are killed and butchered for the intention of being processed as food.

93 The Canadian Food Inspection Agency (CFIA) performs inspection activities in all federally registered meat establishments. This is done to verify that meat products are manufactured in accordance with the Meat Inspection Act and the Meat Inspection Regulations.

94 Provincial/territorial governments are responsible for regulating the production and inspection of meat in these facilities.

## HILDA'S UNITY GARDEN SOCIETY (HUGS)

HUGS was founded in 2009 by residents of the Bayers-Westwood community in Halifax's West End. The project evolved out of a growing interest in community food security, spurred by workshops run at the Bayers Westwood Family Resource Centre (BWFRC), in conjunction with the Ecology Action Centre (EAC). Volunteers raised funds to build 24 raised beds. Early days in the garden were difficult; there were few resources and little infrastructure. Recognizing the important role the garden played in the community, the EAC and the BWFRC agreed to revitalize the garden in 2013, working to upgrade the physical infrastructure and to increase community participation. The garden now boasts a large shed, a fence, a permanent water source, and two waist-high raised beds (for seniors who garden). They've also given residents the tools they need to properly maintain their plots. Additionally, much work was done to bring community members into the garden. Now there are over 20 individuals and families involved, with an estimated 80 people directly benefitting, with dozens more indirectly benefitting.



### SUMMARY

Halifax is geographically diverse with agricultural lands, long coastlines for fishing, suburban markets and a vibrant urban core. While there is a significant amount of data related to the local food economy and infrastructure, the picture is still somewhat incomplete. Fisheries data pertaining specifically to the Halifax region are particularly difficult to obtain: there is also limited insight on the scope of the processing and distribution industries, and very little knowledge of the consumption patterns of the population. Despite limitations, the data related to the infrastructure suggest Halifax enjoys some benefits that contribute to the local food system such as diversity of local foods available as a result of the agriculture and fishing industries. There are a number of urban agricultural initiatives such as greenhouses, home gardens, community gardens, and urban farms that appear to be growing in size and scope, and the municipal government is making strides to protect rural agriculture, and promote urban food related initiatives. While the number of farms is increasing, the average age of both farmers and fishers is high. Employment in the fisheries has not rebounded from the collapse of the ground fishery; however, alternative fisheries such as snow crab and aquaculture seem to be mitigating this situation. There are few data related to the consumption of local food, marking this as an area for further research. The developing picture of this determinant shows some forward thinking and exciting advances in the local food economy and infrastructure, alongside elements of concern like the aging labour force in agriculture and fishing. The data within the local food economy and infrastructure determinant have clear connections with indicators in other determinants highlighting that despite advancements in the local food movement, there are still many households that cannot access healthy, local food—especially low income households.

### How we support our food system

Public investment and support are influential to a healthy, just, and sustainable food system. Governments at all levels, businesses, and community institutions can set policies and spending priorities that affect community food security and optimally these actions would be coordinated, strategic, and evidence-based.

Local and municipal governments throughout Canada are actively involved in strengthening the food system, evidenced by the number of food strategies supported by local governments. The city of Halifax has named community food security in its regional plan.<sup>(54)</sup> Furthermore, Halifax has committed to identifying opportunities to integrate small-scale food production and community gardening into site and building designs.<sup>(104)</sup> Food was also a focus in the Mayor's Conversation on Healthy and Livable Communities in October 2013.<sup>(105)</sup>

Conversely, there still remain many policies that impede the realization of a healthy, just, and sustainable food system. Perhaps most notably are the social policies developed at all levels of government to support citizens and families who are experiencing economic or physical hardships. The food costing and charitable food organization data show that income assistance rates are not sufficient to cover the cost of a basic nutritious diet when other costs of living such as utilities, shelter, and transit are considered. Special diet allowances also fall short in providing enough support to those with disabilities and illnesses.

A comprehensive scan of the policies and practices that enhance or impede the community food security is beyond the scope of this report. For this report, the investment and support of the food system is limited to the themes of food policy, emergency planning and research support.

#### 4.5.1

### FOOD POLICY

This report contributes to the identification of some policies and practices that impact community food security, however it does not provide a comprehensive inventory. The need for such an inventory is recognized in that current policies and practices can be supported and emergent initiatives can be implemented as opportunities arise.

Food policies play a pivotal role in realizing a healthy, just, and sustainable food system. Provincially, there has been a concerted effort to develop and revise policies to support healthy food environments. *THRIVE! A plan for a healthier Nova Scotia* provides an overarching strategy for this work.<sup>(52)</sup> The integration of food policy and social policy is the foundation of THRIVE! and the application of this approach has implications in the advancement of community food security. Additionally the Environmental Goals and Sustainable Prosperity Act<sup>(105)</sup> contains two goals related to increasing local food production: the first is that 20% of the money spent on food by Nova Scotians will be spent on locally produced food by 2020 and the second goal is to increase the number of local farms by 5% by 2020.

Many provincial and local policies provide an opportunity to align healthy eating and the local food economy through intentional action to link policy directives to the local food system, including the local food economy and infrastructure. Table 12 outlines the determinants of community food security as they relate to some of these policies and their role in local food system. For example, the purchase and procurement of local food

products is encouraged in most policies. Others consider assurances of food for everyone through reasonable pricing and universal food availability in the policy directives. For example, the School Food and Nutrition Policy state that “food programs can help ensure that all students have access to healthy, affordable foods during the day.”<sup>(106)</sup> As a result, school breakfast and snack programs are designed to be universally available to all students rather than only students who are vulnerable to food insecurity.

### Institutions with local purchasing policies

The potential for large institutions to play a role in contributing to a healthy, just, and sustainable food system is significant. By their nature, institutions such as municipal governments, recreation centres, correctional facilities, hospitals, schools, and universities, long term care facilities, and licensed childcare centres represent a large, stable market for local producers and fishers.<sup>(101)</sup> The presence of a procurement policy committed to local purchasing could strengthen support for local farmers, fishers, and producers.

In the Halifax region, all institutions that fall under provincial nutrition policies (i.e. schools and licensed child care centres) have guidelines to purchase and serve locally sourced foods whenever possible;<sup>(106-107)</sup> which translates into 352 sites in the Halifax region. Local purchasing policies or practices are either in development or in practice within other institutions such as Capital Health, Dalhousie University, and others.

There is no known comprehensive inventory of the number of institutions with local purchasing policies. This presents as an opportunity for future food system assessments.

Table 12: Institutional policies by determinants of Community Food Security (CFS), Halifax, 2013.<sup>95</sup>

	Accessibility	Adequacy	Knowledge and agency	Local food production and consumption	Public investment and supports	Resource protection and enhancement
<i>Settings</i>						
Health care facilities (n=20+ sites)	Coloured block	Coloured block		Coloured block	Coloured block	Coloured block
Licensed daycare and childcare centers (n=208)	Coloured block	Coloured block	*	Coloured block	Coloured block	Coloured block
Long term care facilities (n=34)	Coloured block	Coloured block	*		Coloured block	
Public schools (n=144)	Coloured block	Coloured block	**	Coloured block	Coloured block	Coloured block
<i>Institutions and organizations</i>						
Dalhousie <sup>(108)</sup>			Coloured block	Coloured block	Coloured block	Coloured block
Halifax Regional Municipality				Coloured block	Coloured block	Coloured block

A coloured block indicates inclusion or application of directives, guidelines or suggested practices related to CFS (see footnote). \* Through programming \*\* Through curriculum.

<sup>95</sup> Policies encouraging local food purchasing and procurement were considered under the local food production and consumption determinant. Policies that made a specific reference to the promotion and protection of breastfeeding were considered within the accessibility and public investment and supportive environment determinants. The policies making specific reference to healthy food availability were considered within the adequacy determinant. The policies that encouraged role modeling and/or skill development were categorized under the knowledge and agency determinant. Policies including direction related to waste management practices were considered under the resource protection and enhancement determinant of CFS.

# BREASTFEEDING COMMUNITY OF PRACTICE: MAKE BREASTFEEDING YOUR BUSINESS INITIATIVE

Breastfeeding provides food security for infants and young children. It is the only food an infant requires in the first 6 months of life, and it provides many of the nutrients needed into the first few years of life.

The Breastfeeding Community of Practice is a coalition of volunteers and professionals promoting and supporting breastfeeding locally. One of their most important initiatives has been the Make Breastfeeding Your Business project. It encourages businesses and organizations to create supportive environments for breastfeeding clients and employees, and in doing so contributes to improving breastfeeding rates and food security. Its successes include counting more than 50 stores and offices that encourage breastfeeding on their premises and that also support their own employees to continue breastfeeding once they return to work. They also supported Capital Health in developing its breastfeeding policy that covers over 12,000 employees.



## Breastfeeding policies

The Nova Scotia Human Rights Commission's breastfeeding policy falls under the Human Rights Act and affirms a woman's right to breastfeed in public. The policy states that women cannot be asked or made to feel compelled to move to a more discreet area to breastfeed. The policy also states that women who need to breastfeed while working should be accommodated by the employer.<sup>(109)</sup>

The provincial breastfeeding policy<sup>(110)</sup> applies to the Department of Health and Wellness, District Health Authorities, the IWK Health Centre and all health system funded providers. The policy objectives are: to provide leadership for the protection, promotion and support of breastfeeding; to improve the health status of mothers and babies by increasing breastfeeding initiation and duration in Nova Scotia; and to support the implementation of the Baby Friendly Initiative.<sup>96</sup>

<sup>96</sup> The Baby Friendly Initiative is an international program established by the World Health Organization and UNICEF to promote, support and protect breastfeeding initiation and duration worldwide in hospital and in the community with the aim to improve the health status of mothers and babies/children.

There is a joint breastfeeding policy between Public Health Services (Capital Health) and the IWK Health Center<sup>97</sup> to promote, support and protect breastfeeding. The policy is framed around the Baby Friendly Initiative and aims to foster collaboration among community partners and help establish a culture that is supportive of breastfeeding.<sup>(111)</sup> Additionally, Capital Health has a policy that protects, promotes and supports breastfeeding by staff in the workplace and is committed to providing an environment where all persons are treated with dignity and respect. This policy applies to all Capital Health employees, students, physicians and volunteers.<sup>(112)</sup>

### **Breastfeeding friendly businesses**

Make Breastfeeding Your Business<sup>98</sup> is a provincial initiative that supports and guides businesses, organizations, and municipalities to adopt practices that protect, promote, and support breastfeeding. The Breastfeeding Community of Practice<sup>99</sup> reports that in 2013 there were over 50 breastfeeding friendly spaces in Halifax, created through the support of the Make Breastfeeding Your Business initiative.

### **Marketing programs supporting local food**

There are two province wide marketing programs that promote locally produced and processed foods. Select Nova Scotia is run by the Nova Scotia Department of Agriculture. Halifax has hosted events organized through Select Nova Scotia every year since 2008, such as the IncrEDIBLE Picnic. Taste of Nova Scotia is a joint marketing initiative involving both the private and public sectors. Many sectors and many Halifax businesses take part in this initiative.

---

97 For Public Health within Halifax this includes: 4 Public Health sites for the IWK Health Centre within Halifax this includes approximately 13+ sites including the main IWK Health Centre site, administrative offices, community based offices/programs/clinics for mental health and addictions, women's health, and children's health, etc. (as per IWK Health Centre website: <http://www.iwk.nshealth.ca/page/getting-here-and-around>).

98 Created by Sarah Frittenburg 4th year Dalhousie student, in collaboration with the Lunenburg & Queens County Baby-Friendly Initiative committee (Feb 2009).

99 Breastfeeding Community of Practice: is a volunteer network of individuals who support breastfeeding in Halifax. The community of practice connects with individuals, communities and organizations that are interested in creating a breastfeeding- friendly culture in NS and provide support to make it happen.

#### 4.5.2

### EMERGENCY RESPONSE

The development of emergency response plans most often includes guidelines for the assurances of food provisions.

Halifax's Emergency Management Organization<sup>(113)</sup> and the emergency measures by-law (By-Law E-100) Respecting of a Prompt and Coordinated Response to an Emergency identify food provisions as a part of the individual household emergency kit.<sup>(114)</sup>

Other businesses and institutions in Halifax take food provisions into account as part of their emergency response planning. Some examples include Capital Health, the Maritime Forces Atlantic, university campuses, and so on. There is no known list of the number of emergency response plans in Halifax.

In terms of the food available within the province in the event of an emergency that would disrupt the food supply chains, the capacity to deal with such a situation is currently unknown.

#### 4.5.3

### RESEARCH

Funding for research is a key avenue in better understanding the current food system and the potential to realize a healthy, just, and sustainable food system. There is no known comprehensive list of research activities related to food security in Halifax; however, some examples have been compiled.

Public support for food system related research including the agriculture, fishery and environmental sectors, as well as the social constructs of food, such as affordability, accessibility and cultural appropriateness, enables innovation, adaptation, and change, to better support community food security. In terms of agricultural and food production research, the federal and provincial governments support discovery and applied research, as well as knowledge transfer activities through a number of direct and indirect funding mechanisms. Some examples of organizations and institutions conducting food security research in the province include:

- **Perennia:** Perennia is a crown-owned corporation with the mandate to deliver a wide range of extension knowledge transfer activities across the province, including field crops, horticulture, animal husbandry, organic agriculture and food safety. Most other provinces have eliminated similar knowledge transfer and extension organizations.
- **Faculty of Agriculture, Dalhousie University:** There are numerous indirect programs that support agriculture and food research, including direct funding for the Faculty of Agriculture, administered by the Department of Agriculture, outside the post-secondary funding envelope. Broadly speaking, this supports a range of academic, research and knowledge transfer initiatives at the Faculty and benefits the entire provincial agriculture sector.
- **FoodARC, Mount Saint Vincent University:** Two of their current initiatives include: Activating Change Together for Community Food Security and Voices for Community Food Security. Activating Change Together for Community Food Security is a five-year participatory research project based at FoodARC, Mount Saint Vincent University to increase community food security for all Nova Scotians. Through project activities, “the strategic research alliance strives to better understand the components of

community food security from a diversity of perspectives and increase our capacity—as individuals, community members, and citizens—to address it through policy change.”<sup>(39)</sup> Voices for Community Food Security formerly the Nova Scotia Participatory Food Costing Project involves “people who have experience of food insecurity, and those with the ability to impact the issue, in the process of collecting, analyzing and sharing knowledge about the affordability of a healthy diet in Nova Scotia.” This collaborative, community based participatory research has been in existence for over 10 years.<sup>(17)</sup>

- **Faculty of Health and Human Performance, Dalhousie University:** There are a number of research projects studying the food environments in our society, including institutions like schools, sport and recreation settings.
- **Public Health—Capital Health, Understanding Communities Unit** have worked in partnership with others to conduct research to better understand the community food system including involvement in Activating Change Together for Community Food Security case community of Spryfield.
- **Ecology Action Centre** has produced reports on the fisheries sector and the “Is Nova Scotia Eating Local?” report on the social, economic and environmental impacts of the food system in Nova Scotia. (The latter was produced with the Nova Scotia Federation of Agriculture.)

#### **Provincial support for agriculture and food research:**

One vehicle for funding agriculture and food research is the Growing Forward II program. It is a joint federal/provincial initiative that supports applied and innovative agriculture and food research programs, delivered through researchers at post secondary institutions. Other indirect support for agriculture research comes from agencies like the Nova Scotia Research Investment Trust that supports research at post-secondary institutions that, in part, train food and agriculturalists.

It is noted that this is not a comprehensive list of supported research related to the food system and in fact, this may be an area where further inventories would be helpful in establishing a better understanding of the current food system in Halifax.

## **SUMMARY**

Governments, organizations, institutions, and community led initiatives are all contributing to strengthening community food security through policies, practices and processes. There have been a number of policies, initiatives, and strategies focused on the advancement of community food security by promoting healthy eating, local food procurement, adopting waste management practices, improving food access and creating opportunities for learning. Highlighting the success stories related to public investment and supports provides resources for others to learn and incorporate food systems thinking within their own sphere of influence.

There are gaps in our knowledge related to emergency preparedness and the current capacity of the Halifax region to be self-sustaining should a state of emergency necessitating the closure of the transportation network be declared.

With respect to research related to the food system, there are a number of known projects and knowledge supports, and a few examples were shared. It would seem practical to acknowledge that there are more research related activities not mentioned in this report. The development of an inventory of these activities, and the knowledge generated as a result, would be a valuable contribution to understanding the food system both locally and beyond. The knowledge could inform decisions related to potential food system actions in future.

### How we sustain our food system

A healthy, just, and sustainable food system is contingent upon a regional and provincial foundation of farmers and farmland, and fishers and fishing grounds. It is impacted by the degree to which farmland and fish stocks are protected from loss. In such a system the health of the environment is protected, promoted, and preserved through environmental stewardship of natural resources. Decisions made today must consider the future impact as a result.

#### 4.6.1.

### AGRICULTURAL LAND BASE

The regional plan identifies the Musquodoboit Valley as the only remaining prime farmland in Halifax largely unaffected by non-agricultural uses. Although the number of farms has declined over the last 50 years, dairy and mixed farming remain important sources of employment.<sup>(24)</sup> A group in the Musquodoboit Valley has begun to assemble a local food map of the area.<sup>100</sup>

#### Land actively farmed

Halifax has 165 census farms that provide a range of products and commodities such as livestock, eggs, hay, vegetable, and fruit crops.<sup>(20)</sup> Collectively, the crops make up a total of 4,131.05 hectares of farmland (See Table 13). Additional details related to the types and size of farms in Halifax is found in appendices Q-U.

Table 13: Number of farms and hectares of land by crop type, Halifax, 2012.<sup>101</sup>

<i>Farms: crop type</i>	<i>Number of farms reporting</i>	<i>Hectares</i>
Hay and field	124	3,468
Fruit, berries, and nuts	33	650
Vegetables (excluding greenhouse)	20	13
Vegetables (greenhouse)	5	.05
<b>Total area</b>		<b>4,131.05</b>

100 Accessed at: <http://www.musquodoboitvalleyguide.ca/development-groups/local-food/>.

101 Statistics Canada (2012). Farm and farm operator data: 2011 census of agriculture. Retrieved from <http://www29.statcan.gc.ca/ceag-web/eng/index-index.jsessionid=9E155F6067AB49AE768E3D6844053175>.

### **Land available for gardening**

Achieving a healthy, just, and sustainable food system requires some consideration as to the amount of land available for food production in rural, suburban and urban areas. As previously reported in the accessibility and local food economy and infrastructure sections, there are some data on the land available for gardening in the Halifax region.

Nipen (2009) examined the potential space for food production in the urban area of peninsular Halifax. The study reported that 3.2 km<sup>2</sup> or 1/6 of the peninsula is made up of yards, unobstructed by buildings and roads and as a result, they represent potential areas for crop cultivation. Shade relief models showed that shading in the summer covers on average between 0% and 55% of yard space. Based on these findings, it was concluded that there is enough land to produce a significant amount of summer-season vegetables on the Halifax peninsula. This study did not consider public areas such as parks, fields, idle lands or areas that are underused or abandoned.<sup>(115)</sup>

### **Urban agricultural protection policies**

There are no known official policies in Halifax that protect urban agriculture.

### **Rural agricultural protection policies**

In accordance with a policy that protects the agricultural land base, Halifax Regional Council directed staff to support local agriculture through municipal authority and jurisdiction.<sup>(25)</sup>

Good soil is essential for most agriculture and the removal of topsoil can damage valuable farmland. The Municipal Government Act provides municipalities with the power to “regulate or prohibit the removal of topsoil” by way of land use by-laws where there is supporting policy in the Municipal Planning Strategy. This new provision<sup>(116)</sup> will permit Halifax to create a topsoil removal by-law, which develops measures and regulations to improve on-site storm water retention, prevent erosion, and retain topsoil.

The Regional Plan section 3.2.4 will establish an agricultural designation on the Generalized Future Land Use Map shown in Appendix V.<sup>(54)</sup> The designation applies to a significant part of the Musquodoboit Valley and encourages the area to be used for “natural resource-based activities and industries such as farming, forestry and mining and to protect these uses from the intrusion of incompatible non-resource related uses”. The designation will seek to “support services for the surrounding agricultural communities by establishing a series of centres within which continuing development will be supported and by limiting the amount of residential development which may occur beyond these centres.”<sup>(54)</sup>

## FISHERIES

Protection of the fisheries is a significant dimension in securing a healthy, just, and sustainable food system. The collapse of the ground fish fishery, and the hardships that ensued, have prompted efforts to protect the marine environment and marine life, in addition to adopting more sustainable ways of catching, harvesting and marketing fish and seafood. The following indicators will report on some of the ways the fishery is being protected.

### Grocers with sustainable seafood<sup>102</sup> policies

There are two major food retailers that have adopted sustainable seafood sales policies: Sobeys<sup>103</sup> and Loblaw's<sup>104</sup> both with multiple outlets throughout Halifax.<sup>(117-118)</sup> Implementation of these policies are part of a long-term goal to ensure a stable supply of seafood and to further efforts to protect the marine environment through the commitment to not sell any seafood species, farmed or wild, that are associated with major sustainability issues, unless there is an acceptable plan and timeline to improve the sustainability issues associated with the product. Progress has been made to de-list some red-ranked species and there has been some progressive procurement through traceability and fishery improvement projects. There is still work to be done to transition the seafood marketplace to fully sustainable sources, for both wild capture fisheries and for aquaculture.

### Fishery and aquaculture protection policies

The federal Fisheries Act was amended and received Royal Assent in 2012.<sup>(119)</sup> The changes to the Act focused on protecting the productivity of recreational, commercial and Aboriginal fisheries, where the protection rules will address significant threats to the fisheries and the habitat that supports them. Provincially the Nova Scotia Fisheries and Coastal Resources Act seeks to encourage, promote and implement programs that sustain and improve the fishery, including aquaculture.<sup>(120)</sup> Furthermore, the draft Coastal Strategy<sup>(121)</sup> calls for municipal involvement in protecting the coastline, and by extension the fishing industry, through zoning by-laws.

New regulations in the Fisheries Act will manage threats to the sustainability and ongoing productivity of Canada's commercial, recreational and Aboriginal fisheries through compliance and protection tools; clear, consistent regulations and standards; and enhanced partnerships with agencies positioned to provide fisheries protection.<sup>(119)</sup>

### Locally-harvested wild fish in local markets

These data are not available.

<sup>102</sup> Seafood fished or farmed in a manner that can maintain or increase production in the long term, without jeopardizing the health or function of the web of life in our oceans.

<sup>103</sup> "By 2013, we will not sell any seafood species (in our seafood and grocery departments) that have major sustainability issues associated with them, where science-based consensus has defined the extent of the issues, unless the sources we procure from have science-based development plans and timetables for improvement. We will monitor development plans over time for demonstration of improvements, and will consider appropriate action if suitable progress is not made. As sustainability also includes social elements, we will consider in our decision-making the impact on the economy of Canadian-based local producer communities and their local retail markets we serve."

<sup>104</sup> "All species/stocks are assessed using our seafood sourcing decision tree. We are aiming toward Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC) or equivalent certification for all our seafood products. In 2013, approximately 88%\* of seafood product sales in our core categories (fresh seafood, frozen seafood, canned goods and frozen grocery) were procured from MSC or ASC certified sources, acceptable sources with conditions, or sources making meaningful progress toward sustainability."

#### 4.6.3

### **SEED**

The protection of seed resources can help preserve the heritage, diversity and integrity of the local agricultural food system.

#### **Seed banks and seed libraries**

A seed bank is a type of seed depository where the security of the seed is the priority; whereas, a seed library can be described as a grassroots, small scale project that focuses on widespread access to seeds.

In Nova Scotia, there are three operating seed libraries: The Just Us! Centre for Small Farms in Grand Pre, the Harriet Irving Botanical Gardens on the Acadia campus in Wolfville (focused on forests and native species) and the Halifax Heritage Seed Library at the Ecology Action Centre in Halifax. There is also one seed bank at MacRae Library at the Dalhousie Agricultural Campus, Truro.

Generally, interest in seed libraries seems to be emerging throughout Nova Scotia. There is potential for the establishment of a regional seed bank that would serve as a backup for locally significant seed varieties currently held at the Seeds of Diversity bank in Ontario<sup>(105)</sup>. This local seed library could support smaller community projects.

#### 4.6.4

### **ENERGY**

It takes a lot of energy to produce, process, transport, package, and store food. Understanding energy use and greenhouse gas emissions in the food system is the first step in reducing our consumption of finite resources, like oil or coal, and reducing our polluting emissions.

#### **Distance food travels (and associated greenhouse gas emissions)**

The distance food travels can impact the environment through increased greenhouse gas emissions and consumption of natural resources.

The average distance traveled by an item in the National Nutritious Food Basket (NNFB) from its origin to Halifax is 3,976 km.<sup>(26)</sup> When considering a weekly diet, the basket of goods travels a total distance of 30,666 km and emits 5.911 kg of carbon dioxide. The distances and greenhouse gas emissions for a theoretical “all-local NNFB basket” were also calculated. As a comparison, an estimate of 350 km for travel within the province was used for all local foods. The theoretical, all-local basket is approximately one sixth of the distance and emissions: 4,988 km and emitted 1.017 kg of carbon dioxide.<sup>(26)</sup>

#### 4.6.5

### SOIL, AIR AND WATER QUALITY

The health of basic ecological resources is vital to the realization of a healthy, just, and sustainable food system. There were no indicators developed for this theme; however, there is a federal soil benchmarking program with sites in Nova Scotia, and the provincial government maintains a groundwater monitoring program, although the data are not reported here.

In 2011, the Ecology Action Centre published a study on heavy metals in Halifax community gardens and found that more than one third of samples had higher concentration of lead than the Canadian Council of Ministers of the Environment guideline (CCME).<sup>105</sup> Arsenic was also widespread in the sampled sites, with a concentration higher than the CCME guideline in almost half of the sample locations. This was expected due to the high background concentration of naturally-occurring arsenic in Nova Scotia soils and bedrock. Copper and zinc were also measured for this study and only a few sampled locations had higher concentration of these elements than the CCME guideline.<sup>(27)</sup>

#### 4.6.6

### FOOD WASTE

Food waste is an important issue to discuss in the context of community food security. Wasted food represents wasted resources throughout the entire food system chain. The amount of food wasted and how this waste is addressed at a municipal level can hinder or support community food security. We do not have food waste statistics at the municipal or provincial level; however, a recent study found that an estimated \$27 billion of food is wasted each year in Canada—this is roughly 40% of the value of food we produce.<sup>(29)</sup>

Halifax is a leader in the handling of municipal waste and promoting practices that protect and enhance the environment. For example, one by-law prohibits the export of waste materials generated within the municipality, resulting in all industrial, commercial and institutional (ICI) sector garbage, organics, construction and demolition waste being processed in Halifax.<sup>(122)</sup>

Despite the success of the recycling and green bin programs within the region, there is still opportunity to improve the quality of the compost to make it better suited to food growing.

#### **Tonnes total waste disposed annually**

In 2011-2012, there were 60,500 tonnes of residential garbage collected in Halifax. The tonnage of refuse generated by the residential sector has fluctuated since 2003, reaching a peak in 2005-2006 at 69,100 tonnes.<sup>(27)</sup>

Recent data indicate close to 52% of residential waste is currently diverted from landfill, a significant increase when compared to 5% in 1995. Furthermore an estimated 66% of waste diversion occurs within the industrial, commercial and institutional (ICI) sectors.<sup>(28)</sup>

---

105 <http://ceqg-rqge.ccme.ca/en/index.html#void>.

### **Tonnes compost diverted annually**

In 2011/2012 the residential and commercial sectors produced a combined 51,328 tonnes of organic waste; 34,713 tonnes from the residential sector and another 16,615 tonnes from the ICI sector.

Halifax was the first municipality in Canada to implement an organics program<sup>(28)</sup> in response to a provincial ban on organics disposal in landfills. Since the program began, the amount of organic waste being captured has steadily increased in concert with decreased amounts of waste being sent to the landfill site. The success of the program has exceeded the capacity of the two original processing facilities, forcing the city of Halifax to look elsewhere for overflow capacity particularly in relation to peak lawn and yard waste and Christmas tree processing.”<sup>(28)</sup>

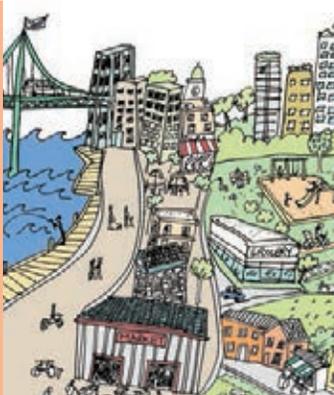
### **Reclaimed food**

In 2013, Feed Nova Scotia reported that 22.3% of food donations were reclaimed from wholesalers and distributors. The reclamation companies donated 777,496 kilograms of food deemed unmarketable by retail, of which Feed Nova Scotia (adhering strictly to food safety guidelines) was able to salvage 489,604 kilograms.<sup>(5)</sup> This represents a significant amount of food that would have otherwise been considered waste.

## **SUMMARY**

This section presents a picture of the current food production capacity particularly in relation to agriculture, thus providing useful benchmarks to measure future progress. From this data, it is known that there is growing potential on peninsular Halifax and that 165 rural farms are operating on approximately 4,100 hectares. Further research may be able to ascertain the degree to which these resources could sustain the food needs of the population.

The section also looked at the activities and initiatives that protect and enhance food system resources. These are diverse, ranging from community-led seed exchanges to sustainable business practices and policies, to regulatory acts that outline the commitments from federal, provincial and municipal governments. Broadly, the protection of the food system resources through regulation, practices and policies seems to be strong in concept; however, the extent of application and enforcement and its subsequent impact on the food system resources is unknown.



## **DALHOUSIE UNIVERSITY**

All dining facilities are tray-free and have composting programs. There are more than 100 composting stations elsewhere on campus. Dining services diverts about 90% of recyclable materials from the landfill and there is a program for electronics recycling.

# NOTES:

A series of horizontal dotted lines for taking notes, spanning most of the page width.



# CONCLUSION

The intent of this document is to share a story and create a picture of community food security in Halifax. There is a lot of information in the document; a natural result of the challenges we encountered when describing the complexity of the food system as it contributes to community food security and the realization of a healthy, just, and sustainable food system. The amount of data and information in the report also speaks to the enormous level of activity within the Halifax food system.

**We see the Food Counts report as being a valuable tool to:**

- 1. Provide a benchmark from which future targets can be measured and by doing so, contribute to our understanding of the extent to which the food system is healthy, just and sustainable.**
- 2. Identify the gaps and limits in our knowledge of the local food system and highlight the many positive examples of strength and innovation.**

The reader is encouraged to view each determinant as contributing to the story of the food system and to recognize that not all the information will point in the same direction. For example, there are indicators that highlight the strength in the current food system such as the number of farmers' markets, community gardens and institutional policies with local food components; other indicators clearly show challenges such as the high level of food insecurity and high rates of some chronic diseases in Nova Scotia. Thus, the overall picture is extraordinarily complex. A broad interpretation of the results must be done cautiously.

As noted, Halifax has experienced a statistically significant increase in household food insecurity since 2008; today, one in five households is considered food insecure. As a result, the growth of food banks and charitable food resources seem to be increasing. These data represent a call to action and one that will not be solved in isolation from any one facet or sector of the food system. This challenge will require coordinated support across the political, ecological, economic, and social systems that have a strong influence on the structure and participation of citizens within the food system

This assessment also strives to highlight what is remarkable and positive about the food system. There are obvious strengths in the extent to which governments, researchers, organizations, community groups, and individuals are devoted to improving the food system. The local food movement seems to be strengthening with the diversity of food access points like farmers' markets, ethnic food stores, community supported agriculture and fisheries, and innovative food businesses. The food system is also supported by a number of practices, polices and by-laws such as those designed to protect our natural resources and celebrate the cultural diversity of Halifax. There appears to be a number of learning opportunities and continuous efforts to create healthy eating environments in schools, child-care centres and workplaces, and ongoing opportunities to learn and share knowledge across various dimensions of the food system. Future efforts to create strategies and policies to support community food security will provide the opportunity to continue to expand and enhance the positive facets of the current Halifax food system.

Some of the gaps in our knowledge relate to the lack of available evidence to demonstrate the effectiveness of the many policies, practices and by-laws designed to support the food system. We know that many people go to farmers' markets, but do markets promote social cohesion? We know that healthy eating policies at many public institutions in the region encourage local food procurement, but there is no evidence to show whether this occurs or to what extent. It is too soon to tell the degree to which healthy public policies and healthy eating environments are impacting chronic disease. Despite the limitations and unknowns, the time appears to be right: January 2014 the "Mayor's Conversation on a Healthy and Liveable Community" staff report was endorsed by Regional Council, which identified local food as one of three key priorities. The report recommended that Council develop and implement an urban orchard pilot project and support the Halifax Food Policy Alliance in its development of a food strategy for the city. Food security was adopted as a key consideration for future planning and the design of communities through the Halifax Regional Plan.

It is our hope that the information presented in this report will prompt a discussion in the community where residents with different backgrounds, interests, and knowledge about the food system will come together to explore the possibilities in building a healthy, just, and sustainable food system. In many respects the work is well underway and opportunities to integrate a community food security lens to guidelines, initiatives and policies within municipal programs, facilities and planning processes continues to grow. So the time is ripe to build on this momentum and create a healthy, just, and sustainable food system in Halifax and we hope this report will support this movement.



## REFERENCES

1. McRae, R. & Donahue, K. (2013). Municipal food entrepreneurs: a preliminary analysis of how Canadian cities and regional districts are involved in food system change. Retrieved from [http://capi-icpa.ca/pdfs/2013/Municipal\\_Food\\_Policy\\_Entrepreneurs\\_Final\\_Report.pdf](http://capi-icpa.ca/pdfs/2013/Municipal_Food_Policy_Entrepreneurs_Final_Report.pdf)
2. MacRae, Rod Notes from Food Policy Development in Canada graduate course, Faculty of Environmental Studies, York University, 2009.
3. Joughin, B. (2010) *How food secure is Vancouver in a changing world?* 2010. Retrieved from [http://aaawordsmith.ca/pdfs/FSV\\_2010\\_edit\\_feb-2013\\_webQ.pdf](http://aaawordsmith.ca/pdfs/FSV_2010_edit_feb-2013_webQ.pdf)
4. Capital District Health Authority (2013). An overview of the health of our population. Retrieved from <http://www.Capital Health.nshealth.ca/public-health/population-health-status-report>
5. FEED Nova Scotia (2014). *Hunger in Nova Scotia*. Retrieved from [http://www.feednovascotia.ca/hungerfacts\\_stats.html](http://www.feednovascotia.ca/hungerfacts_stats.html)
6. Food Banks Canada (2013). *HungerCount 2013*. Retrieved from <http://www.foodbankscanada.ca/FoodBanks/MediaLibrary/HungerCount/HungerCount2013.pdf>
7. Tarasuk, V., Dachner, N., Hamelin, A., Ostry, A., Williams, P.L., Poland, B. & Raine, K. A survey of food bank operations in five Canadian cities. (under review)
8. CCHS survey 2011-2012 Canadian Community Health Survey, Statistics Canada, 2010/2011. CANSIM table no.: 105-0502, 105-0592 data
9. CCHS survey 2011-2012 Chronic Disease InfoBase Data Cubes. 2012. Canadian Community Health Survey, Statistics Canada, 2011/2012. CCHS Disease by Geography, Age Group and Sex
10. Key, T.J., Schatzin, A., Willett, W.C., Allen, N.E., Spencer, E.A. & Travis, R.C. (2004) Diet, nutrition and the prevention of cancer. *Public Health Nutrition*, 7(1a), 187-200.
11. CCNS Cancer Registry. (2012)

12. Canadian Community Health Survey 2012. Statistics Canada Breastfeeding initiation
13. Public Health-Capital Health 2012. Breastfeeding exclusivity.
14. Canadian Community Health Survey 2010/11. Statistics Canada Fruit and vegetable consumption
15. Tarasuk, V., Mitchell, A., & Dachner, N. (2014). *Household food insecurity in Canada*, 2012. Retrieved from [http://nutritionalsciences.lamp.utoronto.ca/wp-content/uploads/2014/05/Household\\_Food\\_Insecurity\\_in\\_Canada-2012\\_ENG.pdf](http://nutritionalsciences.lamp.utoronto.ca/wp-content/uploads/2014/05/Household_Food_Insecurity_in_Canada-2012_ENG.pdf)
16. Williams, P.L., Watt, C., Johnson, C.P., Anderson, B.J., Green-LaPierre, R.J., Reimer, D. (2012) The affordability of a nutritious diet for Income Assistance recipients in NS (2002-2010). *Canadian Journal of Public Health*, 103(3), 183-188.
17. Nova Scotia Food Participatory Food Costing Project (2013). *Can Nova Scotians afford to eat healthy? Report on 2012 participatory food costing*. Retrieved from [http://www.feednovascotia.ca/images/NSFoodCosting2012\\_Report.pdf](http://www.feednovascotia.ca/images/NSFoodCosting2012_Report.pdf)
18. Noseworthy, B.L., Williams, P.L., Blum, I. & MacLeod, M. (2011) The Availability and Relative Cost of Locally Produced Foods in Grocery Stores in Nova Scotia. *Journal of Hunger and Environmental Nutrition*, 6(2), 188-206.
19. JRG Consulting Group. (February 2012) Planning for tomorrow for OAC: Input from industries. Summary report
20. Statistics Canada (2011). *Census of agriculture*. Retrieved from <http://www.statcan.gc.ca/ca-ra2011/index-eng.htm>
21. Statistics Canada (2012). Farm and farm operator data: 2011 census of agriculture. Retrieved from <http://www29.statcan.gc.ca/ceag-web/eng/index-index;jsessionid=9E155F6067AB49AE768E3D6844053175>
22. Fisheries and Oceans Canada (2013). *Commercial fisheries: 2010 fishers information*. Retrieved from <http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/fishers-pecheurs/fp10-eng.htm>
23. Pinfold, G. with Rogers Consulting Inc. (2007). *Nova Scotia seafood processing sector: State of the industry and competitiveness assessment*. Retrieved from <https://novascotia.ca/fish/documents/seafoodreport.pdf>
24. Crawford, K. & Butler, K. (2014). *Nova Scotia farmers' markets economic impact study 2013: Cultivating community economy*. Retrieved from <http://farmersmarketsns.files.wordpress.com/2014/03/report-screen.pdf>
25. *Supporting Agriculture in Halifax Regional Municipality* (2009) Retrieved from: <http://www.halifax.ca/council/agendasc/documents/1011091016report.pdf>
26. Scott, J. & MacLeod, M. (2010) *Is Nova Scotia eating local? and if not... Where is our food coming from?* Retrieved from [https://www.ecologyaction.ca/files/images-documents/file/Food/FM%20July4%20\\_final\\_long\\_report.pdf](https://www.ecologyaction.ca/files/images-documents/file/Food/FM%20July4%20_final_long_report.pdf)
27. Ecology Action Centre (2011) "*Community Garden Heavy Metal Study*": Retrieved at: <https://www.ecologyaction.ca/files/images-documents/file/Community%20Garden%20Heavy%20Metal%20Contamination%20Study.pdf>

28. Halifax Regional Municipality (2013). *Waste resource strategy update*. Retrieved from <https://www.halifax.ca/council/agendasc/documents/130205ca1222.pdf>
29. Value Chain Management Centre (2010). *Food waste in Canada: Opportunities to increase the competitiveness of Canada's agri-food sector, while simultaneously improving the environment*. Retrieved from <http://vcm-international.com/wp-content/uploads/2013/04/Food-Waste-in-Canada-112410.pdf>
30. Hamm, M.W. & Bellows, A.C. (2003). *Community food security and nutrition educators*. *Journal of Nutrition Education and Behavior*, 35(1), 37-43.
31. Department of Community Services Statement of Mandate 2012-2013 [http://www.novascotia.ca/coms/departement/documents/DCS-Statement\\_of\\_Mandate-2012-2013.pdf](http://www.novascotia.ca/coms/departement/documents/DCS-Statement_of_Mandate-2012-2013.pdf)
32. Province of Nova Scotia. (2014). Nova Scotia Community Counts web page - data modeled from Statistics Canada, National Household Survey, 2011. Retrieved from <http://www.novascotia.ca/finance/communitycounts/profiles/community/default.asp?gnum=mun91&gview=3&glevel=mun>
33. Statistics Canada. (2013). Population by broad age groups and sex, percentage distribution (2011) for both sexes, for Canada, provinces and territories, and census metropolitan areas and census agglomerations. Retrieved from <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hlt-fst/as-sa/Pages/highlight.cfm?TabID=1&Lang=E&Asc=1&OrderBy=1&Sex=1&View=3&tableID=21&queryID=3&PRCode=12>
34. Statistics Canada. Table 202-0804 - Persons in low income, by economic family type, annual, CANSIM (database). Retrieved from: <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=2020804>
35. Statistics Canada (2014). 2011 census. Retrieved from <http://www12.statcan.gc.ca/census-recensement/index-eng.cfm>
35. Statistics Canada (2014). 2011 census. Retrieved from <http://www12.statcan.gc.ca/census-recensement/index-eng.cfm>
36. Statistics Canada. (2014) *Persons with disabilities and employment*. Retrieved from: <http://www.statcan.gc.ca/daily-quotidien/141203/dq141203a-eng.htm>
37. Xuereb, M. & Desjardins, E. (2005) *Towards a healthy food system for the Waterloo region*. Retrieved from: [http://chd.region.waterloo.on.ca/en/researchResourcesPublications/resources/FoodSystems\\_Report.pdf](http://chd.region.waterloo.on.ca/en/researchResourcesPublications/resources/FoodSystems_Report.pdf)
38. Miewald, C. (2009). *Community food system assessment: A companion tool for the guide*. Retrieved from <http://www.phsa.ca/NR/rdonlyres/A359DCB6-2D22-46F7-A0FD-57C4FA8C25E7/0/Community-FoodSystemAssessmentACompanionToolfortheGuide.pdf>
39. FoodARC (2014). *Activating change together for community food security*. Retrieved from <http://foodarc.ca/actforcfs/>
40. Newell, F. D., Williams, P. L., & Watt, C.G. (2014). Is the minimum enough? Affordability of a nutritious diet for minimum wage earners in Nova Scotia (2002-2012). *Canadian Journal of Public Health*, 105(3), e158-e165.

41. 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), 430-4.
42. McIntyre, L., Bartoo, A.C. & Emery, J.H. (2012). When working is not enough: food insecurity in the Canadian labour force. *Public Health Nutrition*, 17(1), 49-57.
43. Statistics Canada. (2014). Focus on geography series, 2011 census: Census subdivision of Halifax, RGM - Nova Scotia. Retrieved from <http://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-csd-eng.cfm?Lang=eng&GK=CSD&GC=1209034>
44. Statistics Canada. 2006 Census of Population, Statistics Canada catalogue no. 97-554-XCB2006039 (Halifax, RGM Code 1209034) <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?TABID=1&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&G-C=0&GK=0&GRP=1&PID=93624&PRID=0&PTYPE=88971,97154&S=0&SHOW-ALL=0&SUB=0&Temporal=2006&THEME=69&VID=0&VNAMEE=&VNAMEF=>
45. Statistics Canada. Canadian Survey on Disability 2012: Tables, Tables 1.1-1.14 Prevalence of disability for adults by sex and age group, Canada/province/territory. 2012, Catalogue no. 89-654-X, Ottawa, 2013.
46. Frank, L. (2014) A Generation of Broken Promises: The 2014 Report Card on Child and Family Poverty in Nova Scotia. Centre for Policy Alternatives.
47. Service Canada-Atlantic region, Labour Market Information Brief: Nova Scotia, March 2012.
48. Data supplied by request from the Nova Scotia Department of Community Services, March 2015
49. Tweddle, A., Battle, K., & Torjman, S. (2013) Welfare in Canada 2012 Caledon Institute of Social Policy. Retrieved from <http://www.caledoninst.org/Publications/PDF/1031ENG.pdf>
50. Williams, P.L. & Lake, S. (2013). The provision of charitable food assistance in Canada: Forging a more adequate response. Key Findings from Halifax Regional Municipality. Retrieved from [http://foodarc.ca/wp-content/uploads/2013/05/Charitable\\_Food\\_Assistance\\_in\\_Canada\\_Hfx\\_March2013\\_Final1.pdf](http://foodarc.ca/wp-content/uploads/2013/05/Charitable_Food_Assistance_in_Canada_Hfx_March2013_Final1.pdf)
51. Roustit, C., Hamelin, A.M., Grillo, F., Martin, J., & Chauvin, P. (2010). Food insecurity: could school food supplementation help break cycles of intergenerational transmission of social inequalities? *Pediatrics*, 126(6), 1174-1181. doi: 10.1542/peds.2009-3574
52. Province of Nova Scotia (2012). *THRIVE! A plan for a healthier Nova Scotia*. Retrieved from <https://thrive.novascotia.ca/sites/default/files/Thrive-Strategy-Document.pdf>
53. Tarasuk, V., Dachner, N., Hamelin, A., Ostry, A., Williams, P.L., Poland, B. & Raine, K. A survey of food bank operations in five Canadian cities. (under review)
54. RP+5 Regional Municipal Planning Strategy (2014). Retrieved from <http://www.halifax.ca/planhrm/documents/AttachmentASept18FinalDraft.pdf>

55. Largent, P. (2012). Cross-cultural food consumption in Chicago: The impact of ethnic grocery stores on the availability of a healthy, affordable, and quality food supply. *College of Liberal Arts & Social Sciences Theses and Dissertations*. Retrieved from <http://via.library.depaul.edu/cgi/viewcontent.cgi?article=1134&context=etd>
56. Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., DeVine, D., Trikalinos, T., & Lau, J. (2007). Breastfeeding and maternal and infant health outcomes in developed countries. Retrieved from <http://archive.ahrq.gov/downloads/pub/evidence/pdf/brfout/brfout.pdf>
57. Iqbal, R., Anand, S., Ounpuu, S., Islam, S., Zhang, X., Rangarajan, S., Chifamba, J., Al-Hinai, A., Keltai, M., & Yusuf, S. (2008). Dietary patterns and the risk of acute myocardial infarction in 52 countries: Results from the INTERHEART study. *Circulation*, 118, 1929-1937. doi: 10.1161/CIRCULATIONAHA.107.738716
58. Che, J. & Chen, J. (2001). Food insecurity in Canadian households. *Health Report*, 12(4), 11-22.
59. Galesloot, S. et al. (2012) Food insecurity in Canadian adults receiving diabetes care. *Canadian Journal of Dietetic Practice and Research*. 73, e261-e266.
60. Vozoris, N. & Tarasuk, V. (2003). Household food insufficiency is associated with poorer health. *Journal of Nutrition*, 3 (133), 120-126.
61. Willows N, et al. (2011). Associations between household food insecurity and health outcomes in the Aboriginal population (excluding reserves). *Health Report*, 22, 1-6.
62. McLeod, L. & Veall, M. (2006). The dynamics of food insecurity and overall health: evidence from the Canadian National Population Health Survey. *Applied Economics*, 38: 2131-2146.
63. Moore, V.M. & Davies, M.J. (2005). Diet during pregnancy, neonatal outcomes and later health. *Reproduction, Fertility, and Development*, 17(3), 341-348. doi: <http://dx.doi.org/10.1071/RD04094>
64. Ontario Society of Nutrition Professionals in Public Health & the Ontario Public Health Association (Food Security Workgroup) (2011). A call to action on food security: Key messages and backgrounder. Retrieved from [http://www.osnpnh.on.ca/communications/Food\\_security\\_key\\_messages\\_background.pdf](http://www.osnpnh.on.ca/communications/Food_security_key_messages_background.pdf)
65. Health Canada (2009). *Prenatal nutrition guidelines for health professionals- Folate contributes to a healthy pregnancy*. Retrieved from: [http://www.hc-sc.gc.ca/fn-an/alt\\_formats/hpfb-dgpsa/pdf/pubs/folate-eng.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/pubs/folate-eng.pdf)
66. Perinatal Epidemiology Research Unit (2012). *Nova Scotia Atlee Perinatal Database Report of Indicators: 2002-2011*. Retrieved from [http://rcp.nshealth.ca/sites/default/files/publications/nsapd\\_indicator\\_report\\_2002\\_2011.pdf](http://rcp.nshealth.ca/sites/default/files/publications/nsapd_indicator_report_2002_2011.pdf)
67. Statistics Canada. Table 102-4005 - Low birth weight (less than 2,500 grams) and borderline viable birth weight-adjusted low birth weight (500 to less than 2,500 grams), by sex, Canada, provinces and territories, annual, CANSIM (database)
68. Health Canada (2014). *Nutrition for healthy term infants: Recommendations from birth to six months*. Retrieved from <http://www.hc-sc.gc.ca/fn-an/nutrition/infant-nourisson/recom/index-eng.php>

70. Horta, B.L. & Victora, C.G. (2013). *Short-term effects of breastfeeding: a systematic review on the benefits of breastfeeding on diarrhoea and pneumonia mortality*. Retrieved from [http://apps.who.int/iris/bitstream/10665/95585/1/9789241506120\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/95585/1/9789241506120_eng.pdf?ua=1)
71. Horta, B.L. & Victora, C.G. (2013) *Long-term effects of breastfeeding: a systematic review*. Geneva: World Health Organization. Available from [http://apps.who.int/iris/bitstream/10665/79198/1/9789241505307\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/79198/1/9789241505307_eng.pdf?ua=1)
72. Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., DeVine, D., Trikalinos, T., & Lau, J. (2007). *Breastfeeding and maternal and infant health outcomes in developed countries*. Retrieved from <http://archive.ahrq.gov/downloads/pub/evidence/pdf/brfout/brfout.pdf>
73. World Cancer Research Fund/American Institute for Cancer Research (2007). *Food, nutrition, physical activity, and the prevention of cancer: a global perspective*. Retrieved from [http://www.dietandcancerreport.org/cancer\\_resource\\_center/downloads/Second\\_Expert\\_Report\\_full.pdf](http://www.dietandcancerreport.org/cancer_resource_center/downloads/Second_Expert_Report_full.pdf)
74. World Cancer Research Fund/American Institute for Cancer Research (2010). *Breast cancer 2010 report: Food, nutrition, physical activity, and the prevention of breast cancer*. Retrieved from [http://www.dietandcancerreport.org/cancer\\_resource\\_center/downloads/cu/Breast-Cancer-2010-Report.pdf](http://www.dietandcancerreport.org/cancer_resource_center/downloads/cu/Breast-Cancer-2010-Report.pdf)
75. Dauchet, L., Amoyyel, P., Hercberg, S. & Dallongeville, J. (2006). Fruit and vegetable consumption and risk of coronary heart disease: a meta analysis of cohort studies. *The Journal of Nutrition*, 136(10), 2588-2593.
76. He, F.J., Nowson, C.A., Lucas, M., & MacGregor, G.A. (2007). Increased consumption of fruit and vegetables is related to a reduced risk of coronary heart disease: meta-analysis of cohort studies. *Journal of Human Hypertension*, 21, 717-728. doi:10.1038/sj.jhh.1002212
77. Dacht, L., Amouyel, P., & Dallongeville, J. (2005). Fruit and vegetable consumption and risk of stroke. *Neurology*, 65(8), 1193-1197.
78. Pavia, M., Pileggi, C., Nobile, C., & Angelillo, I. (2006) Association between fruit and vegetable consumption and oral cancer: a meta –analysis of observational studies. *American Journal of Clinical Nutrition*, 83, 1126-1134.
79. Lunet, N., Lacerda-Vieira, A., & Barros, H. (2005). Fruit and vegetables consumption and gastric cancer: A systematic review and meta-analysis of cohort studies. *Nutrition and Cancer*, 53(1), 1-10. doi: 10.1207/s15327914nc5301\_1
80. Aune, D., Lau, R., Chan, D.S., Viera, R., Greenwood, D.C., Kampman, E., & Norat, T. (2011). Nonlinear reduction in risk for colorectal cancer by fruit and vegetable intake based on meta-analysis of prospective studies. *Gastroenterology*, 141(1) 106-118. doi: 10.1053/j.gastro.2011.04.013.
81. Health Canada (2007). *Eating well with Canada's food guide*. Retrieved from <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>
82. Davis, B. & Tarasuk, V. (1994). Hunger in Canada. *Agriculture and Human Values*, 11(4), 50-57.
83. Fuller-Thomson, E., Nimigon-Young, J., & Brennenstuhl, S. (2012). Individuals with fibromyalgia and depression: findings from a nationally representative Canadian survey. *Rheumatology International*, 32(4), 853-862. doi: 10.1007/s00296-010-1713-x

84. Gucciardi, E., Vogt, J.A., DeMelo, M., & Stewart, D.E. (2009). Exploration of the relationship between household food insecurity and diabetes in Canada. *Diabetes Care*, 32(12), 2218-2224. doi: 10.2337/dc09-0823
85. Muirhead, V., Quiñonez, C., Figueiredo, R., & Locker, D. (2009). Oral health disparities and food insecurity in working poor Canadians. *Community Dentistry and Oral Epidemiology*, 37(4), 294-304. doi: 10.1111/j.1600-0528.2009.00479.x.
86. Noseworthy, B.L., Williams, P.L., Blum, I. & MacLeod, M. (in progress). Food security and healthy eating in Nova Scotia: exploring the implications of buying local in grocery stores.
87. Chenall, C. (2010). Improving cooking and food preparation skills: A synthesis of the evidence to inform program and policy development and improving cooking and food preparation skills. Retrieved from [http://www.hc-sc.gc.ca/fn-an/alt\\_formats/pdf/nutrition/child-enfant/cfps-acc-synthes-eng.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/pdf/nutrition/child-enfant/cfps-acc-synthes-eng.pdf)
88. Loopstra, L. & Tarasuk, V. (2013) Perspectives on Community Gardens, Community Kitchens and the Good Food Box Program in a Community-based Sample of Low-income Families. *Canadian Journal of Public Health*, 104(1), e55-e59.
89. Canadian General Standards Board (2006). *Organic production systems general principles and management standards*. Retrieved from <http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/programme-program/normes-standards/internet/bio-org/documents/032-0310-2008-eng.pdf>
90. Atlantic Canadian Regional Organic Network (n.d.). Retrieved from [http://www.acornorganic.org/resources/organicdirectory/results/search&profile\\_affiliation\\_pub=Farmer&profile\\_province=NS/P20](http://www.acornorganic.org/resources/organicdirectory/results/search&profile_affiliation_pub=Farmer&profile_province=NS/P20)
91. Stotland, J. (2013). Halifax's chicken keepers step into a legal void. Halifax Media Co-Op. Retrieved from <http://halifax.mediacoop.ca/story/halifaxs-chicken-keepers-step-legal-void/19196>
92. Retrieved at: <http://www.myHalifax.ca/toolkit/CommunityGardens.php>
93. Retrieved at: <http://www.Halifax.ca/rec/Gardens.html>
94. MacLeod, M. & Scott, J. (2007). *Local food procurement policies: A literature review*. Retrieved from <http://www.organicagcentre.ca/Docs/LocalFoodProcurementPolicies.pdf>
95. Statistics Canada, Fisheries and Oceans Canada. *Canada's Wild Fisheries: Facts and Figures*. Retrieved from: <http://www.dfo-mpo.gc.ca/fm-gp/sustainable-durable/fisheries-peches/stats2011/wild-sauvages-eng.htm>.
96. Fisheries and Oceans Canada (2013). *Commercial fisheries*. Retrieved from <http://www.dfo-mpo.gc.ca/stats/commercial/land-debarq-eng.htm>
97. Nikoloyuk, J. & Adler, D. (2013) *Valuing our fisheries: Breaking Nova Scotia's commodity curse*. Retrieved from <https://www.ecologyaction.ca/files/images-documents/file/Marine/Valuing%20our%20Fisheries%20FINAL.pdf>
98. Fisheries and Oceans Canada (2013). Commercial fisheries: 2010 fishers information. Retrieved from: <http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/fishers-pecheurs/fp10-eng.htm>

99. Charles, A., Boyd, H., Lavers, A., & Benjamin, C. (2002). The Nova Scotia GPI fisheries and marine environments accounts: A preliminary account of ecological, socioeconomic and institutional indicators for Nova Scotia's fishery and marine environment. Retrieved from <http://gpiatlantic.org/pdf/fisheries/fisheries.pdf>
100. Knight, A. & Chopra, H. (2011). Growing demand: Local food procurement at publicly funded institutions in Nova Scotia. Retrieved from <https://www.novascotia.ca/agri/marketing/research/growing-demand.pdf>
101. Government of Nova Scotia (2011). *Food safety regulations*. Retrieved from <http://www.novascotia.ca/just/regulations/regs/hpafdsaf.htm>
102. Nova Scotia Department of Agriculture (2011). *Nova Scotia food retail and food services code*. Retrieved from <http://novascotia.ca/agri/documents/food-safety/NSFoodCode.pdf>
103. Halifax Regional Municipality (2006). Regional municipality planning strategy. Retrieved from [http://www.halifax.ca/regionalplanning/documents/Regional\\_MPS.pdf](http://www.halifax.ca/regionalplanning/documents/Regional_MPS.pdf)
104. NS Department of Agriculture, 2013 "Environmental Goals and Sustainable Prosperity Act: Tracking Sheet 2012-13)
105. Halifax Regional Municipality (2014). *Mayor's conversation on a healthy livable community council report*. Retrieved from <http://www.Halifax.ca/council/agendasc/documents/140128ca1131.PDF>
105. Government of Nova Scotia (2006). *Food and nutrition policy for Nova Scotia public schools*. Retrieved from [http://www.ednet.ns.ca/healthy\\_eating/](http://www.ednet.ns.ca/healthy_eating/)
106. Government of Nova Scotia (2011) *Manual for food and nutrition in regulated child care settings*. Retrieved from [http://www.ednet.ns.ca/earlyyears/documents/providers/Manual-Food\\_and\\_Nutrition.pdf](http://www.ednet.ns.ca/earlyyears/documents/providers/Manual-Food_and_Nutrition.pdf)
107. Green Report Card, Dalhousie University (2010) Retrieved at: <http://www.greenreportcard.org/report-card-2010/schools/dalhousie-university/surveys/dining-survey.html>
108. Nova Scotia Human Rights Commission (2011). *Breastfeeding policy*. Retrieved from [http://humanrights.gov.ns.ca/sites/default/files/files/breastfeeding%20revised%20policy\(1\).pdf](http://humanrights.gov.ns.ca/sites/default/files/files/breastfeeding%20revised%20policy(1).pdf)
109. Nova Scotia Health Promotion and Protection (2006). *Breastfeeding in Nova Scotia policy statement*. Retrieved from <http://novascotia.ca/dhw/healthy-communities/documents/Provincial-Breastfeeding-Policy.pdf>
110. IWK Health Centre & Capital Health (2010). *Nova Scotia Direct Health Authorities/IWK Health Centre breastfeeding policy/procedure*. Retrieved from [http://policy.nshealth.ca/Site\\_Published/DHA9/document\\_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=26218](http://policy.nshealth.ca/Site_Published/DHA9/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=26218)
111. Capital Health (2013). *Staff breastfeeding policy & procedure*. Retrieved from [http://policy.nshealth.ca/Site\\_Published/DHA9/document\\_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=45575](http://policy.nshealth.ca/Site_Published/DHA9/document_render.aspx?documentRender.IdType=6&documentRender.GenericField=&documentRender.Id=45575)
112. Halifax (2014). Emergency management organization. Retrieved from <http://www.halifax.ca/emo/>

113. Halifax Regional Municipality (2001). *By-law E-100 respecting of a prompt and coordinated response to an emergency*. Retrieved from <https://www.halifax.ca/legislation/bylaws/hrm/ble100.pdf>
114. Nipen, A. (2009). *Assessing the available land area for urban agriculture on the Halifax peninsula*. Retrieved from [http://www.dal.ca/content/dam/dalhousie/pdf/science/environmental-science-program/Honours%20Theses/a\\_nipenthesisjan.pdf](http://www.dal.ca/content/dam/dalhousie/pdf/science/environmental-science-program/Honours%20Theses/a_nipenthesisjan.pdf)
115. Municipal Government Act. Retrieved at: <http://www.novascotia.ca/snsmr/municipal/pdf/mun-local-government-resource-handbook-5-1.pdf>
116. Sobeys (2010). *Sobeys Inc. national sustainable seafood policy*. Retrieved from <http://www.sobeysustainability.com/en/Supply-Chain/Sustainable-Seafood/Sustainable-Seafood-Policy.aspx>
117. Loblaw Companies Limited (2013). Loblaw sustainable seafood commitment. Retrieved from [http://www.loblaw.ca/files/6304\\_LoblawSeafood2013\\_Design\\_V8.pdf](http://www.loblaw.ca/files/6304_LoblawSeafood2013_Design_V8.pdf)
118. Fisheries and Oceans Canada. Fisheries Act (amended 2012). Retrieved at: <http://laws-lois.justice.gc.ca/PDF/F-14.pdf>
119. Fisheries and Coastal Resources Act (1996). Retrieved at: <http://nslegislature.ca/legc/statutes/fishand.htm>
120. Draft Coastal Strategy (2012). Retrieved at: <http://www.novascotia.ca/coast/documents/draft-coastal-strategy2011oct.pdf>
121. Halifax Regional Municipality (2010). *Solid waste resource collection and disposal by-law*. Retrieved from <http://www.halifax.ca/legislation/bylaws/hrm/documents/By-LawS-600.pdf>

# NOTES:

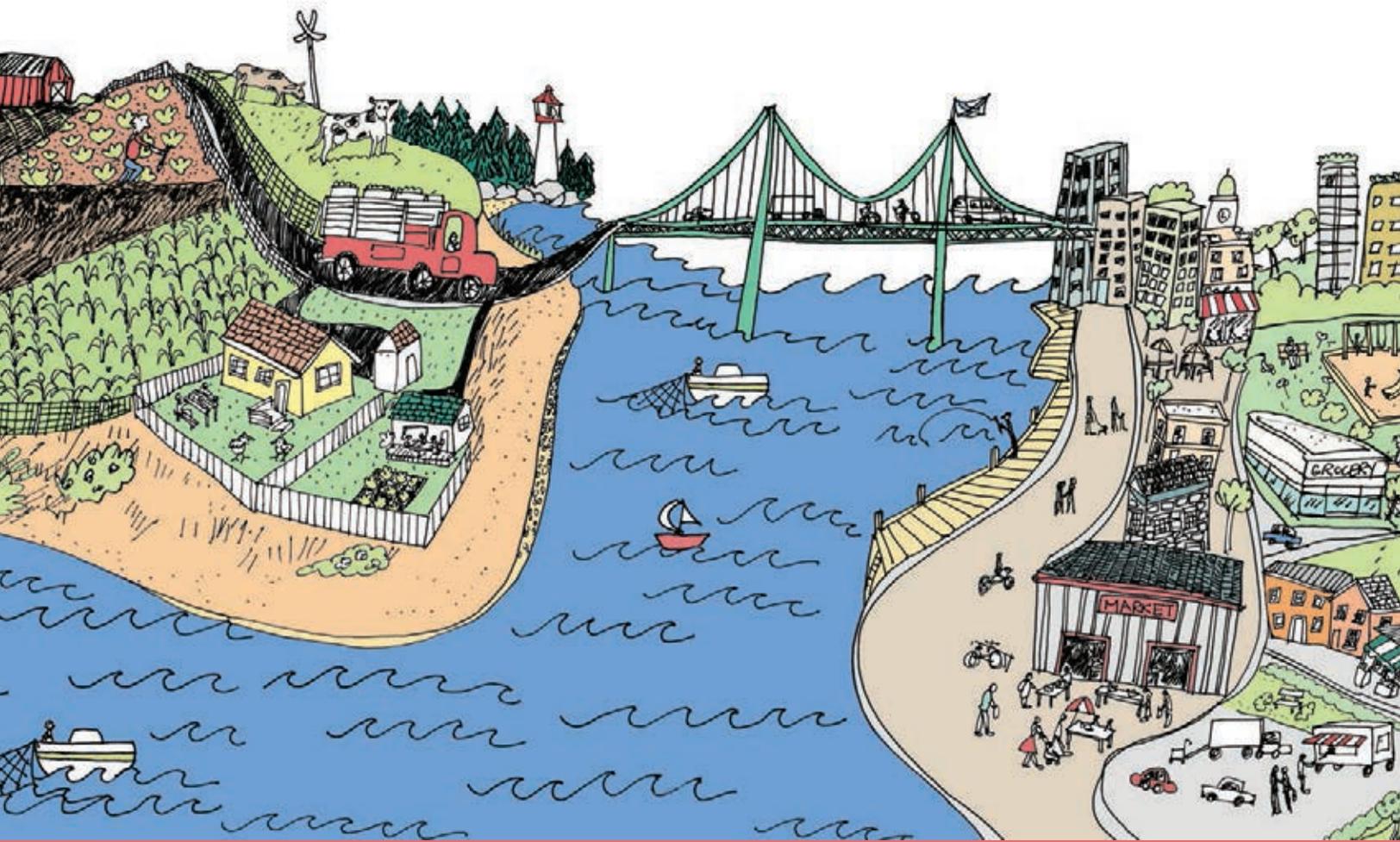
A series of horizontal dotted lines for taking notes, spanning most of the page width.





# FOOD COUNTS

## HALIFAX FOOD ASSESSMENT



HALIFAX FOOD POLICY ALLIANCE

# APPENDICES

# APPENDIX A: EXAMPLES OF MUNICIPAL INTEGRATIONS IN FOOD SYSTEMS WORK<sup>100</sup>



100 McRae, R. & Donahue, K. (2013). Municipal food entrepreneurs: a preliminary analysis of how Canadian cities and regional districts are involved in food system change. Retrieved from [http://capi-icpa.ca/pdfs/2013/Municipal\\_Food\\_Policy\\_Entrepreneurs\\_Final\\_Report.pdf](http://capi-icpa.ca/pdfs/2013/Municipal_Food_Policy_Entrepreneurs_Final_Report.pdf)

## APPENDIX B: DETERMINANTS AND INDICATORS OF COMMUNITY FOOD SECURITY, HALIFAX, 2013

<i>Determinant</i>	<i>Theme</i>	<i>Indicator</i>
 <p><b>Accessibility</b></p> <p>Healthy, culturally appropriate and sustainably produced food needs to be accessible physically to all citizens in order to enhance community food security. The accessibility of food is directly related to income, the affordability of food, the distance to food outlets, resources to produce food and the availability of a sustainably produced food supply.</p>	<b>Availability</b>	<ul style="list-style-type: none"> <li>• Grocery stores</li> <li>• Fast food outlets</li> <li>• Farmers' markets</li> <li>• Vendors and food trucks</li> <li>• Community Supported Agriculture (CSA)</li> <li>• Community Supported Fisheries (CSF)</li> <li>• Pop-up farm and fish markets</li> </ul>
	<b>Community food resources</b>	<ul style="list-style-type: none"> <li>• Community food resources</li> <li>• Organizations providing community kitchens programs</li> <li>• Food delivery programs (Meals on Wheels/Frozen Favorites)</li> <li>• School breakfast programs</li> <li>• Human milk banks</li> <li>• Charitable food services</li> <li>• Food bank use</li> </ul>
 <p><b>Adequacy</b></p> <p>Adequacy refers to the ability of every individual to acquire sufficient quantities of safe, culturally appropriate, nutritious and sustainably produced food without resorting to emergency or charitable food sources. The quality and quantity of the food available will be sufficient to promote health and manage chronic disease. The protection and promotion of breastfeeding is also recognized.</p>	<b>Cultural appropriateness</b>	<ul style="list-style-type: none"> <li>• Ethno-cultural food businesses at farmers' markets</li> <li>• Ethnic food stores</li> </ul>
	<b>Health</b>	<ul style="list-style-type: none"> <li>• Rates of chronic disease (Obesity, diabetes, heart disease, stroke, high blood pressure, cancer, low birth weight)</li> <li>• Breastfeeding (initiation and exclusivity)</li> <li>• Fruit and vegetable intakes</li> </ul>
	<b>Sufficiency and affordability</b>	<ul style="list-style-type: none"> <li>• Household food insecurity</li> <li>• Affordability of nutritious food</li> <li>• Price of local compared to imported food</li> </ul>

<i>Determinant</i>	<i>Theme</i>	<i>Indicator</i>
<p> <b>Knowledge and agency</b></p> <p>Knowledge is defined in this report as opportunities for citizens to gain skills, awareness, familiarity and understanding of food and the food system. To gain awareness, familiarity, and understanding of food and the food system, including where, how, and by whom food is produced and distributed. Agency enables citizens to act upon this knowledge to enhance personal and community food security and health.</p>	<p><b>Education</b></p>	<ul style="list-style-type: none"> <li>• School gardens</li> <li>• Schools offering food skill development courses</li> <li>• Fishery, agriculture and food production training programs</li> <li>• Commercial/academic food training programs</li> <li>• Community food skill development programs</li> <li>• Breastfeeding support</li> </ul>
<p> <b>Local food economy and infrastructure</b></p> <p>The diversity and strength of a local food economy and the individuals all along the supply chain are significant determinants of the strength and self-sufficiency of our food system. A healthy, just, and sustainable food system is economically, environmentally, and socially beneficial for everyone involved including farmers, fishers, workers, and citizens.</p>	<p><b>Agriculture</b></p>	<ul style="list-style-type: none"> <li>• Farms</li> <li>• Certified organic farms</li> <li>• Farmers by age</li> <li>• Gross farms sales</li> <li>• Percentage of food dollar that returns to farmer</li> </ul>
	<p><b>Urban agriculture</b></p>	<ul style="list-style-type: none"> <li>• Urban farms</li> <li>• Residential/urban chickens</li> <li>• Urban beekeeping</li> <li>• Rooftop gardens</li> </ul>
	<p><b>Community food infrastructure</b></p>	<ul style="list-style-type: none"> <li>• Number and area of community gardens</li> <li>• Number of people attending farmer markets</li> <li>• Revenue generated at farmers markets</li> <li>• Proportion of home owners growing fruits and vegetables</li> <li>• Number and location of greenhouses</li> </ul>
	<p><b>Fishery</b></p>	<ul style="list-style-type: none"> <li>• Types of fisheries</li> <li>• Landings by species</li> <li>• Number of fishers</li> </ul>
	<p><b>Labour</b></p>	<ul style="list-style-type: none"> <li>• Hours worked on a farm</li> </ul>
	<p><b>Distribution</b></p>	<ul style="list-style-type: none"> <li>• Wholesalers/food distributors</li> </ul>
	<p><b>Processing</b></p>	<ul style="list-style-type: none"> <li>• Certified commercial grade kitchens</li> <li>• Fish processing facilities</li> <li>• Abattoirs, meat plants, dairies and other processors</li> </ul>

<i>Determinant</i>	<i>Theme</i>	<i>Indicator</i>
<p> <b>Public investment and support</b></p> <p>Governments, businesses, and institutions can set policies and spending priorities that impact community food security. Optimally these actions would be coordinated, strategic, and evidence-based.</p>	<b>Food policy</b>	<ul style="list-style-type: none"> <li>• Institutions with policies related community food security</li> <li>• Policies supporting breastfeeding</li> <li>• Breastfeeding friendly businesses</li> <li>• Marketing programs supporting local food</li> </ul>
	<b>Emergency response</b>	<ul style="list-style-type: none"> <li>• Plans that include food provisions</li> </ul>
	<b>Research</b>	<ul style="list-style-type: none"> <li>• Research related to the food system</li> <li>• Provincial support for agriculture and food research</li> </ul>
<p> <b>Resource protection and enhancement</b></p> <p>A healthy, just, and sustainable food system is reliant upon a strong foundation of local farmers and farmland, as well as fishers and fishing grounds. The health of the system is impacted by the degree to which farmland and fish stocks are protected from loss. In sustainable food systems, the health of the environment is protected, promoted and preserved.</p>	<b>Agricultural land base</b>	<ul style="list-style-type: none"> <li>• Actively farmed land</li> <li>• Land available for gardening</li> <li>• Urban agricultural protection policies</li> <li>• Rural agricultural protection policies</li> </ul>
	<b>Fishery</b>	<ul style="list-style-type: none"> <li>• Grocers with sustainable seafood sales</li> <li>• Fisheries and aquaculture protection policies</li> <li>• Locally-harvested wild fish in local markets</li> </ul>
	<b>Seed</b>	<ul style="list-style-type: none"> <li>• Seed banks and seed libraries</li> </ul>
	<b>Energy</b>	<ul style="list-style-type: none"> <li>• Distance food travels (and associated greenhouse gas emissions)</li> </ul>
	<b>Soil-air-water quality</b>	<ul style="list-style-type: none"> <li>• There were no indicators developed for this section</li> </ul>
	<b>Food waste</b>	<ul style="list-style-type: none"> <li>• Total waste disposed annually</li> <li>• Compost diverted annually</li> <li>• Reclaimed food</li> </ul>

## APPENDIX C: GEOGRAPHIC DESCRIPTORS USED IN SPECIFIC DATA REPORTING SECTIONS

<i>Geographic area</i>	<i>Definition</i>	<i>Data source within the Assessment</i>
<b>Capital District Health Authority (Capital Health)</b>	The area described within the boundaries of Halifax and the Municipality of West Hants and the area within the boundaries of the Municipality of East Hants described as follows: beginning near Hillsvale, at the corner marking the most easterly point on the boundary between the Municipalities of East Hants and West Hants, then southeasterly across the Municipality of East Hants to a corner point, near Lewis Mills, on the boundary between the County of Halifax and the Municipality of East Hants, then southwesterly and westerly along the boundary between the County of Halifax and the Municipality of East Hants, then north-easterly along the boundary between the Municipalities of East Hants and West Hants, to the point of beginning. <a href="https://www.novascotia.ca/just/regulations/regs/hadistgn.htm">https://www.novascotia.ca/just/regulations/regs/hadistgn.htm</a>	Demographics, economics and health
<b>Census Metropolitan Area (CMA)</b>	Area consisting of one or more neighbouring municipalities situated around a core. A census metropolitan area must have a total population of at least 100,000 of which 50,000 or more live in the core <a href="http://www12.statcan.gc.ca/census-recensement/2011/ref/dict/geo009-eng.cfm">http://www12.statcan.gc.ca/census-recensement/2011/ref/dict/geo009-eng.cfm</a>	Household food insecurity, demographics, economics and health
<b>Community Health Boards (CHB)</b>	There are six community health boards in the Halifax. They include Chebucto West, Cobequid, Dartmouth, Eastern Shore, Musquodoboit, Halifax and Southeastern (Refer Map 1)	Demographic and economics
<b>Halifax by electoral district</b>	There are 16 electoral districts in Halifax (Refer Map 2)	Mapping of retail stores, grocers, farmers' markets, charitable food sources and school related resources
<b>Maritime region</b>	The Maritime fishing area refers to the southern coast of Nova Scotia (Refer Map 7)	Fisheries

## APPENDIX D: DEMOGRAPHIC PROFILE HALIFAX

Variable		Level of geography		
		Halifax	Capital Health	Nova Scotia
<b>Population <sup>a</sup></b>	<b>Total (n)</b>	<b>390,285</b>	<b>412,518</b>	<b>921,725</b>
	Population density ( <i>persons/square km</i> )	87.7	59.6	17.3
	Population Growth (% change 2006-2011)	4.5%	4.3%	0.9%
	% female	51.7%	51.6%	51.7%
	School age (5-19 years)	16.3%	16.3%	16.5%
<b>Population by age groups (years) <sup>a</sup> (% of n)</b>	Under 20	21.4%	21.5%	21.2%
	20-29	15.3%	15.0%	12.1%
	30-39	13.4%	13.3%	11.7%
	40-49	15.6%	15.6%	15.0%
	50-64	21.2%	21.3%	23.3%
	65 and older	13.1%	13.3%	16.6%
<b>Visible minorities <sup>b</sup> (Total and % of x)</b>	<b>Total reporting (x)</b>	<b>384,505</b>	<b>406,290</b>	<b>906,175</b>
	<b>Total visible minorities</b>	<b>9.1%</b>	<b>8.8%</b>	<b>5.2%</b>
	<i>Black</i>	3.6%	3.5%	2.3%
	<i>Arab/West Asian</i>	1.7%	1.7%	0.7%
	<i>Chinese/Korean/Japanese</i>	1.5%	1.4%	0.8%
	<i>South Asian</i>	0.2%	1.0%	0.5%
	<i>Other</i>	2.1%	1.2%	0.9%
<b>Aboriginal identity <sup>b</sup></b>	<b>Total reporting (y)</b>	<b>384,505</b>	<b>406,296</b>	<b>906,170</b>
	<i>Aboriginal identity (% of y)</i>	2.5%	2.5%	3.7%
<b>Citizenship and immigration <sup>b</sup></b>	<b>Total (N)</b>	<b>384,495</b>	<b>406,290</b>	<b>906,175</b>
	<i>Canadian citizen</i>	96.1%	96.2%	97.6%
	<i>Non-Canadian</i>	3.9%	3.8%	2.4%
	<i>Born in Nova Scotia</i>	66.5%	67.4%	75.7%
	<i>Born outside Nova Scotia</i>	24.1%	23.6%	18.2%
	<i>Immigrants</i>	8.1%	7.9%	5.3%
	<i>Non-permanent residents</i>	1.2%	1.2%	0.8%
<b>Family structure <sup>a</sup> (% all families)</b>	<b>Total census families</b>	<b>109,755</b>	<b>116,593</b>	<b>270,065</b>
	<i>Married</i>	67.8%	67.9%	68.5%
	<i>Common-law</i>	15.4%	15.4%	14.2%
	<i>Lone parent</i>	16.7%	16.6%	17.3%

Variable			Level of geography		
			Halifax	Capital Health	Nova Scotia
<b>Language</b> <sup>a</sup> (% of y)	Total reporting (y)		<b>386,400</b>	<b>408,292</b>	<b>910,615</b>
	Language spoken at home	English	94.6%	94.8%	95.4%
		French	0.9%	0.9%	1.7%
		Both	0.2%	0.2%	0.2%
	Mother tongue	English	90.2%	90.6%	91.8%
		French	2.6%	2.5%	3.4%
		Both	0.4%	0.4%	0.3%
<b>Income</b> <sup>c</sup>	Individual	Median (in \$)	\$ 28,531	\$ 28,291	\$ 24,030
		Average (in \$)	\$ 36,754	\$ 36,387	\$ 31,795
	Family	Median (in \$)	\$ 66,881	\$ 66,019	\$ 55,412
		Average (in \$)	\$ 78,189	\$ 77,052	\$ 66,032
	% Low Income families		10.0%	9.9%	10.3%
<b>Educational attainment</b> <sup>c</sup>	% age 20 and over with certificate, diploma, or degree		84.7%	84.0%	77.1%
<b>Households</b> <sup>c</sup>	Own (% of n)		64.0%	64.9%	72.0%
	Rent (% of n)		36.0%	35.1%	27.6%
	Repair (% of n)		35.1%	35.6%	40.0%
	Value (in \$)		\$ 212,853	\$ 209,324	\$ 158,000
	Monthly Payments (in \$)		\$ 988	\$ 974	\$ 761
	Rent Increase/Decrease (in \$)		\$ 754	\$ 745	\$ 671
<b>Labour</b> <sup>c</sup>	Employment rate (% of n)	> 25 years old	65.7%	65.2%	58.0%
		15 to 24 years old	58.7%	58.3%	52.9%
	Transportation (% of n)	Vehicle	75.7%	76.5%	83.6%
		Public transit	11.9%	11.3%	5.9%
		Walk to work	10.1%	9.9%	8.2%

Note:

a – 2011 Canadian Census data,

b – 2011 National Household Survey,

c – 2006 Canadian Census data,

Other – Filipino, Latin American, Southeast Asian

Source: Government of Nova Scotia. (2013). Nova Scotia Community Counts. Retrieved February 21, 2014 from <http://www.gov.ns.ca/finance/communitycounts/geogpage.asp>

APPENDIX E: DEMOGRAPHIC, ECONOMIC AND HEALTH PROFILE HALIFAX AND NOVA SCOTIA

Context	Indicator	Levels with data—percentage (raw numbers)		
		Municipal*	Capital Health	Provincial
Demographic context	Percentage of seniors	13.1%	13.3% (54,991/412,518)	16.6%
	Percentage of lone-parent families	16.7%	16.6% (19,376/116,593)	17.3%
	> Lone male parent	3.1%	3.1% (3,610/116,593)	3.4%
	> Lone female parent	13.7%	13.5% (15,735/116,593)	13.9%
	Immigrants	7.4%	7.2% (28,146/390,926)	5%
	Percentage of persons in private households living alone	12.3%	12.1% (49,341/406,287)	12%
	> 65 years and older living alone	3.4%	3.5% (14,086/406,287)	4.4%
	Aboriginal identity	1.4%	1.4% (5,549/390,927)	2.7%
	School age children	16.3%	16.5% (151,675/921,725)	16.3%
	Population growth	4.7%	4.5% ((412,518-394,639)/394,639)	0.9%
	Population aged 20 and over who have obtained a certificate, diploma, or degree	84.7%	84.0% (252,912/301,127)	77.1%
	> Male	84.4%	83.7% (119,037/142,227)	76.2%
	> Female	84.8%	84.3% (133,880/158,899)	78.0%
	Population density (persons per sq km)	87.7	59.6	17.3

Context	Indicator	Levels with data—percentage (raw numbers)		
		Municipal*	Capital Health	Provincial
Economic context	Median annual family income	\$66,881	\$66,019	\$55,412
	Median annual income seniors (2006)	\$23,900	N/A	19,400
	Median annual income seniors (2011)	\$27,760	N/A	\$22,280
	% low income—economic families	10.0%	9.9% (11,071/111,471)	10.3%
	% low income—unattached individuals 15 years and over	35.3%	35.2% (22,697/64,436)	35.0%
	% low income—private households	14.3%	14.1% (54,857/388,857)	13.8%
	Children aged 17 and under living in low income economic families	N/A	15.4% (12,135/78,800)	16.4%
	Rates of unemployment	7.2%	7.4%	10.0%
	> Male	7.6%	7.8%	10.9%
	> Female	6.9%	7.0%	9.2%
	Average monthly beneficiaries of Income Assistance as a percentage of the Nova Scotia population	N/A	N/A	4.7% (2011-2012 data)
	Social assistance rate	3.9%	N/A	4.4%
	> Male	3.6%	N/A	4.2%
	> Female	4.3%	N/A	4.7%
	Guaranteed Income Supplement	Deferred	Deferred	Deferred
	Household affordability: spending 30% or more of household income on housing costs	25.8%	N/A	22.6%
	Lone-parent family household	39.8%	N/A	37.7%
	Percentage of population that is food insecure, total, age 12 and over	N/A	8.3% (years 2007-2008) 11.8% (years 2011-2012)	8.7% (years 2007-2008) 10.8% (years 2011-2012)
	> 65 years and over	N/A	Too unreliable to be published	3.6% (years 2007-2008) 3.6% <sup>E</sup> (years 2011-2012)

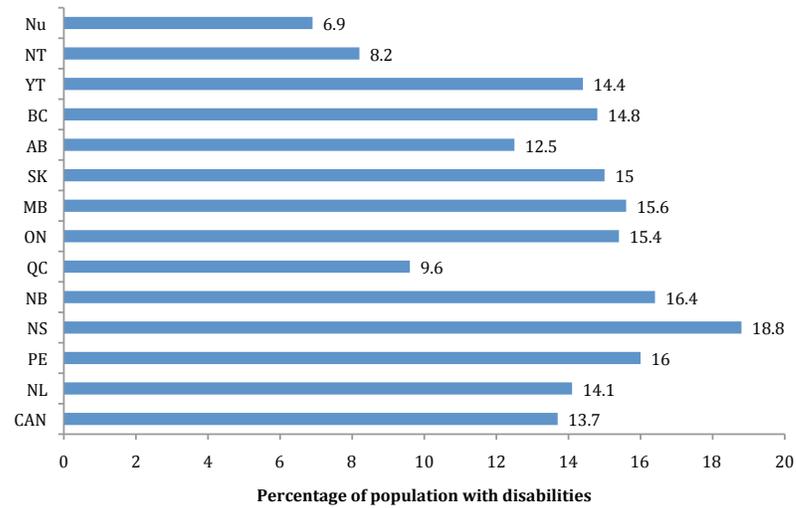
Context	Indicator	Levels with data—percentage (raw numbers)		
		Municipal*	Capital Health	Provincial
Health context	Percentage self reported Overweight or obese (18 years of age and over)	57.1%*	57.3%	60.8%
	Percentage self reported Overweight or obese (12 to 17 years of age)	34.6%* <sup>E</sup>	33.4% <sup>E</sup>	31.5%
	Percentage with self reported Diabetes	6.9%*	7.1%	8.6%
	Percentage with self reported High Blood pressure	17.7%*	18.2%	22.6%
	Percentage with self reported Heart disease	N/A	3.9%	5.8%
	Percentage with self reported Stroke	N/A	1.1% <sup>E</sup>	1.4% <sup>E</sup>
	Low birth weight	N/A	N/A	6.0%
	Fruit and vegetable consumption, 5 times or more per day, 12 years and over	38.2%*	38.4%	34.0%
	• Males, 12 years and over	31.7%*	31.5%	27.2%
	• Females, 12 years and over	44.0%*	44.4%	40.0%
	Fruit and vegetable consumption, 5 times or more per day, 12-19 years	35.8%*	36.1%	36.4%
	• Males, 12-19 years	39.3%* <sup>E</sup>	41.8% <sup>E</sup>	38.3%
	• Females, 12-19 years	32.6%* <sup>E</sup>	30.8% <sup>E</sup>	34.6%
	Fruit and vegetable consumption, 5 times or more per day, 65 years and over	36.5%*	37.7%	35.5%
	• Males, 65 years and over	25.7%* <sup>E</sup>	25.2% <sup>E</sup>	25.2%
	• Females, 65 years and over	44.9%*	46.7%	43.5%

N/A – data not available for this level of geography

E – use with caution

\* Where indicated, the data may be reported at the level of Census Metropolitan Area (CMA) boundaries. The Halifax CMA includes Halifax Regional Municipality and the boundaries as well as population counts and characteristics are very similar. Please see: [http://geodepot.statcan.gc.ca/GeoSearch2011-GeoRecherche2011/GeoSearch2011-GeoRecherche2011.jsp?currentTab=GeographicHierarchy&MinX=8358818.405714282&MinY=1360896.07111801&MaxX=8728079.665714297&MaxY=1585663.79459628&LastImage=http://geodepot.statcan.gc.ca/Diss/Output/GeoSearch2011\\_f6geoimspaz234684736100743.gif&lang=E&boundaryType=csd&FormTool=&sZoomLevel=5&DisplayData=Yes&IdentUID=1209034&IdentName=Halifax,%20RGM&placeID=539](http://geodepot.statcan.gc.ca/GeoSearch2011-GeoRecherche2011/GeoSearch2011-GeoRecherche2011.jsp?currentTab=GeographicHierarchy&MinX=8358818.405714282&MinY=1360896.07111801&MaxX=8728079.665714297&MaxY=1585663.79459628&LastImage=http://geodepot.statcan.gc.ca/Diss/Output/GeoSearch2011_f6geoimspaz234684736100743.gif&lang=E&boundaryType=csd&FormTool=&sZoomLevel=5&DisplayData=Yes&IdentUID=1209034&IdentName=Halifax,%20RGM&placeID=539)

## APPENDIX F: POPULATION WITH A DISABILITY, BY REGION IN CANADA, 2012.



Source: Statistics Canada. Canadian Survey on Disability 2012: Tables, Tables 1.1 to 1.14 Prevalence of disability for adults by sex and age group, Canada/province/territory, 2012, Catalogue no. 89-654-X, Ottawa, 2013.

## APPENDIX G: COMMUNITY SUPPORTED AGRICULTURE IN HALIFAX 2013\*

*Community Supported Agriculture, farm deliveries to Halifax*

<i>Fruit and vegetable</i>	<i>Meats</i>	<i>Prepared meals</i>	<i>Bakery</i>
Abundant Acres	Bruce Family Farm	Flying Apron	Gold Island Bakery
Cochrane Family Farm	GrassRoots Up		
Highland Farm	Shani's Farm		
Hutton	Wild Mountain		
Ironwood	Holdanca Farm		
Moon Fire			
Olde Furrow			
Snowy River			
Southfield Organics			
TapRoot			
Vista Bella			
Stewart's Organic Farm			
Watershed			

*\*none of the above mentioned farms are located within Halifax*

## APPENDIX H: NUMBER OF AGENCIES AND ACTIVITIES RELATED TO CHARITABLE FOOD SERVICE PROVISION<sup>101</sup>

<i>Agency type</i>	<i>Number of agencies (%)</i>	<i>Number of meals served/month (%)</i>	<i>Number of individuals given groceries/month (%)</i>
Multi-service agencies (e.g., family resource centres, drop-ins, social service agencies)	18 (35%)	6 812 (27%)	1 225 (17%)
Churches, mosques, synagogues, and other faith centres	11 (22%)	3 548 (14%)	925 (13%)
Ministries and other faith-based service agencies for the poor	9 (18%)	3 712 (15%)	3 838 (55%)
Organizations focused solely on food assistance	6 (12%)	8 730 (35%)	660 (9%)
Colleges, universities	4 (8%)	480 (2%)	365 (5%)
Health centres	3 (6%)	1 872 (7%)	0
<b>TOTAL</b>	<b>51</b>	<b>25 154</b>	<b>7 013</b>

101 Williams, P.L. & Lake, S. (2013). The Provision of Charitable Food Assistance in Canada: Forging a more adequate response. Key Findings from Halifax Regional Municipality. Retrieved Dec 4, 2013 from [http://foodarc.ca/wp-content/uploads/2013/05/Charitable\\_Food\\_Assistance\\_in\\_Canada\\_Hfx\\_March2013\\_Final1.pdf](http://foodarc.ca/wp-content/uploads/2013/05/Charitable_Food_Assistance_in_Canada_Hfx_March2013_Final1.pdf)

APPENDIX I:

ETHNICALLY DIVERSE FOOD SERVED AT HALIFAX  
FARMER'S MARKETS (FEB 2014)

		Seaport	Alderney	Partners for Care Capital Health	Historic	Tantallon	Hammonds Plains	Musquodoboit
<b>Baked goods</b>								
<i>French</i>		2	1					
<i>German</i>		2	1				1	
<i>Cheese</i>								
<i>Dutch</i>		1						
<b>Meat</b>								
<i>Bavarian</i>		1						
<b>Other</b>								
<i>Tunisia (olive oil)</i>		1						
<i>Iran (saffron)</i>		1						
<b>Prepared foods</b>								
<i>Acadian</i>	1			1				
<i>African</i>	1			1				
<i>Antiguan</i>		1						
<i>Cambodian</i>	2				1			
<i>Chinese</i>	1							
<i>Egyptian</i>				1				
<i>Greek</i>							1	
<i>German</i>	4	1						
<i>Indian</i>					1			
<i>Italian</i>					1			
<i>Japanese</i>	1				1			
<i>Lebanese</i>	1	1						
<i>Mediterranean</i>	1	1						
<i>Mexican</i>		1						
<i>Polish</i>	1	1						
<i>Trinidad</i>	1			1				
<i>Turkish</i>								
<i>Ukrainian</i>								

## APPENDIX J:

## ETHNIC AND CULTURALLY DIVERSE RETAIL FOOD STORES INVENTORY, (FEB-MAR, 2014)

<i>Name</i>	<i>Address</i>	<i>Location/District</i>	<i>Description of ethnic selection</i>
Sobeys	3286 Hwy 2	Fall River D1	Multicultural
Atlantic Superstore	5240 Hwy 7	Porters Lake D2	Multicultural
Atlantic Dutch Shop	94 Horseshoe Turn Rd	Lawerentetown D2	Dutch Netherlands
Atlantic Superstore	650 Portland St	Dartmouth D3	Multicultural
Sobeys	268 Baker Dr	Dartmouth D3	Multicultural
Sobeys	2 Forest Hills	Cole Harbour D4	Multicultural
Sobeys	612 Highway 7	Westphal D4	Multicultural
Superstore	920 Cole Harbour	Cole Harbour D4	Multicultural
Atlantic Superstore	9 Braemar Dr	Dartmouth D5	Multicultural
Sobeys	211 Pleasant St	Dartmouth D5	Multicultural
Sobeys	210 Wyse Road	Dartmouth D5	Multicultural
Sobeys	551 Portland	Dartmouth D5	Multicultural
Wok's Cooking Oriental Gourmet Shop	273 Wyse Road	Dartmouth D5	Asian
Target	21 Micmac Blvd.	Dartmouth D5	Multicultural
Big Ray Asian Grocery	121 Main St #7	Dartmouth D6	Asian
Walmart	90 Lamont Terr	Dartmouth D6	Multicultural
Sobeys	60 Tacoma Dr	Halifax D7	Multicultural
Atlantic Superstore	1075 Barrington St	Halifax D7	Multicultural
Sobeys	1120 Queen	Halifax D7	Multicultural
Jerry Kwik Way	5465 Inglis St	Halifax D7	Indian
Don 88 Asian Grocery	6083 South St	Halifax D7	Asian
Ca Hoa Grocery	5483 Victoria Rd	Halifax South End D7	Asian
Taishan Asian Grocery	1312 Queen St	Halifax D7	Asian
Pete's and European Delicatessen	1515 Dresden Row	Halifax D7	European
Japanese Food Paradise	1020 Barrington St	Halifax South End D7	Asian (Japanese)
Atlantic Superstore	6139 Quinpool Rd	Halifax D8	Multicultural
Atlantic Superstore	6141 Young St	Halifax D8	Multicultural
Sobeys	2651 Windsor St	Halifax D8	Multicultural
M Mart Clover Farm	5553 Bloomfield St	Halifax North End D8	Asian
J J Korean Oriental Foods	2326 Gottingen St	Halifax D8	Asian (Korean)
Indian Groceries	6061 Young St	Halifax North End D8	Indian
Italian Market	6061 Young St	Halifax D8	Italian
Fancy Lebanese Bakery	2573 Agricola St	Halifax D8	Lebanese
Newfoundland Grocery	6061 Willow St	Halifax North End D8	Newfoundland

<i>Name</i>	<i>Address</i>	<i>Location/District</i>	<i>Description of ethnic selection</i>
Mid-East Food Center	2595 Agricola St	Halifax D8	Mediterranean Middle Eastern
European Pantry	6516 Chebucto Rd	Halifax West End D9	European
Heiwa Oriental Market	7018 Chebucto Rd	Halifax West End D9	Asian (Korean & Japanese)
Wholesale Club	7111 Chebucto Rd	Halifax D9	Multicultural
Taishan Asian Grocery	6466 Quinpool Rd	Halifax D9	Asian
Sobeys	6990 Mumford Rd	Halifax D9	Multicultural
Atlantic Superstore	3601 Joseph Howe Dr	Halifax D9	Multicultural
Walmart	6990 Mumford Rd.	Halifax D9	Multicultural
Tian Phat Asian Grocery	209 Bedford Hwy	Bedford D10	Asian
Al-Quds Food	3559 Dutch Village Rd	Halifax D10	Indian
Al-Arz Pita Bakery	19 Alma Cres	Halifax D10	Middle East
Curry and Spice	123 Main Ave	Halifax D10	Indian
House of Halal Groceries	14 Titus St	Halifax D10	Halal-Middle Eastern
Turkish Food Center	227 Bedford Hwy	Bedford D10	Turkey
Yummy Deli	3647 Dutch Village Rd	Halifax D10	European
Sobeys	279 Herring Cove Rd	Halifax D11	Multicultural
European Farmer's Market	103 Chain Lake Dr	Bayer's Lake D12	
Target	194 Chain Lake Dr	Bayer's Lake D12	Multicultural
Sobeys	287 Lacewood Dr	Halifax D12	Multicultural
Atlantic Superstore	210 Chain Lake Dr	Halifax D12	Multicultural
Walmart	220 Chain Lake Dr	Halifax D12	Multicultural
Atlantic Superstore	5178 St. Margarets Bay Rd	Tantallon D13	Multicultural
Sobeys	3650 Hammonds Plains Rd	Tantallon D13	Multicultural
Mariposa Natural Market	Crossroads of St. Margaret's Bay Rd. Upper Tantallon	Upper Tantallon D13	Mediterranean
Atlantic Superstore	745 Sackville Dr	Lower Sackville D15	Multicultural
Sobeys	752 Sackville Dr	Lower Sackville D15	Multicultural
Sobeys	80 First Lake Dr	Lower Sackville D15	Multicultural
Atlantic Superstore	1650 Bedford hwy	Bedford D16	Multicultural
Sobeys	55 Peakview Way	Bedford D16	Multicultural
Sobeys	961 Bedford Hwy	Bedford D16	Multicultural
Pete's and European Delicatessen	1595 Bedford Hwy	Bedford D16	European
Bailey's Meat Market	1189 Bedford Hwy	Bedford D16	Halal-Middle Eastern
Walmart	141 Damascus Rd	Bedford D16	Multicultural

## APPENDIX K:

INCIDENCE RATES OF CANCER IN CAPITAL HEALTH  
AND NOVA SCOTIA, 2012

<i>Cancer site</i>	<i>Nova Scotia incidence rate (per 100,000 residents)</i>	<i>Capital Health incidence rate (per 100,000 residents)</i>
<b>Colorectal</b>	60.99	61.36
<b>Pancreas</b>	10.30	9.86
<b>Stomach (2012 only)</b>	5.82	6.28
<b>Stomach (avg. 2010-12) †</b>	5.88	5.60
<b>Bladder (includes in situ cases)</b>	21.06	20.78
<b>Breast (females only)</b>	113.14	123.31
<b>Prostate (males only)</b>	109.13	119.76

\* Cancer data

- CCNS Cancer Registry. Most recent completed incidence year=2012
- Invasive cancers for colorectal, breast, prostate, pancreas, stomach
- Invasive and in situ cancers for bladder
- For breast and prostate, cases were restricted to females only and males only, respectively

\*\* Population data

- Received by CCNS through NS Dept of Finance. Most current population data from 2011.

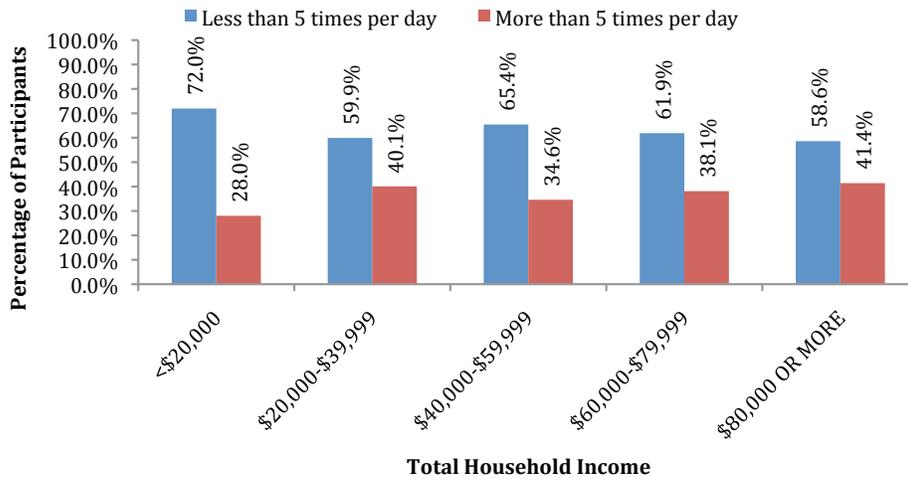
† Population denominator used 2009, 2010 and 2011

In order to calculate the age standardized incidence rates, an intermediate step is creating age-specific rates. Normally, this is done using the number of cases in the numerator and the population (for the year/s corresponding to the case count) in the denominator. CCNS had not received have not received 2012 population data, at the time of printing we used 2011 population data in the calculations. Since NS has a relatively stable population, this should not affect the incidence rates as shown. However, you should consider the incidence rates presented as estimates rather than the final rate.

In the DHA annual reports that provide incidence rates for cancers, the data are grouped into the most recent 5-year period (thus 2012 incidence rates would be presented as the weighted average of 2008 to 2012) in order to provide stable estimates of the cancer incidence. This is especially important for rare cancer sites, since the smaller sample size leads to mathematically unstable estimates.

APPENDIX L:

FRUIT AND VEGETABLE CONSUMPTION BY  
TOTALHOUSEHOLD INCOME, HALIFAX CENSUS  
METROPOLITAN AREA CANADIAN COMMUNITY  
HEALTH SURVEY 2010-11<sup>102</sup>



APPENDIX M:

FOOD SECURITY STATUS,  
BASED ON 18 ITEM QUESTIONNAIRE

<i>Food Security Status, based on 18 item HFSSM questionnaire*</i>			
<i>Status</i>	<i>Interpretation</i>	<i>10 item adult food security scale</i>	<i>8 item child food security scale</i>
<b>Food secure</b>	No report of income –related problems with food access	No items affirmed	No items affirmed
<b>Marginal food insecurity**</b>	Some indication of worry or an income-related barrier to adequate, secure food access	Affirmed no more than 1 item on either scale	
<b>Moderate food insecurity</b>	Compromise in quality and/or quantity of food consumed by adults and/or children due to a lack of money for food	2-5 positive responses	2-4 positive responses
<b>Severe food insecurity</b>	Disrupted eating patterns and reduced food intake among adults and/or children	6 or more positive responses	5 or more positive responses

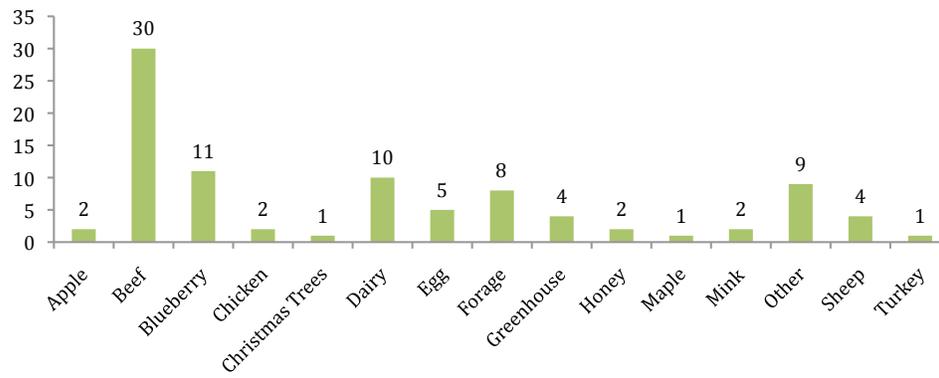
\* Adapted from: Canadian Community Health Survey, cycle 2.2, Nutrition (2004): Income related Household Food Security in Canada.

\*\* One item in either scale affirmed

† Accessed from: Tarasuk, V, Mitchell, A, Dachner, N. (2013) Household food insecurity in Canada, 2012. Toronto. Retrieved March 9th, 2014 from: <http://nutritionalsciences.lamp.utoronto.ca/>

## APPENDIX N:

## REGISTERED FARMS IN HALIFAX BY PRIMARY COMMODITY, 2012

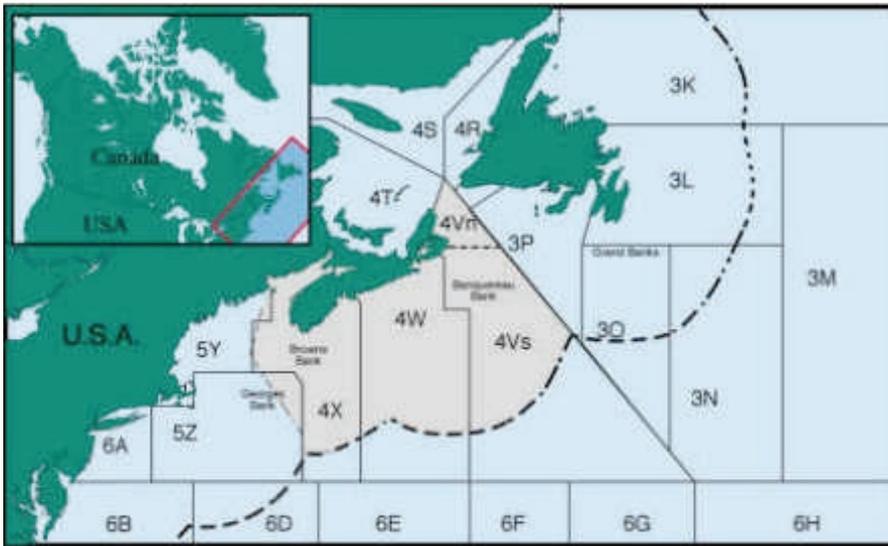


<i>Name of Garden</i>	<i>Type of garden</i>	<i>Total garden area (SqM) or capacity to expand</i>	<i>Growing area (sq meters)</i>	<i>Number of plots</i>
<b>Beaver Bank Kinsac Senior Association</b>				
<b>Bloomfield Community Garden</b>	<i>Allotment</i>	348	23	10
<b>BLT Community Garden</b>	<i>Allotment</i>	very little room to expand	181	61
<b>Christ Church Garden</b>	<i>Community Organization</i>	lots of room for expansion	30	2
<b>Common Roots Urban Farms—Community Garden Component</b>	<i>Urban Farm with Allotment, Community and Teaching Gardens</i>	16,188 (4 acres) some room for expansion	4,047	157
<b>Cole Harbour Heritage Farm Museum</b>	<i>Urban Farm and Teaching Gardens</i>	10,117 (2.5 acres)		
<b>Transition Bay—Crossroads Educational Garden</b>	<i>Community Organization/ Teaching</i>	plans for 1-2 more beds for spring 2014	20	7 beds
<b>Transition Bay—Seabright Community Garden</b>	<i>Allotment</i>	695	139	
<b>Dartmouth Commons</b>	<i>Allotment</i>	lots of room for expansion	108	15
<b>Devonshire Community Garden/Alexandra Children's Centre</b>	<i>Allotment</i>	98	25	13
<b>Dustan Street Community Garden</b>	<i>Allotment</i>			
<b>Goodness Grows</b>	<i>Allotment</i>	149	111	

<i>Name of Garden</i>	<i>Type of Garden</i>	<i>Total garden area (SqM) or capacity to expand</i>	<i>Growing area (sq meters)</i>	<i>Number of plots</i>
<b>Gorsebrook Community Garden</b>	<i>Allotment</i>	406	406	47
<b>Greystone Community Garden</b>	<i>Collective</i>			
<b>Halifax Refugee Clinic</b>	<i>Community Organization</i>	20	20	1
<b>Name withheld</b>	<i>Community Organization</i>	12	12	2
<b>Name withheld</b>	<i>Community Organization</i>	8	8	1
<b>HUGS: Hilda United Garden Society</b>	<i>Collective</i>	1,394	186	24
<b>Halifax Multi-Cultural Garden (ISIS)</b>	<i>Community Organization/ Communal</i>	lots of room for expansion	80	18
<b>ISIS—Immigrant Settlement and Integration Services: Glen Garden</b>	<i>Community Organization/ Communal</i>	99	99	29
<b>ISIS—New Garden in planning</b>	<i>Community Organization/ Communal</i>	not yet established	not yet established	striving for 15 plots for spring 2014
<b>Jackson Road Community Garden</b>	<i>Allotment</i>			
<b>John Umlah Memorial Community Garden</b>	<i>Community Organization</i>	929	808	29
<b>Lancaster Ridge Community Garden</b>	<i>Allotment</i>	room to expand	171	18
<b>Middle Musquodoboit Community Garden</b>				

<i>Name of Garden</i>	<i>Type of Garden</i>	<i>Total garden area (SqM) or capacity to expand</i>	<i>Growing area (sq meters)</i>	<i>Number of plots</i>
Mount Saint Vincent University	<i>University/Collective</i>	171	51	11
North End Community Garden	<i>Collective</i>	427	371	30 family/ 1 communal for youth
Name withheld	<i>Community Organization</i>	lots of room for expansion	13	2
Olde Home Community Garden	<i>Community Organization</i>			
Prescott Street Community	<i>Allotment</i>	697	304	27
ReachAbility	<i>Community Organization</i>	very little room to expand	12	3
Regal Road Community Garden	<i>Allotment</i>	15	15	20
Ropeworks Community Garden	<i>Collective</i>	40	40 (including this year's additions)	currently 7, adding 5 more this year
SeeMore Green (Dal/NSPIRG)	<i>University/Collective</i>	60 plus	1161	37
Spryfield Urban Farm	<i>University/Collective</i>	12183 (3 acres)	2023	3-one teaching, one allotment area, one farm area
St. Alban's Church Community Garden	<i>Community Organization</i>	19	19	2
St. Mary's University	<i>University/Collective</i>	90	33	33
Sunrise Manor	<i>Collective</i>	no room for expansion	5	3
Take Action Society Outdoor Classroom and Community Garden	<i>Community Organization/School</i>	150.5	150.5	17
Willow Street	<i>Collective</i>			
YWCA Halifax	<i>Community Organization</i>			

APPENDIX P: MARINE FISHERY ZONES IN NOVA SCOTIA



## APPENDIX Q:

## HAY AND FIELD CROPS IN HALIFAX, 2011\*

<i>Hay and field crops</i>	<i>Farms reporting</i>	<i>Total size</i>	<i>Total hectares</i>
Total wheat	2	X <sup>t</sup>	X <sup>t</sup>
Spring wheat	0	0	0
Durham	0	0	0
Winter	2	X	X
Oats	13	171	69
Barley	3	108	44
Mixed grain	1	X	X
Total corn	10	809	327
Corn for grain	2	X	X
Corn for silage	9	X	X
Total rye	0	0	0
Spring rye	0	0	0
Canola (rapeseed)	0	0	0
Soybeans	0	0	0
Flaxseed	0	0	0
Dry field peas	0	0	0
Chickpeas	0	0	0
Lentils	0	0	0
Dry white beans	0	0	0
Other dry beans	1	X	X
Alfalfa and alfalfa mixtures	12	1,242	503
All other tame hay and fodder	61	6,186	2,503
Forage seed for seed	0	0	0
Potatoes	5	5	2
Mustard seed	0	0	0
Sunflowers	0	0	0
Canary seed	0	0	0
Ginseng	0	0	0
Buckwheat	1	X	X
Sugar beets	0	0	0
Caraway seed	0	0	0
Triticale	0	0	0
Other field crops	2	X	X
<b>Total</b>	<b>124</b>	<b>8,521</b>	<b>3,468</b>

\* Statistics Canada Data, 2011

<sup>t</sup> The value of 'X' has been suppressed to meet the confidentiality requirements of the Statistics Act

## APPENDIX R:

## FRUIT, BERRIES AND NUTS IN HALIFAX, 2011\*

<i>Fruit, berries, and nuts</i>	<i>Farms reporting</i>	<i>Total size</i>	<i>Total hectares</i>
Apples total area	6	X <sup>t</sup>	X <sup>t</sup>
Pears total area	0	0	0
Plums and prunes total area	0	0	0
Cherries (sweet) total area	1	X	X
Cherries (sour) total area	0	0	0
Peaches total area	0	0	0
Apricots	0	0	0
Grapes total area	3	X	X
Strawberries total area	0	0	0
Raspberries total area	1	X	X
Cranberries total area	0	0	0
Blueberries total area	28	X	X
Saskatoon berries total area	0	0	0
Other fruit, berries and nuts total area	0	0	0
<b>Total</b>	<b>33</b>	<b>1607</b>	<b>650</b>

\* Statistics Canada Data, 2011

<sup>t</sup> The value of 'X' has been suppressed to meet the confidentiality requirements of the Statistics Act

## APPENDIX S:

VEGETABLES (EXCLUDING GREENHOUSE)  
IN HALIFAX, 2011\*

<i>Vegetable</i>	<i>Farms reporting</i>	<i>Total acres</i>	<i>Total hectares</i>
Sweet corn	3	1	0
Tomatoes	9	X <sup>t</sup>	X <sup>t</sup>
Cucumbers	8	2	1
Green peas	6	1	0
Green and waxed beans	8	1	0
Cabbage	3	1	0
Chinese cabbage	0	0	0
Cauliflower	2	X	X
Broccoli	4	X	X
Brussels sprouts	1	X	X
Carrots	7	X	X
Rutabagas and turnips	6	X	X
Beets	5	X	X
Radishes	1	X	X
Shallots and green onions	3	0	0
Dry onions, yellow, Spanish, cooking	4	1	10
Celery	2	X	X
Lettuce	5	1	0
Spinach	4	0	0
Peppers	4	0	0
Pumpkins	10	X	X
Pumpkins	8	2	1
Asparagus producing	0	0	0
Asparagus non-producing	2	X	X
Other vegetables	8	X	X
<b>Total Vegetables (excluding greenhouse)</b>	<b>20</b>	<b>31</b>	<b>13</b>

\* Statistics Canada Data, 2011

<sup>t</sup> The value of 'X' has been suppressed to meet the confidentiality requirements of the Statistics Act

## APPENDIX T: GREENHOUSE VEGETABLES IN HALIFAX, 2011\*

<i>Vegetable</i>	<i>Farms reporting</i>	<i>Square feet</i>	<i>Square metres</i>
Greenhouse Vegetables	5	5,452	507

\* Statistics Canada Data, 2011

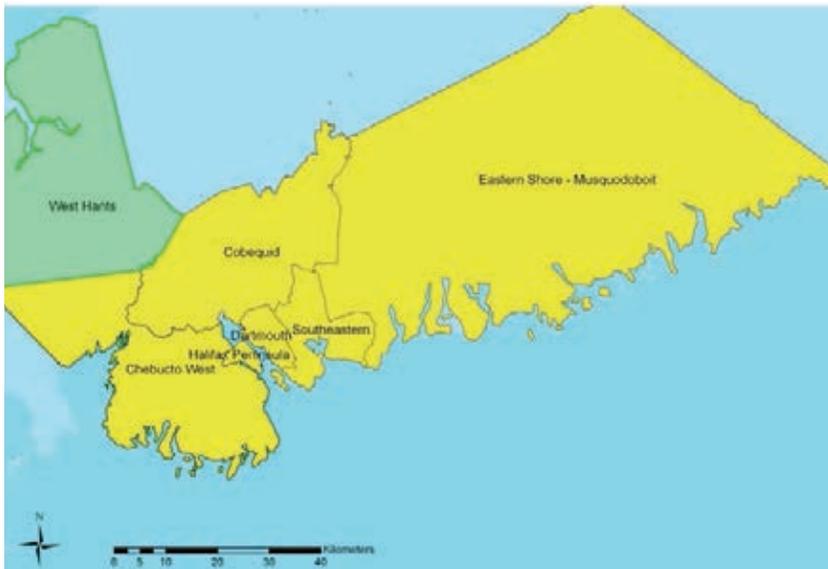
## APPENDIX U: LIVESTOCK IN HALIFAX, 2011\*

<i>Livestock</i>	<i>Farms reporting</i>	<i>Number</i>
<b>Cattle and Calves</b>		
<i>Calves (under 1 year)</i>	53	946
<i>Steers (1 year and older)</i>	19	120
<i>Heifers (1 year and older)</i>	45	709
<i>Beef cows</i>	34	459
<i>Dairy cows</i>	16	2,141
<i>Bulls (1 year and older)</i>	33	47
<b>Total Cows and Calves</b>	56	4,422
Sheep and Lambs	6	207
Pigs	8	40

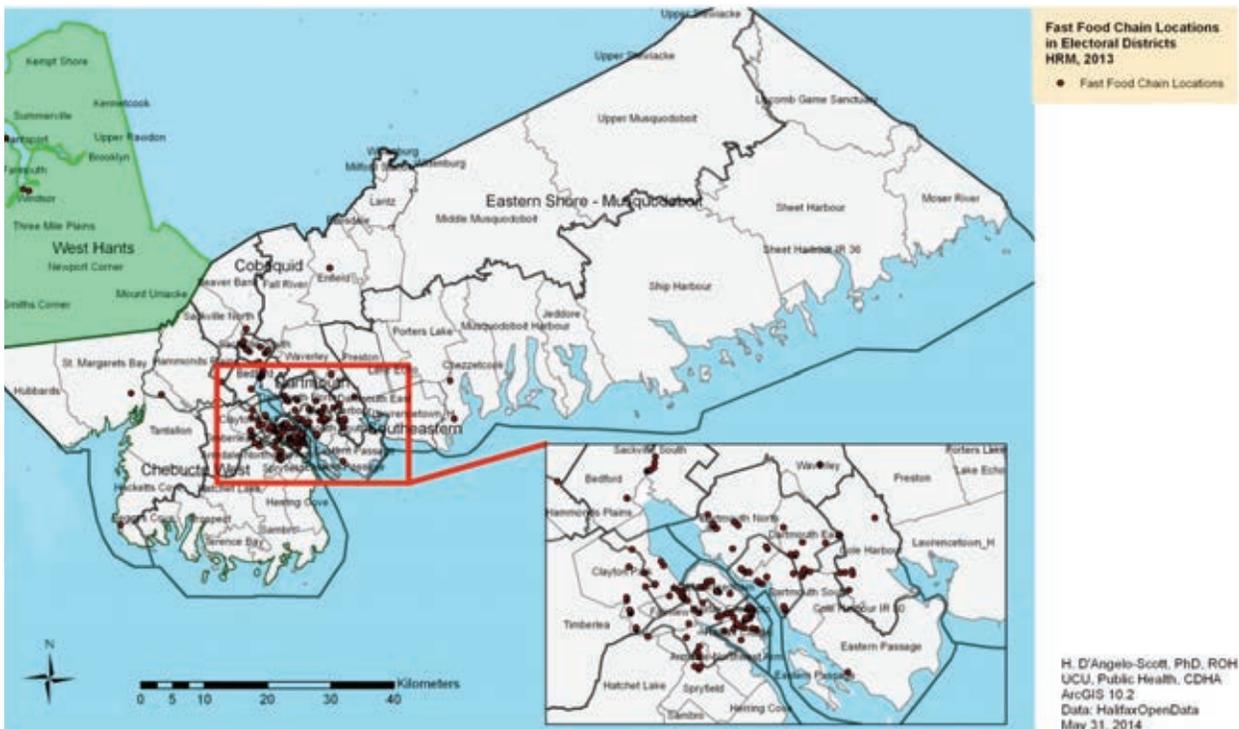
\* Statistics Canada Data, 2011



**MAP 1:**  
Halifax Regional Municipality by Community Health Board, 2014



**MAP 2:**  
Fast Food Stores by Chain in Halifax, 2013<sup>103</sup>

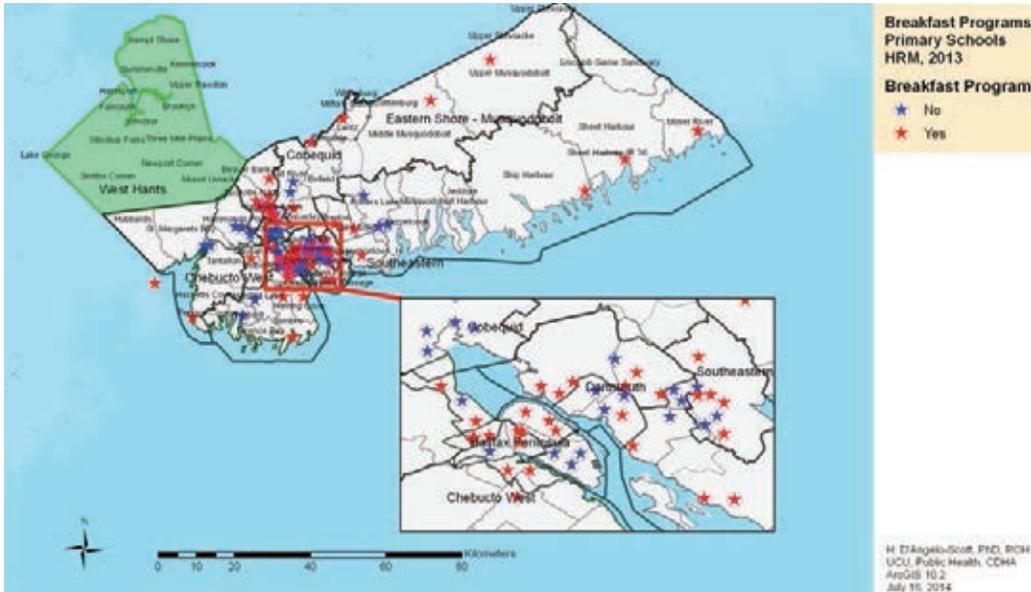


103 Data sourced from Dr. Sara Kirk, Dalhousie University

**MAP 3:**

Breakfast programs in primary schools (*Primary to Grade 6*) by electoral boundary, HRM, 2014.

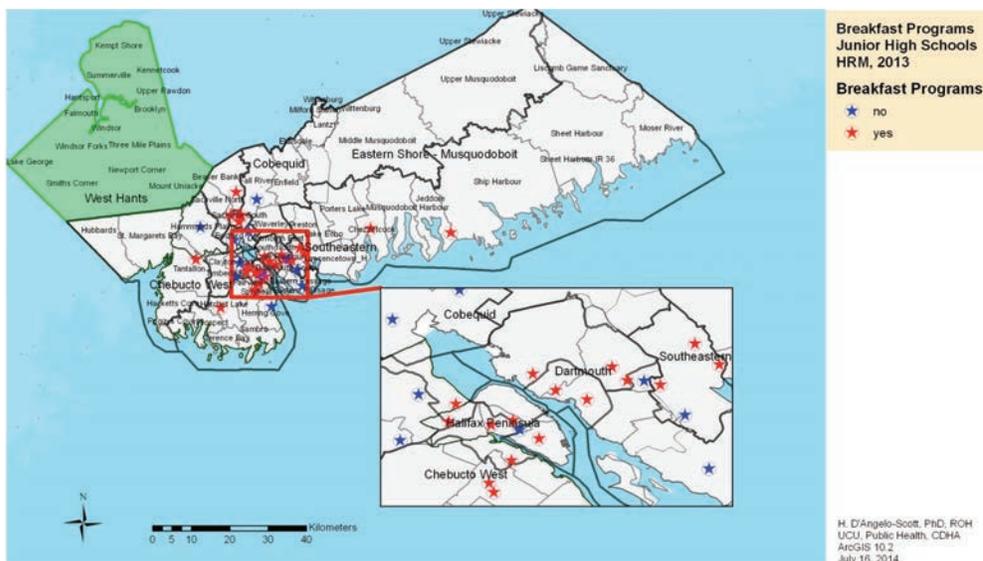
*Among the 100 primary schools, 56 have breakfast programs and 36 do not have a breakfast program. For eight schools the presence of a breakfast program was unknown.*



**MAP 4:**

Breakfast programs in junior high schools (*Grades 7 to 9 as well as schools with Primary to Grade 9*) by electoral boundary, HRM, 2014.

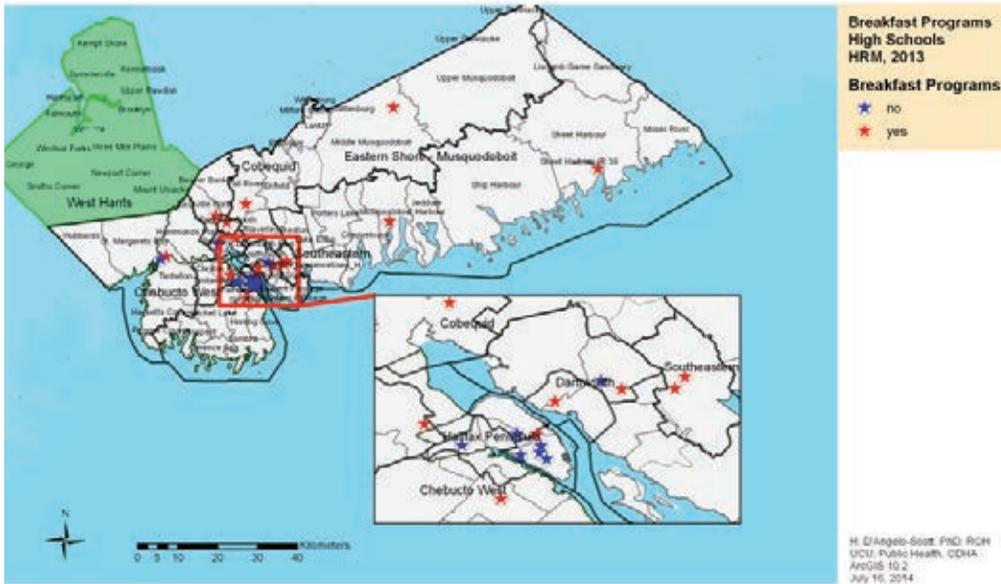
*Among the 39 Junior high schools, 25 have breakfast programs and 11 do not have a breakfast program. For three schools the presence of a breakfast program was unknown.*



**MAP 5:**

Breakfast programs in high schools (*Grades 10 to 12 as well as schools with Primary to Grade 12*) by electoral boundary, HRM, 2014.

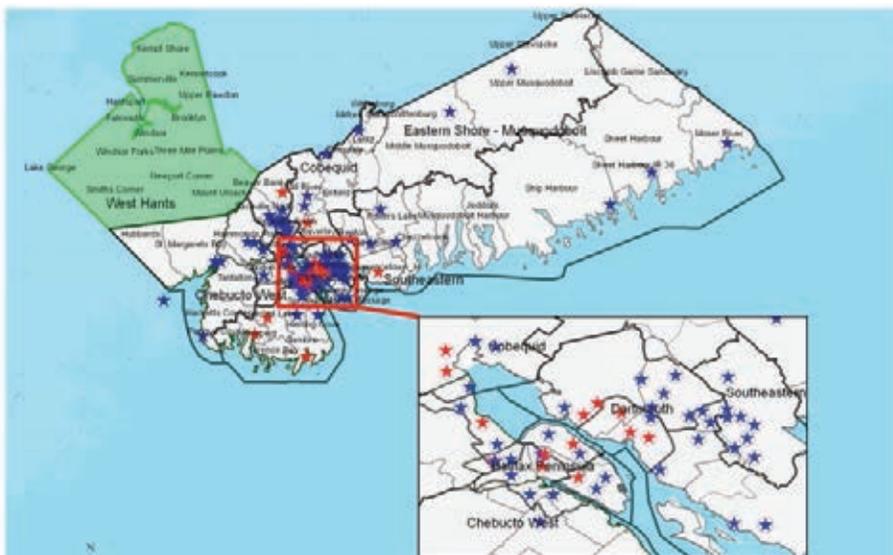
*Among the 33 high schools, 10 have breakfast programs and 16 do not have a breakfast program. For seven schools the presence of a breakfast program was unknown. Note one high school was excluded as a postal code was not available known.*



**MAP 6:**

Garden programs in primary schools (*Primary to Grade 6*) by electoral boundary, HRM, 2014.

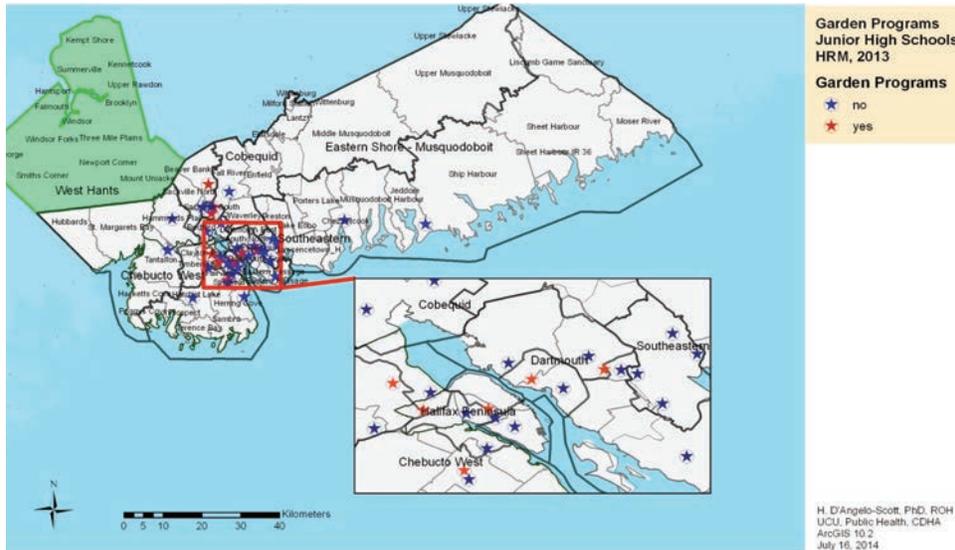
*Among the 100 primary schools, 19 have garden programs and 74 do not have a garden program. For seven schools the presence of a garden program was unknown.*



### MAP 7:

Garden programs in junior high schools (*Grades 7 to 9 as well as schools with Primary to Grade 9*) by electoral boundary, HRM, 2014

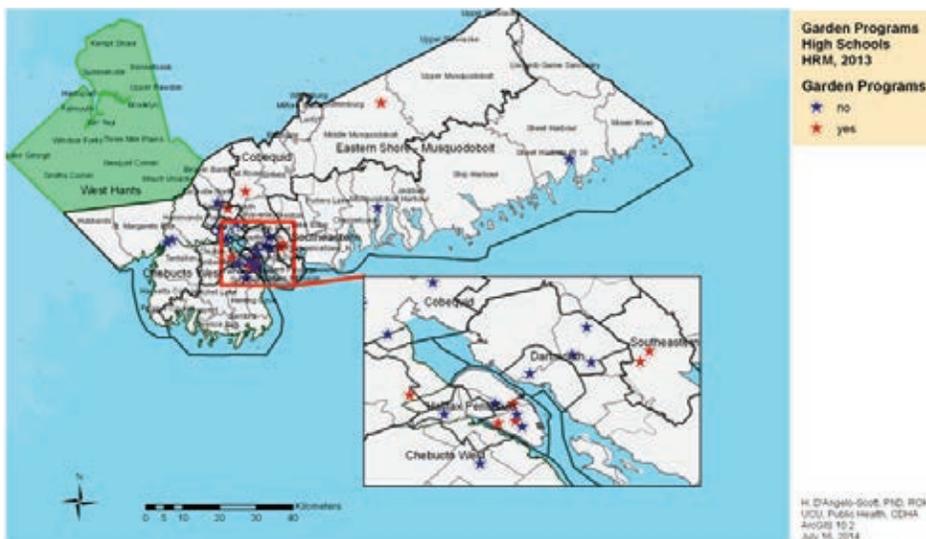
*Among the 39 junior high schools, 9 have garden programs and 27 do not have a garden program. For three schools the presence of a garden program was unknown.*



### MAP 8:

Garden programs in high schools (*Grades 10 to 12 as well as schools with Primary to Grade 12*) by electoral boundary, HRM, 2014.

*Among the 33 high schools, 9 have garden programs and 19 do not have a garden program. For five schools the presence of a garden program was unknown. Note one high school was excluded as a postal code was not available.*



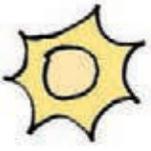
# NOTES:

A series of horizontal dotted lines for taking notes, spanning the width of the page.









HALIFAX FOOD POLICY ALLIANCE

