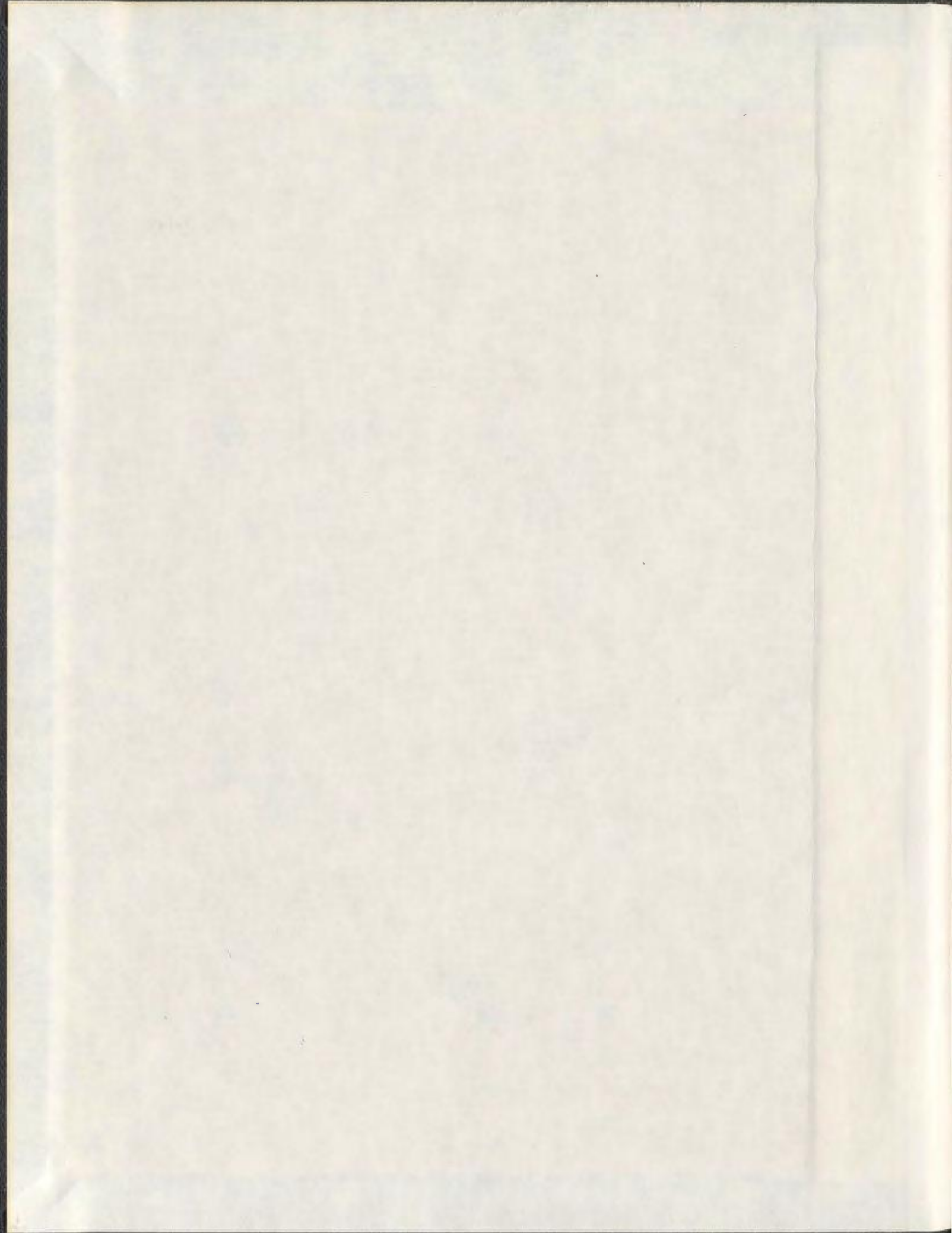


AN EXAMINATION OF RURAL AND COASTAL
FOODSCAPES: INSIGHTS FOR THE STUDY OF
COMMUNITY FOOD SECURITY AND SUSTAINABLE
FOOD SYSTEMS

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**AN EXAMINATION OF RURAL AND COASTAL FOODSCAPES:
INSIGHTS FOR THE STUDY OF COMMUNITY FOOD SECURITY AND
SUSTAINABLE FOOD SYSTEMS**

by

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ABSTRACT

In the context of growing inequity in access to food, threatened livelihoods for food producers, and environmental challenges, food security has garnered significant attention. Over the last twenty years, food security research has shifted from a focus on the individual and household to considering the role of community. It suggests that community well-being influences sustained food security and that local communities should have more ownership over their food system. Community food security has emerged as part of a movement in North America and Europe towards sustainable and local food systems.

However, most community food security remains focused on agri-food systems to the neglect of fisheries. This study is a significant contribution to the community food security literature by examining the intersections of fisheries restructuring and community food security in the Bonne Bay region on Newfoundland's west coast. Since the 1990s collapse of regional cod stocks, many coastal areas in Newfoundland, including Bonne Bay, have undergone significant social and economic change related to the fishing industry. As food security becomes increasingly linked to ideas about the 'local' and 'sustainable,' this study interrogates what these ideas mean in the Bonne Bay region.

This study presents the foodscape as a new conceptual lens for understanding community food security. Most simply, foodscapes are the sites or landscapes where food can be obtained as well as the interactions with food that unfold in these places. A foodscape

analysis explores the connections among people, places, and food, including the connections among the acquisition, preparation and eating of food, to understand food security at interrelated household and community levels. Findings show that community food security in the Bonne Bay region takes place at the interface of formal and informal food economies. Most households use a food provisioning strategy combining food purchasing and self-provisioning. Local seafood remains important to diets, although there are increasing constraints on its access.

This case study highlights important gaps and opportunities for future community food security research. First, a consideration of self-provisioning and informal economies has only been marginally explored in food scholarship. Secondly, this study calls for greater consideration of fisheries to truly address issues of equity and sustainability in food systems.

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PART ONE

Chapter 1 Introduction

1.1 Study overview

This study arose out of an interest in how fisheries restructuring may impact the food security of coastal communities. A growing body of research in the field of community food security is emphasizing the importance of local and sustainable food systems for ensuring sustained food security. However, very little community food security research has focused on coastal regions, including the contributions fisheries make to food systems or how fisheries-related restructuring may impact food security and local food systems. While some studies have looked at the impacts of agricultural restructuring on food security (see Bell, 2010; Koc & Dahlberg, 1999), few if any have focused on the relationship between fisheries restructuring and food security. This thesis uses the Bonne Bay region on the west coast of Newfoundland as a case study for examining seafood and other kinds of food security in a region that has experienced and continues to undergo substantial social and economic change related to fisheries.

The Bonne Bay region is on Newfoundland's Northern Peninsula bounded to the west by the Gulf of St Lawrence. The region consists of five communities including Rocky Harbour, Norris Point, Woody Point, Glenburnie/Birchy Head/Shoal Brook, and Trout River (see Figure 1.1). These towns are surrounded by Gros Morne National Park and have a year-round population of approximately 3000 people. In addition to changes related to fisheries, the region has seen substantial growth in tourism in recent years because of its location within Gros Morne National Park. There have also been longer-

term political and economic changes that have contributed to changing food provisioning patterns over the past number of decades. This thesis is concerned with understanding the relationship between interactive restructuring and community food security in this region. Drawing on work by Ommer and the Coasts Under Stress research team (2007), I use the term ‘interactive restructuring’ to understand restructuring as an interactive system-changing process that “occurs through the interplay of social factors (economics, policy, institutional history) with the biophysical environment” (p.4). A focus on interactivity is a more interdisciplinary approach to restructuring as it seeks to understand the interaction of social, economic, political, and environmental relationships and challenges more static views about human and natural systems (Sinclair & Ommer, 2006).

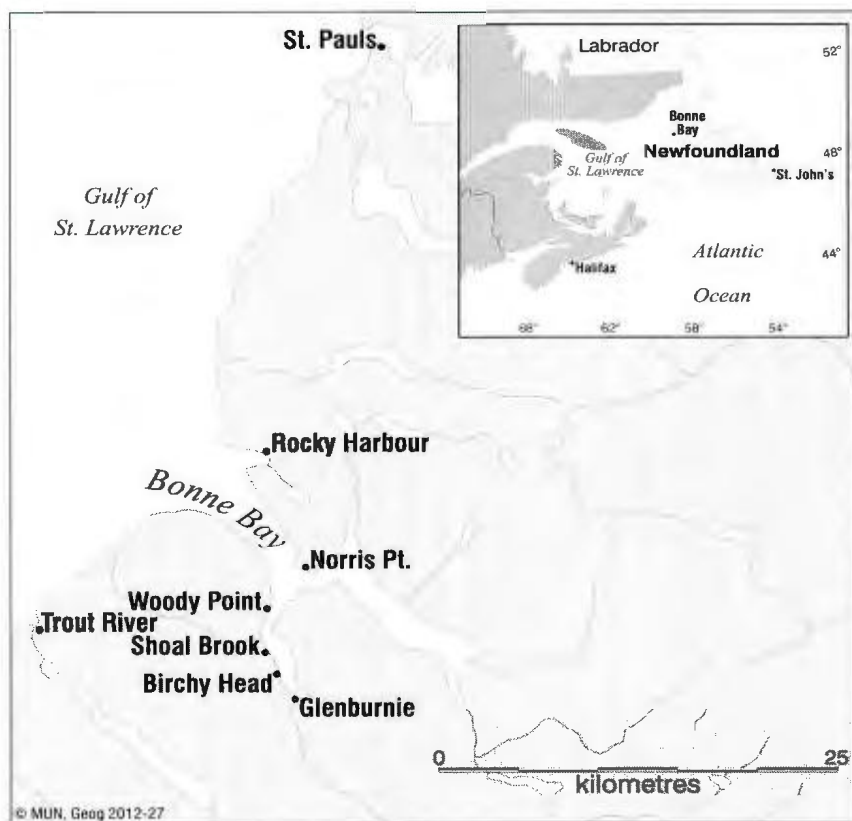


Figure 1.1 Map of the Bonne Bay region

1.2 Context: Interactive restructuring and the fisheries crisis

Newfoundland was settled by Europeans for its fish. For nearly two centuries, the cod fishery was the foundation of many coastal communities throughout Newfoundland and Labrador. For even longer, fishing people migrated to the island annually to participate in the cod fishery. On the west coast of the island, including Bonne Bay, salmon, herring, and lobster fisheries were also important to early settlement along with opportunities in forestry. However, settlers quickly realized that the fishery alone could not support them. They also turned to the land to produce as much food for home consumption as possible, based on a combination of fishing for sale and subsistence, hunting, and gardening.

Until the mid-twentieth century, fishing enterprises remained situated in household units and a seasonal, resource-based cycle of food provisioning persisted. Starting in the 1950s, the fishery gradually transitioned from mainly small-scale production (with some larger-scale operations in regions like the south coast) to more industrial and commercial production by the 1980s (Wright, 2001). This was accompanied by a shift in fish processing away from the household and into fish plants. At the same time, traditional patterns in food provisioning began to change rapidly following Newfoundland's Confederation with Canada and the influx of modern goods and services, including imported foods (Omohundro, 1994).

Change in many coastal communities has been particularly rapid since the collapse of cod and other groundfish stocks in the early 1990s. In the early 1990s, almost all cod and

other groundfish fisheries in Newfoundland and Labrador were placed under moratoria because of severe resource declines. Alongside the cod moratorium, declining abundance of Atlantic salmon lead to a commercial moratorium across the island in 1992, and the fishery has not reopened since (Fisheries and Oceans Canada, 1997). The Northern Gulf cod fishery in the Gulf of St. Lawrence is one of ten stocks (4RS3PN) in various Northwest Atlantic Fisheries Management (NAFO) regions in eastern Canada that collapsed. Bonne Bay is part of NAFO fishing division 4R. Of the many factors that contributed to the collapse, overfishing has been recognized as paramount. Some have critiqued the “managed annihilation” of northern and other cod stocks in a country that prided itself in having some of the best fisheries science in the world (Bavington, 2010).

In the Bonne Bay region two moratoria were imposed on Northern Gulf cod between 1994 and 1996 and again in 2003 (Fisheries Resource Conservation Council, 2011). The fishery reopened in 1997 but the stock subsequently declined and the fishery was shut down again in 2003 (Fisheries Resource Conservation Council, 2011). In the spring of 2004 a small fishery reopened, in part to support ongoing involvement by harvesters in the determination of resource availability (Fisheries Resources Conservation Council, 2011). Since 1997, the fishery has been made up of exclusively fixed gears operating in the inshore, while prior to the moratorium mobile fleets fishing offshore in the winter caught the majority of fish (Fisheries and Oceans Canada, 2012b). Limits on subsistence fishing for cod were also eventually imposed following the commercial moratorium. In 1995, the recreational cod fishery was closed across the island (Centre for Newfoundland Studies, 2013). It opened up in 1998, but closed again in 2003 in the Northern Gulf

region coinciding with the second commercial moratorium (Centre for Newfoundland Studies, 2013).

Presently, there are very small quotas for both commercial and recreational cod fisheries. The total allowable catch for the commercial cod fishery in the Northern Gulf of St. Lawrence was only 1500 tonnes in 2012, down from 2000 tonnes in 2011 and 4000 tonnes in 2010 (Fisheries and Oceans Canada, 2012b). The total allowable catch is only a fraction of what it used to be with a historical high of 100 000 tonnes in 1983 (Fisheries and Oceans Canada, 2012b). For the recreational cod fisheries, about 161 tonnes of cod fish were caught for the 4R3Pn region as a whole in 2006, the most recent year for which data are available (Fisheries and Oceans Canada, 2007). As of 2003, Northern Gulf cod was designated as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and as of 2010 was considered endangered (Fisheries and Oceans Canada, 2012b). While Northern Gulf cod remains at threat of being listed on the Species At Risk Act, COSEWIC's recommendation to list the stock as endangered has been disputed on the basis of negative socioeconomic implications for fishing dependent communities (Fisheries and Oceans Canada, 2005).

The cod stock collapse is only the most recent phase in a much longer history of fisheries restructuring (Ommer and the Coasts Under Stress research team, 2007). Leading up to the collapse of the early 1990s, Newfoundland inshore fishing communities had been experiencing a crisis for some time. The federal government recognized a decline in groundfish stocks as early as the 1970s prompting the extension of the 200 mile Exclusive

Economic Zone (EEZ) in 1977. Declaration of an EEZ by Canada led to changes in regulatory structure. The Northwest Atlantic Fisheries Organization (NAFO) was established to manage stocks straddling or outside of Canada's EEZ, while for stocks within the EEZ the Department of Fisheries and Oceans (DFO) set total allowable catches (TACs) and the Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC) was established to provide scientific advice (Fisheries Resources Conservation Council, 2011). This was accompanied by changes in management practices, including greater use of limited-entry licensing (Fisheries Resources Conservation Council, 2011). There was rapid growth in catching and processing capacity following Canada's extended jurisdiction and many groundfish stocks initially increased until the mid-1980s; at this time, there began to be signs that many stocks were not increasing to the extent reported by DFO (Fisheries Resources Conservation Council, 2011). Many inshore fish harvesters warned about declining stock numbers prior to the collapse in the early 1990s (Neis et al., 1999). Even much earlier in the 19th century, there had been crises in the fishery related to localized overfishing of cod stocks in some areas and associated patterns of spatial and temporal expansion of effort into new areas to compensate for declining landings (Cadigan, 1999; Cadigan & Hutchings, 2001). Historically, crises also arose with other species. In the early decades of the 20th century continued over harvesting of lobster stocks along the west coast led to a government imposed moratorium on the fishery, the earliest in Newfoundland's history (Korneski, 2012).

The collapse of NL groundfish stocks (and those in other parts of Atlantic Canada) brought substantial social and economic changes to coastal regions and threatened

community survival and livelihoods. In western Newfoundland, geographical remoteness combined with limited livelihood options made this region particularly susceptible to the consequences of resource collapse (Felt & Sinclair, 1995). The collapse of cod and other groundfish stocks affected young people who would have entered the fishery and ended some fishing traditions while changing others (Hamilton & Seyfrit, 1994; Jackson, Marshall, Tirone, Donovan, & Shepard, 2006). There was substantial out-migration from many coastal communities following the moratorium. The Bonne Bay region experienced nearly a 20% population decline between 1991 and 2006 (Newfoundland and Labrador Statistics Agency, 2009). A series of adjustment programs helped provide income assistance and retrain displaced workers, although the benefits were distributed unevenly among residents leading to new inequalities (Hamilton & Butler, 2001).

Twenty years after the moratorium the cod stocks have not rebuilt (Fisheries and Oceans Canada, 2012b). Communities face ongoing challenges related to net out-migration, with this movement comprised mostly of young people, and an aging population (MacDonald, Sinclair, & Walsh, 2013). These demographic changes, combined with increased high school completion rates and investment in postsecondary education, are contributing to an aging group of fish harvesters and dwindling recruitment of workers including young people to the fishing industry (MacDonald et al., 2013). There has been a shift to shellfish harvesting and processing following the collapse of groundfisheries, with many crab licenses given out to small-scale harvesting enterprises following the cod collapse (Schrang, 2005). Nonetheless, increased value from shellfisheries has not fully compensated for the lost income from groundfisheries particularly for small-scale fish

harvesters and processing workers (Ommer and the Coasts Under Stress Research Team, 2007; Schrank, 2005). There is also growing concern about the long-term resource sustainability of shellfish (Fisheries and Oceans Canada, 2012c), at the same time that the number of active fish harvesters and particularly employment opportunities for plant workers, due to plant closures and shorter seasons, has declined substantially in recent decades (MacDonald et al., 2013; Ommer and the Coasts Under Stress Research Team, 2007; Schrank, 2005). Some pelagic fisheries, such as herring and mackerel, are also in a state of decline. Mackerel stocks around Bonne Bay are under particular threat from unsustainable fishing levels and landings in the region have decreased significantly in the last few years (Paterson, 2013). At the same time, traditional fixed gears for herring and mackerel are being used less and less and replaced by a larger purse seine fleet (Paterson, 2013).

The collapse of groundfisheries has led to increased efforts to restructure the fishing industry. In recent years, attention has centered on rationalizing the industry through eliminating more harvesters and processing plants, and in particular inshore fleets and small processing plants in more rural parts of the province (Walsh, 2011). Alongside rationalization have been efforts to professionalize the industry, such as the 1997 Provincial Act for professionalization of the harvesting sector. Professionalization aims to restrict fish harvesting to those who meet established guidelines for full-time harvesters and keep out “moonlighters” (Bavington, Gretzic, & Neis, 2004, p.173). This also means that those outside the commercial fishery cannot access some fisheries, such as crab and

lobster at all for subsistence, while others, such as cod, salmon, and trout, can only be accessed through recreational licenses.

In line with a dominant discourse focused on rationalization and development of an internationally competitive fishing industry (see Walsh, 2011), about 90% of fish production is exported from the province (S. Lewis, personal communication, August 4, 2011). Consequently many species compete on the global market with implications for the economic viability of harvesters and processors. For example, cod competes with other whitefish, including cheaper substitutes such as tilapia (Khan, 2011). Over the past few years, harvesters have also faced challenges because of low prices for crab and lobster due to a combination of oversupply and decline in world markets (Friedrick, 2012; Wright, 2010). At the same time, there is a freeze on new processing and fish buyers licenses in the province, constraining the flow of seafood into local markets as well as direct sales of seafood to consumers by harvesters (Murphy & Neis, 2011). A lack of local markets for seafood has been raised as a concern by some restaurant and tourism operators in the province wanting to feature local and traceable seafood in their establishments (Lowitt, 2011b; Murphy & Neis, 2011). Others have noted an overall lack of federal and provincial policies designed to support domestic consumption and marketing of seafood (Food Secure Canada, 2011b; Khan, 2011; MacRae, 2011).

Since the collapse of groundfish fisheries, tourism has assumed a more important role in many regions of the province. In the Bonne Bay region, Gros Morne National Park

generates important tourist revenue, with over 185 000 visitors to the Park during the 2010-2011 season (Parks Canada, 2011). Many households rely on seasonal tourism employment. Parts of the tourism sector are also closely tied to the fishing industry. Restaurant operators in the region are looking to source local seafood and the fishery is an important part of the heritage of the region (Lowitt, 2011b).

Much has been written about the social and economic restructuring that has taken place in Newfoundland communities following the cod stock collapse, including the consequences for livelihood options and working conditions (Gautrin et al., 2009; MacDonald, Neis, & Gretzic, 2006; Ommer and the Coasts Under Stress Research Team, 2007); impacts on individual and community health (Dolan et al., 2005); and opportunities for youth and work (Canning, Power, & Norman, 2010; Jackson, Marshall, Tirone, Donovan, & Shepard, 2006). However, an interactive approach to restructuring reminds us that coastal communities have undergone restructuring not only related to fisheries, including changes in social programs, education, and in other sectors. Of particular relevance to this study are social and economic changes contributing to shifts in food provisioning over time (Omohundro, 1994; Parrish, Turner, & Solberg, 2007). In the Bonne Bay region an important change was the construction of a highway in the late 1960s linking Bonne Bay to the larger centre of Deer Lake to the south. This provided easier access to supermarkets for the first time. With the establishment of Gros Morne National Park in 1973 park regulations have also influenced access to wild foods. Tourism also exerts an important influence on the local food system in terms of the availability of places for

eating out and local markets for seafood, while tourists also bring with them their own sets of food preferences.

Newfoundland and Labrador is not the only coastal place to experience restructuring. Rural and coastal communities throughout Canada and around the world today face similar challenges as resource constraints and environmental decline intersect with social and political changes to influence overall community well-being and sustainability (Kearney, Berkes, Charles, Pinkerton, & Wiber, 2007; Ommer and the Coasts Under Stress research team, 2007; Winson & Leach, 2002).

1.3 Situating this study

It is in this context of ongoing restructuring that this thesis is concerned with understanding the relationship between interactive restructuring and community food security, using the Bonne Bay region on Newfoundland's west coast as a case study. Research has examined restructuring in coastal regions with particular attention in Newfoundland and Labrador focused on restructuring following the collapse of groundfish stocks. However, relatively little of this research has looked specifically at the implications of these changes for the food security of coastal communities, although initial research by the Coasts Under Stress research team suggested there are important linkages between environmental change and food production and availability in coastal communities (Parrish et al., 2007).

At the same time that little fisheries restructuring research has focused explicitly on food security, there is a large and growing body of research in the area of community food security that has paid little attention to fisheries and coastal geographies. Community food security emphasizes the linkages between the social, economic, and environmental well-being of communities and food security aims (Dietitians of Canada, 2007; Hamm & Bellows, 2003). It is a more recent approach to food security that links anti-hunger (in terms of household and individual access to food) and sustainable food systems perspectives (Hamm & Bellows, 2003). Community food security has emerged as part of a larger movement in North America and Europe towards sustainable and local food systems in response to problems posed by an increasingly global and industrial food system (Feagan, 2007).

Most community food security research, along with the broader field of sustainable food systems research of which it is a part, focuses on agri-food systems. This work has critically interrogated industrial agriculture and presented a range of alternative agri-food approaches (see Blay-Palmer, 2010). However, a consideration of fisheries has been largely absent, including how fisheries may contribute to sustainable food systems as well as how fisheries restructuring may impact community food security. Further, much community food security research has taken place in urban places, to the neglect of rural and especially coastal regions. This study addresses an important gap in knowledge by examining community food security in the coastal, fisheries-dependent region of Bonne Bay. As an island and remote province, Newfoundland and Labrador faces additional

challenges in terms of reliability of food supply. The majority of food consumed in the province is imported and travels via ferry to the island.

1.4 Research questions and approach

The main question that guided this research was: what is the relationship between interactive restructuring and community food security in the fisheries-dependent region of Bonne Bay on the west coast of Newfoundland? Related questions included, what are the key factors presently influencing community food security? What strategies do households use to respond to food-related changes? And what resources and supports are available at a community level that may contribute to food security? To address these research questions I used mixed methods within an interpretivist approach. An interpretivist approach suggests there are multiple, socially constructed realities that are best understood by exploring how people themselves make sense of their experiences (Guba & Lincoln, 1985).

Semi-structured interviews with households about their food provisioning practices were the main method of data collection. Household members were asked to describe what they eat in a regular week, where the food they eat comes from, how important seafood is to their diet, and if there is anything that could be done to help them get the food they want for their family. Food provisioning encompasses food acquisition, preparation, cooking, eating, and disposal of food (Marshall, 1995). It extends research about food choice by looking at the sociocultural and environmental contexts in which food consumption takes place (Delormier, Frohlich, & Potvin, 2009). In addition to food

provisioning interviews, a quantitative survey was distributed to all households in the region to collect information about seafood consumption. Lastly, participant observation and interviews were completed with fish harvesters and tourism operators in the region.

1.5 Key concepts

The concept of community food security (herein referred to as CFS) provides an overarching framework for this study. CFS is a fairly new conceptual model of food security that has been described as both a goal and a process (Dietitians of Canada, 2007; Hamm & Bellows, 2003; Levkoe & Wakefield, 2011). CFS emphasizes sustainability in the interrelated realms of society (equitable food access), economy (economic vitality of communities and sustainable livelihoods for food producers and harvesters), and environment (sustainability of the ecosystems on which food production and harvesting depends) (Dietitians of Canada, 2007; Garrett & Feenstra, 1999; Hamm & Bellows, 2003). More specifically, CFS emphasizes these aspects of sustainability through the development of self-reliant and resilient local food systems based in democratic decision-making (Hamm & Bellows, 2003; Stroink & Nelson, 2013; Winne, 2005). While some have pointed out that CFS involves more than just local food systems (for example, it also requires policy support and a recognition of food systems connections across multiple scales), CFS and local food systems often go hand-in-hand in much food scholarship (Born & Purcell, 2006).

While the elements of social equity, economic vitality, and environmental health provide an important starting point for understanding CFS, it has been critiqued for lacking a clear

theoretical framework (Anderson & Cook, 1999; Carlsson & Williams, 2008; Knezevic, Lowitt, Williams, & Johnson, 2013). Some have questioned what ‘local,’ ‘sustainable,’ and ‘community’ mean, arguing that these are contested concepts (Hassanein, 2003; Hinrichs, 2003; Hinrichs, 2010; Qazi & Selfa, 2005). Allen (2010) further argued that the relational and temporal aspects of place have not received enough attention in CFS and local food systems research, which tends to focus more on local in terms of geographical proximity.

In this study, I present the idea of the foodscape as a compelling new way of understanding CFS that overcomes some of these existing challenges associated with the CFS concept. Over the last several years, food studies researchers have increasingly drawn on the idea of the foodscapes. These studies have ranged from supermarket foodscapes (Johnston, Biro, & MacKendrick, 2009), to eating culture in urban foodscapes (Cummins & Macintyre, 2002), to food celebrations in festive foodscapes (Adema, 2009). However, none have used the foodscape concept to look specifically at CFS. Drawing on existing foodscape research, I understand foodscapes to include the actual sites where food can be obtained as well as the meanings and interactions with food that emerge in these spaces and across time (Mikkelsen, 2011). To further develop the foodscape as a conceptual lens, I draw on Appadurai’s (1990) groundbreaking work about global cultural flows as different types of ‘scapes’ to elaborate the foodscape as a “perspectival construct” consisting of shifting relations among people, places, and food across space and time (p.296).

This foodscape lens provides a new approach to understanding CFS in this study, including what local and sustainable food systems mean and how they are socially and geographically understood by residents in the Bonne Bay region. Further, a foodscape lens, with its emphasis on changing interactions across space and time, is particularly amenable to considering interactive processes of restructuring in coastal regions. An analysis of foodscapes serves as the basis for understanding CFS in this region and generating broader analytical and methodological insights for the study of CFS. The concepts of CFS and the foodscape are further elaborated and integrated into a conceptual approach for this study in Chapter 2.

1.6 Organization of the thesis

This thesis consists of nine chapters and is divided into two parts. Part One (Chapters, One, Two, Three, and Four) reviews existing literature and presents the methodology and conceptual approach. Chapter Two reviews changing discourses of food security with a particular focus on the recent idea of community food security and how this intersects with fisheries research. It concludes with an integrated lens for this study drawing on the idea of the foodscape. Chapter Three describes the approach and methods of the thesis in detail including a description of the case study and data collection and analysis procedures. Chapter Four provides a historical context for the chapters to follow by describing traditional Newfoundland foodways. Material in Chapter Four has been previously published in *World small-scale fisheries: Contemporary visions* (Lowitt, 2011a) and *Newfoundland and Labrador Studies* (Lowitt, 2012).

Part Two (Chapters Five, Six, Seven, Eight, and Nine) responds to the question, what does community food security mean in the Bonne Bay region? An examination of foodscapes around Bonne Bay is undertaken as a way of understanding community food security in this region. Chapter Five looks at the role of local seafood in household diets today by presenting findings from a survey of Bonne Bay households. Material in Chapter Five has been previously published in the *Journal of Hunger and Environmental Nutrition* (Lowitt, 2013, Forthcoming). The survey findings in Chapter Five are contextualized in a foodscape discussion in Chapters, Six, Seven, and Eight. Chapters Six, Seven, and Eight are organized according to key stages in food provisioning. Chapters Six and Seven focus on food acquisition through purchasing in a retail environment (Chapter Six) and through self-provisioning (Chapter Seven). Chapter Eight makes links among food acquisition and the preparation, planning, and eating of food. These chapters draw primarily from interviews undertaken with households about their food provisioning practices supported by key findings from the seafood survey and participant observation and interviews with fish harvesters and tourism operators. Chapter Nine reflects on what may be learned for the study of CFS from a foodscape approach, synthesizes key findings from the study, and presents suggestions for future research in the area of sustainable food and fishing systems.

Chapter 2 Literature Review

This chapter develops an understanding of the concept of food security and the contributions that fisheries make to food security. It reviews changing discourses of food security with particular attention to the more recent idea of community food security (CFS) and considers how CFS and fisheries social science research intersect. Linking food security and fisheries social science research is an important contribution to CFS literature, which continues to focus mostly on the agri-food system. In the final section of this chapter, I outline an integrated conceptual approach for this study that brings the idea of the foodscape to the study of CFS.

2.1 Changing discourses of food security

Food security has become a pressing social and public issue relevant to all governments, sectors, and citizens in Canada and globally (Dietitians of Canada, 2007; Enns, Rose, de Vries, & Hayes, 2008; Food and Agriculture Organisation, 2009a; Government of Canada, 1998). At the global scale, food security is often thought of in terms of reliability of supply and the capacity of farming and fishing systems to produce sufficient food to feed a growing world population. The food crisis of 2008 brought global food security concerns to the forefront, including issues such as rising food prices, climate change, market speculation, and demand for biofuels (Godfray et al., 2010).

Food security is a multifaceted concept that can be understood at different levels including the individual, household, community, national, and global levels (Carlsson & Williams, 2008). Food security is often understood according to the definition developed

at the United Nations World Food Summit in 1996 as: “Food security, at the individual, household, national, regional and global levels [is achieved] when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organisation, 1996). The 1996 World Food Summit led to the signing of the Rome Declaration of Food Security which set out seven commitments for achieving food security for all people, including to reduce by half the number of hungry people in the world by 2015 (Food and Agriculture Organization, 1999). In response, Canada also developed its own action plan outlining international and domestic commitments to food security. There have been two more world food summit meetings since 1996, although countries have fallen short on meeting many of the targets in the Rome Declaration (Food and Agriculture Organization, 2009a). The 2009 Food and Agriculture (FAO) report *The State of Food Insecurity in the World* showed that the number of hungry people, even before the 2008 food crisis, has been increasing. The FAO estimated that 1.02 billion people were hungry in 2009 (Food and Agriculture Organization, 2009a).

While gaining international recognition at the World Food Summit, the concept of food security predates the 1996 World Food Summit by a number of decades. The 1948 Universal Declaration of Human Rights, which Canada signed, established food as a basic human right (Wittman, Desmarais, & Wiebe, 2011). This implies a commitment to ensure this right domestically, although Canada has not entrenched the right to food in national law (Wittman et al., 2011). The term “food security” first appeared in the international development literature in the 1960s (Anderson & Cook, 1999). As explained by

Knezevic and McIntosh (2012), food security became a greater concern following World War II as war recovery efforts contributed to a new sense of responsibility among affluent nations to provide for other countries in need of food, while advances in food production associated with the Green Revolution, combined with increasing industrialization of fisheries, generated food surpluses. Distributing surplus food provided developed nations a way of doing humanitarian aid while solving the problem of surplus production, with the consequence that food security was linked with food aid by the 1970s. A focus on national needs and consideration of individual and household access to food came to the forefront in the 1980s. Food banks arose in Canada during an economic recession and initiatives began to focus on improving household capacity to meet their own food security needs.

For the first time in Canada, the 2004 Canadian Community Health Survey (Nutrition Cycle 2.2) provided national and provincial estimates of income-related food insecurity from using the Household Food Security Survey Module (HFSSM), a standard multiple-indicator measure of food security. Using the HFSSM, nearly eight percent of Canadian households were food insecure in 2007-2008 due to insufficient income to buy food (Health Canada, 2012a). At the individual and household level, food insecurity exists when people do not have physical or economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences (Dietitians of Canada, 2005).

Income-related food insecurity refers specifically to the inability to access a sufficient and nutritious diet due to insufficient income (Dietitians of Canada, 2005). Food insecurity has potentially negative consequences for health, including inadequate nutrient intake and

an early onset of some chronic diseases (Desjardins, 2009). Food security itself is a social determinant of health at the same time it is closely linked to income, the most widely recognized social determinant of health (McIntyre, 2003).

In Newfoundland and Labrador, evidence shows that income-related food insecurity is a real concern. At 9.6%, Newfoundland and Labrador had among the highest levels of household food insecurity in Canada in 2007-2008 (Health Canada, 2012b). The province is also reported to have the highest per capita food bank use in the country (Food Banks Canada, 2009). Further, a 2003 food costing study by the Dietitians of Newfoundland and Labrador in collaboration with the Newfoundland and Labrador Public Health Association found that, in light of current data on the cost of healthy eating, many families with low incomes in the province are unable to buy sufficient, nutritious food (Ewtushik, 2003). Newfoundland and Labrador also has among the highest rate of some diet-related chronic diseases, including diabetes and obesity (Canadian Diabetes Association, 2010; Tjepkema, 2008). The higher prevalence of obesity among food-insecure individuals in developed nations has been referred to as the “hunger-obesity paradox” (Scheier, 2005). As Scheier (2005) pointed out, it is not clearly understood what the mechanism is that connects hunger and obesity, but it suggests that not only sufficient but also nutritious food is important for health.

In the early 1990s, the food security discourse shifted again to more explicitly consider the role of community in food security. A community food security approach includes individual and household food security, since a community is only food secure if all its

members are, but it also suggests that community well-being influences food security (Hamm & Bellows, 2003; Winne, 2005).

2.2 Community food security

Community food security (CFS) is a fairly new approach to food security that has gained considerable currency in more recent food security efforts across North America and Europe. CFS attempts to bridge anti-hunger and sustainable food systems perspectives (Hamm & Bellows, 2003). It has come about as part of a broader movement in North America and Europe towards sustainable and local food systems. This movement has emerged over the past twenty years in response to popular and academic concerns with an increasingly global and industrialized food system. Concerns center on increasing centralization in production and processing including the replacement of producer control with corporate control; the erosion of foodways and cultural traditions; rural community disintegration; and environmental degradation associated with industrial food production (Blay-Palmer, 2010; Clapp & Fuchs, 2009; Feagan, 2007; Tagtow & Harmon, 2008; Welsh, 1997). Responses to these problems have largely centered on relocalising food systems. An extensive literature has looked at the potential social, economic, and environmental benefits of local food systems (Blouin, Lemay, Ashraf, Imai, & Konforti, 2009; Conner & Levine, 2008; Feenstra, 2002). Local food systems (interchangeably referred to as community food systems) are seen as a way of promoting sustainability including positive social and positive environmental outcomes (Born, 2006; Hinrichs, 2003), at the same time that a “sustainable vision” is one of the “explanatory factors” in the creation of local food systems (Dupuis & Goodman, 2005, p. 361). Indeed, local and

sustainable often go hand in hand. This movement has been described by various terms in the literature including alternative food initiatives, alternative food networks, civic and democratic agriculture, shortened food supply chains, the quality turn, as well as community food security (Feagan, 2007).

Increasingly, food security efforts in Canada as elsewhere in North America and Europe are focusing more at the community-level. For CFS, the unit of analysis is the community (Winne, 2005). Projects span from community kitchens and community gardens to farmers' markets and community-supported agriculture to local food procurement policies for institutions. CFS emphasizes linkages among food systems activities (such as production, processing and distribution) and between food and community goals (Pothukuchi, 2004). Community capacity to make decisions about food policy and practice is increasingly seen as central to food security over the long term (Williams et al., 2012a; Williams et al., 2012b). Further, as some have cautioned that community-based projects alone do not increase food security, particularly for those most vulnerable to food insecurity (see Tarasuk, 2001), policy work has become more important. For example, in 2011 the non-profit organization Food Secure Canada released *Resetting the Table: A People's Food Policy for Canada*, outlining key policies in areas spanning from food access in urban and northern regions to livelihoods for farmers and fishers. Similarly, the Activating Change Together for Community Food Security Community-University Research Alliance team in Nova Scotia emphasizes policy change at multiple levels to work towards CFS goals across Nova Scotia and beyond (Food Action Research Centre, 2012).

CFS is related to other approaches including the right to food and food sovereignty. In comparison to CFS, the right to food focuses more on global political economy and the need to ensure food access is subject to international law (Kent, 2005). Food sovereignty emerged among peasant farmers and was spearheaded by the international peasant organization la Via Campesina. While the origins of CFS and food sovereignty are somewhat different they share some of the same aims. Food sovereignty emphasizes the right of countries and peoples to control their own food systems, including markets, forms of production, food cultures, and landscapes (Wittman et al., 2011). Some links have been made between CFS efforts in the north and global food sovereignty efforts. For example, Food Secure Canada has worked with ideas from food sovereignty to inform how they think about food security including issues of localism, sustainability, and international solidarity (Food Secure Canada, 2011a).

Because CFS is still a fairly new idea, there is no universally accepted definition. However, it is most often understood in academic and community literature according to the definition by Hamm and Bellows (2003), as “a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice” (p. 10). The Dietitians of Canada’s 2007 CFS position paper drew on Hamm and Bellow’s definition and modified it to include healthy food choices as another aspect of sustainable food systems. According to the United States Department of Agriculture (2010), CFS may be understood as “a prevention-oriented concept that supports the development and enhancement of sustainable, community-based strategies.” As a prevention-oriented

concept, CFS considers not only immediate responses to food insecurity (such as food banks), but emphasizes systemic and broad-based approaches needed to address underlying food security issues and contribute to long-term social, economic, and ecological change (Levkoe & Wakefield, 2011). As such, CFS has been described as a concept or approach as well as a process and goal to work towards (Dietitians of Canada, 2007; Hamm & Bellows, 2003; Levkoe & Wakefield, 2011).

Complicating an understanding of CFS are the various meanings and frameworks for understanding local and sustainable food systems of which CFS is a part. Sustainable food systems broadly refer to the capacity for food systems “to be maintained over the long term, meeting the needs of the present without jeopardizing the ability of future generations to meet their needs” (Tagtow & Harmon, 2008, p. 103). Beyond the realm of food systems, economy, environment, and society are largely recognized as the main separate but connected elements of sustainable development (Giddings, Hopwood, & O'Brien, 2002). Garrett and Feentstra (1999) were among the first to propose a conceptual framework for understanding sustainability in food systems in the three main spheres of social equity and human health, environmental health, and economic vitality. They described a local food system as one in which “sustainable food production, processing, distribution and consumption are integrated to enhance the environmental, economic, and social and nutritional health of a particular place” (p. 2).

But what do local food systems actually look like? E. Power (2000) suggested that the activities making up local food systems fall into two broad categories: new economic

models for food distribution and marketing, such as farmers' markets, community-supported agriculture projects, and producer cooperatives; and self-provisioning activities such as people growing, preserving and preparing their own food often in collaboration with others through community gardens and kitchens. CFS considers both of these aspects in terms of locally-based food production-consumption networks along with increasing the skills and knowledge among citizens to grow, harvest, and prepare their own food.

Garrett and Feenstra's (1999) model of sustainability in local food systems has become widely cited in scholarly and community CFS literature, including in the Dietitians of Canada's 2007 position paper on CFS in which they presented these three elements of sustainability as the main interlinked components of CFS. As described by the Dietitians of Canada (2007), social equity and human health recognizes the injustice of hunger and food insecurity (particularly in affluent nations) and the link between food insecurity and poor health; environmental health is concerned with the viability of the ecosystems that provide food; and economic vitality focuses on producer control over production, marketing, and labour decisions, and increasing community economic self-reliance. These interconnected social, environmental, and economic aims are present throughout CFS literature (Cohen, 2002; Desjardins et al., 2002; Hamm & Bellows, 2003; Levkoe & Wakefield, 2011).

In addition to these three elements, the principle of resilience is starting to be emphasized more in food systems (Eriksen, 2008; Stroink & Nelson, 2009; Stroink & Nelson, 2013),

including some CFS definitions. For example, the ACT for Community Food Security research team in Nova Scotia expanded Hamm and Bellow's (2003) definition of CFS to more explicitly underscore resilience, explained as follows:

A resilient, self-reliant community food system ensures that food is produced, processed, and controlled locally whenever and as much as possible, that the food sources are multiple and varied, and that the community members are directly involved in the decision and policy-making process and, wherever possible, in the production, processing and distribution of food (Knezevic & McIntosh, 2012).

Resilience has become a common lens for understanding the complexity of linked social-ecological systems, such as those for food (Berkes, Colding, & Folke, 2003). It has been defined as “the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks” (Walker, Holling, Carpenter, & Kinzig, 2004, p.5). Resilience is also about increasing the adaptive capacity of communities to respond to change while not crossing critical thresholds (Berkes et al., 2003; Walker et al., 2004). Diversity is seen as central to promoting resilience. As Berkes et al said, “Diversity provides insurance to cope with change” (p.376). The expanded CFS definition above emphasizes “multiple and varied” food sources which, from the perspective of Berkes et al., may provide some “slack and flexibility” in systems (p.15). A resilient system that can withstand change goes hand in hand with social, economic and environmental sustainability (Berkes et al., 2003).

Drawing on existing literature, I use the term CFS holistically, understanding it both as a concept (comprised of the three interlinked elements of social equity, environmental

health, and economic vitality) and as a goal to work towards. More specifically, CFS emphasizes these elements of sustainability through the development of resilient, self-reliant, and democratic local food systems. However, ideas about CFS have been subject to criticism. Some have called for better developed conceptual frameworks and pointed to how the 'local' and 'sustainable' are contested concepts. I elaborate on this discussion in the section about theoretical critiques of CFS. However, I first discuss two main empirical gaps in existing CFS research identified in this literature review: a lack of attention to rural and coastal geographies, and a lack of attention to fisheries as part of food systems and food security.

First, most research has looked at the development of CFS and local food systems in urban and peri-urban centers (Qazi & Selfa, 2005). Much less research has focused on the development of local food systems in rural or coastal regions, with studies that have looked at rural regions often focusing on the potential for local food systems to strengthen rural-urban ties or assist in rural economic development (Feenstra, 1997; Goodman, 2004; Kneafsey, Ilbery, & Jenkins, 2001). Qazi and Selfa pointed out that non-market activities such as subsistence provisioning and bartering, which may be especially important in rural communities, often fall beyond the purview of local food systems research which tends to focus more on alternative market-based ways of securing food.

Second, a consideration of fisheries is a striking gap in CFS research (Lowitt, 2013; Lowitt, Nagy, Nelson, Bavington, 2013; Nelson, Lowitt, Nagy, & Bavington, 2013).

Most research has emphasized agriculture with very little attention to fisheries. Given the

centrality of fisheries to this CFS case study, the following section discusses in more detail the relationship between CFS and fisheries. Parts of the following discussion about CFS and fisheries have been previously published in the *Journal of Hunger and Environmental Nutrition* (Lowitt, 2013).

2.2.1 Community food security and fisheries

Sustainable food systems research has provided a critical interrogation of the global and industrial food system at the same time that it has raised a host of alternative possibilities, such as shorter supply chains, direct agricultural markets, organic farming systems, and small-scale and family farms for strengthening local food systems (Andreatta & Wickliffe, 2002; Feenstra, 2002; Guthrie, Guthrie, Lawson, & Cameron, 2006; Venn, Kneafsey, Holloway, Kneafsey, Cox, Dowler, & Tuomainen, 2006). Some research has focused on the potential for these alternatives, including farmers' markets, community gardens, food box programs, and local food procurement in schools, to increase consumption of local fruits and vegetables (Alaimo, 2008; Carlsson & Williams, 2008; Morgan & Sonnino, 2008; Pigott, 2009; Torjusena, Leiblein, & Vitterso, 2008). However, this literature has focused almost entirely on agri-food systems (Blay-Palmer, 2010; Horrigan, Lawrence, & Walker, 2002; Marsden, Murdoch, & Morgan, 1999; Story, Hamm, & Walllinga, 2009). In contrast, very little attention has been devoted to looking at fisheries as a part of food systems. A lack of attention to fisheries in sustainable food systems research may reflect the origins of this movement in the U.S. with close ties to sustainable agriculture (Hamm & Bellows, 2003), while in Europe local food systems emerged as part of new forms of devolved rural governance associated with reforms to

the European Union's Common Agricultural Policy (Dupuis & Goodman, 2005). Food as an analytical area of focus also has strong roots in rural sociology, which traditionally focused on agriculture and farming before more recently becoming concerned with the broader food system (Hinrichs, 2010).

An absence of fisheries in sustainable food systems research is also particularly striking given that fisheries, like agriculture, are highly globalized and industrialized. Over 40% of world fish production enters the international market, much more than for other food staples including wheat (20%) and rice (5%) (Swartz, Sumaila, Watson, & Pauly, 2010). Further, fishing is most often done using industrialized methods that have been proven to be unsustainable (Pauly et al., 2002). Critical social science fisheries researchers have raised concerns analogous to those of sustainable food systems researchers about the corporate control of fisheries resources (Pinkerton & Edwards, 2009); industrial fishing practices (Wrammer, Ackefors, & Cullberg, 2009); centralized governance structures (Armitage, Berkes, & Doubleday, 2007); and threats to coastal communities and livelihoods (Dolan, et al., 2005; MacDonald et al., 2006; Ommer and the Coasts Under Stress Research Team, 2007). At the same time, fisheries social scientists have documented the significant contributions that small-scale fisheries make to catches, conservation, and livelihoods (Chuenpagdee, 2011; Newell & Ommer, 1999). Despite the many, shared concerns among sustainable food systems and social science fisheries research these bodies of work remain disconnected.

At the same time, considering fisheries in sustainable food systems and CFS research is crucial because fisheries make vital contributions to food systems and food security at global, national, and local levels. Globally, per capita seafood consumption has been increasing from an average of 10 kilograms in the 1960s to an estimated 18.6 kilograms in 2010 (Food and Agriculture Organisation, 2012). Fish provides nearly 20% of the protein intake for nearly three billion people and is an important protein source for people in many other countries (Food and Agriculture Organisation, 2012). Most of this demand is supplied by wild marine capture fisheries as a direct source of seafood and indirectly via aquaculture operations that rely on catches from marine fisheries in the form of feed (Swartz et al., 2010). Further, about half of all the fish caught for human consumption comes from small-scale fisheries, underlying their importance for the world fish supply (Food and Agriculture Organisation, 2005). Unlike catches from industrial fisheries, which tend to be used more for animal feed and other products and not for direct human consumption, nearly all the fish from small-scale fisheries is used for food (Food and Agriculture Organisation, 2005). In resource-dependent developing countries, which have the greatest number of the world's small-scale fishers including many of whom live in communities characterized by poverty and food insecurity, fisheries are vital to food security through contributions to livelihoods and as a source of food (McGoodwin, 2001; Smith, et al., 2010; Sowman & Cardoso, 2010). Small-scale fisheries contributions to food security have been recognized in the FAO's Code of Conduct for Responsible Fisheries as well as the FAO's accompanying set of strategies for enhancing fisheries contributions to food security and poverty alleviation (Food and Agriculture Organisation, 2005).

In developed nations, including Canada, fisheries also make important contributions to food systems, although there is relatively little research or policy work devoted to understanding and furthering these contributions (Lowitt, Nagy, Nelson, & Bavington, 2013; Nelson, Lowitt, Nagy, & Bavington, 2013). Across developed nations, seafood has been promoted as an important part of a healthy diet because it provides high-quality protein, micronutrients, and essential fatty acids (Mahaffey, Clickner, & Jeffries, 2008). Canada's Food Guide encourages Canadians to eat two food guide servings of fish each week (Health Canada, 2012a). Canada also has a large seafood industry. In 2008, Canada ranked 22nd in the world in terms of total landings from marine and freshwater fisheries, and higher at eighth place in terms of total value from seafood exports (Fisheries and Oceans Canada, 2011a). Newfoundland and Labrador makes significant contributions to this industry, accounting for about 28% of Canada's total marine fisheries landings in 2008 (Fisheries and Oceans Canada, 2011a). In coastal regions, fisheries are a vital source of employment as well as a crucial part of the social fabric of coastal communities. In 2008, over 82 000 people were employed in the fishing industry across Canada, including approximately 52 000 in seafood harvesting, 4500 in seafood aquaculture, and 27 000 in seafood processing (Fisheries and Oceans Canada, 2011a).

However, there are challenges facing fisheries contributions to food systems. An overarching challenge is the declining state of global fish stocks. Approximately 85% of the world's fish stocks were fully or over-exploited for the year 2009 (Food and Agriculture Organisation, 2012). At the same time, the majority of international commitments for sustainable management and conservation of the oceans have not been

met (Veitch et al., 2012). The globalization of fisheries has also resulted in a net movement of fish onto the tables of affluent countries, posing threats to the food security of many developing coastal countries (Swartz et al., 2010). Consequently, the downward trend in fish stocks is affecting food security in developing countries more than the developed world; the latter countries have been able to meet any seafood shortage by importing more from developing countries (Pauly, Watson, & Alder, 2005). Brunner, Jones, Friel, and Bartley (2009) argued that health recommendations in developed countries that advocate more fish consumption need to be placed in a larger context that recognizes the declining state of marine fisheries and global inequalities in fish consumption between developing and developed nations. Increasingly, fisheries researchers are arguing that sustaining fisheries contributions to food security depends on effective governance arrangements that protect and improve marine ecosystems, particularly in the face of pressure from international trade (Smith et al., 2010). Charles (2011) similarly argued that striving for increased food security and household and community well-being is a key “good practice” for policy and governance of small-scale fisheries (p.285).

Given the important role that fisheries play in food systems - in both developing and developed country contexts - along with the mounting challenges facing marine ecosystems, food systems research must more actively consider fisheries if it wants to effectively address concerns of equity and sustainability in food systems. There is a large body of social science fisheries research that can help advance work in this area. This research has identified strategies for rebuilding fish chains and marine ecosystems, and

examined the potential for participatory and community-based governance approaches to assist in fisheries rebuilding (Kearney et al., 2007; Khan & Neis, 2010; Murray, Neis, & Johnsen, 2006; Worm, et al., 2009). Considering fisheries in sustainable food systems and CFS research is also particularly crucial because of the growing consumer demand for sustainable seafood across North America and Europe (Ponte, 2012). While not yet picked up in sustainable food systems research, there are examples of fisheries being integrated into local food systems. Community-supported fisheries (adapted from the community-supported agriculture model) have arisen in the U.S. and Canada including *Off the Hook* in Nova Scotia and the *Port Clyde Fresh Catch* brand in Maine. Further, in April 2012, 14 community fishing associations in the U.S. came together to start the national Community Fisheries Network. The Network arose in response to concerns with industry consolidation in harvesting and processing and has plans for a campaign promoting sustainable, community-caught seafood in local and regional markets (Island Institute, 2012). Various sustainable certification schemes, and in particular Marine Stewardship Council (MSC) certification, have also successfully brought sustainable fisheries into the mainstream. However, parallel to criticisms of some food labeling schemes (see Guthman, 2007) some fisheries researchers have critiqued MSC certification as a “soft, market-based version of environmentalism” that hasn’t sufficiently addressed concerns of equity and environmental sustainability (Ponte, 2012, p. 313).

Significantly, there has been mention of fisheries in some recent food policy discussions in Canada. MacRae (2011) looked at the challenges and opportunities for creating a

“joined-up” Canadian food policy including changes needed to both agricultural and fisheries planning. *Resetting the Table: A People’s Food Policy for Canada* by Food Secure Canada (2011b) also devoted a chapter to sustainable fisheries and livelihoods. Food policy discussions must continue to engage with relevant debates taking place in fisheries policy. For example, in late 2011, Fisheries and Oceans Canada (DFO) released *The Future of Canada's Commercial Fisheries*, a document discussing changes to fisheries policy and management. Some of the debate around this document has centered on the potential elimination of the fleet separation and owner-operator policies, rules which have been vital to the existence of independent fishing enterprises in Atlantic Canada (see CURRA, 2012). In September 2012, the Fisheries Minister announced that these policies would remain in place in Atlantic Canada. If removed, there could have been serious implications for the food security of Atlantic Canada’s coastal communities.

This review has highlighted a clear gap in CFS and sustainable food systems research in terms of thinking about fisheries. Despite this absence, many trends in agriculture that have raised concern among sustainable food systems researchers are also being seen in fisheries. Given the important role that fisheries play in food systems - along with the mounting challenges facing marine ecosystems- closer linkages among the study of food and fishing systems are needed to effectively address concerns of equity and sustainability in food systems. This thesis is a first step in this direction by focusing on CFS in a coastal, fisheries-dependent region.

2.3 Theoretical critiques of CFS

In addition to the empirical gaps in CFS research related to coastal geographies and to fisheries there are also more theoretical critiques. Below, I present a review of existing theoretical critiques of CFS and then turn my attention to elaborating an integrated conceptual approach based on the idea of the foodscape for addressing some of these criticisms.

The concept of CFS is still relatively new. As a result, some have argued it is in need of more precise definition within a theoretical framework in order to better direct policy, action, and research (Anderson & Cook, 1999; Carlsson & Williams, 2008; Knezevic et al., 2013). Anderson and Cook said that the principles of social equity, environmental health and economic vitality in CFS literature are only “loosely connected” with no “logical linkages” among them (p.141). Knezevic et al. (2013) similarly argued that CFS remains conceptually underdeveloped, but also cautioned that new conceptual frameworks must remain open to taking various forms in community practice. Relatedly, as the field of CFS continues to grow, more consideration needs to be paid to how ‘community’ is defined (Carlsson & Williams, 2008; Hinrichs, 2012). While ‘community’ is not straightforward, neither are the ideas of the ‘local’ and ‘sustainable,’ with some evidence that these may be perceived differently by different actors in the food system and open to diverse values (Hassanein, 2003; Hinrichs, 2003; Mount, 2012; Qazi & Selfa, 2005). As Allen, FitzSimmons, Goodman, and Warner (2003) argued, “the local is not everywhere the same” (p. 63). To date, most definitions of local food systems have

been geographically determined and assert proximity as important (Allen, 2010). Allen argued that the relational and temporal aspects of place, or thinking about place as a socio-historical construct, have not received enough attention in local food systems research.

Some analysts within food studies are also challenging what they see as a binary between the 'local' and the 'global.' Some have cautioned against a "defensive" approach to local food systems that positions the local against the global (Hinrichs, 2003), such as that expressed by Hendrickson and Heffernan who said (2002): "as people foster relationships with those who are no longer in their locale, distant others can structure the shape and use of the locale, a problem that is being explicitly rejected by those involved in the local food system movements across the globe" (p. 349). As Dupuis and Goodman (2005) noted, " 'the local' as a concept intrinsically implies the inclusion and exclusion of particular people, places and ways of life" (p. 361). Beyond food studies, some, such as geographer Doreen Massey, are calling for a more global sense of place. Massey (1993) argued:

...instead of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings. And this in turn allows a sense of place which is extraverted, which includes a consciousness of its links with the wider world, which integrates in a positive way the global and the local (p. 67).

Related to discussions about the local and global, some have questioned the conflation of the local and the sustainable. For example, Hinrichs (2003) argued that desired social and environmental aims do not always "map neatly" onto the local (p.33). Hinrichs also said

that, “making ‘local’ a proxy for the ‘good’ and ‘global’ a proxy for the ‘bad’ may overstate the value in proximity, which remains unspecified, and obscure more equivocal social and environmental outcomes” (p. 35). Born and Purcell (2006) referred to this tendency to see desirable attributes as essential to the local scale as “the local trap.”

Some have questioned the extent to which local food movements can address underlying issues around labour, migration, and systemic patterns of social injustice (Allen, 2008; Allen, 2010; Blue, 2009; Hinrichs & Kremer, 2002; Kirkpatrick & Tarasuk, 2009).

Tensions have been identified in how the elements of sustainability in CFS fit together, such as balancing social equity and food access with providing a decent return to food producers (Feenstra, 2012; Guthman, Morris, & Allen, 2006). In light of this, Allen (2010) argued that, “if food-system localization efforts are to work toward equity, they must consider inherited material and discursive asymmetries within frameworks of economy, demography, geography and democracy” (p. 295).

2.4 An integrated conceptual approach: Elaborating a foodscape lens

The concept of CFS provides a broad, overarching framework for this study. I use the term CFS holistically, understanding it both as a concept and as a goal to work towards. However, as described above, CFS has been critiqued for lack of a clear theoretical framework and there are tensions around how the related aspects of society, economy, and environment fit together. At the same time, the ideas of the ‘local’ and ‘sustainable’ too often proceed un-interrogated into food scholarship. As a way of addressing these challenges, this study presents the foodscape as a new conceptual approach to the study of CFS.

In recent years the idea of the 'scape' has gained currency across the social sciences and humanities for looking at a range of phenomena such as relationscapes (Manning, 2009), bodyscapes (Geller, 2009), experiencescapes (O'Dell, 2005), and seascapes (Brattland, 2010). As Mikkelsen (2011) said, a scape approach "can be helpful in understanding complex social systems in which humans, artifacts and environments interact" (p.210). While the idea of the scape is increasingly being picked up in discussions about food (see Mikkelsen, 2011), bringing a foodscape approach to the study of CFS specifically is a new application.

The idea of the foodscape, and other types of scapes, arises from a much longer history of studies of the landscape. In geography, the landscape has long been a central topic of inquiry. With the growth of cultural landscape studies over the past forty or so years, the complex material and social aspects of landscapes have been emphasized (Johnson, 2007; Mitchell, 2001). Both these social and material aspects of landscape have been picked up in recent foodscape studies. First, as the landscape is an array of related features, so the foodscape is a spatial array of foods. Even more simply, it is a "landscape of foods" (Mikkelsen, 2011, p. 210). Foodscapes, like landscapes, are material: they are "the actual physical sites where we find food" (Friedberg, 2010, p. 1868). The terms environments, settings, context and sites are often used interchangeably to refer to this material and spatial aspect of foodscapes. Foodscape studies have focused on different physical settings, including supermarkets (Johnston et al., 2009; Winson, 2004), kitchens (Engler-Stringer, 2010; Sobal & Wansink, 2007), schools and workplaces (Mikkelsen, 2011; Osowski, Goranzon, & Fjellstrom, 2012), as well as cities and urban neighbourhoods

(Cummins & Macintyre, 2002; Yasmeeen, 1996). Some have looked at 'ethical' and 'gourmet' foodscapes across a range of food sites (Goodman, Maye, & Holloway, 2010; Johnson & Baumann, 2010). In this rural and coastal case study I demonstrate that alongside the supermarkets, schools and restaurants of the built environment, non-built settings such as gardens, hunting grounds, berry patches and the ocean are also important foodscapes. These may be understood as separate foodscapes at the same time that they collectively make up the regional foodscape around Bonne Bay.

However, the materiality of foodscapes is interwoven with the social. Adema (2009) described foodscapes as "a marriage between food and landscape, both the conceptual notion (idea) of landscape and actual, physical landscapes" (p. 5). Others have described this in terms of the complex sets of social-ecological relationships that make up foodscapes (Goodman, Maye, & Holloway, 2010). Thus foodscapes are not only physical sites for obtaining food; like landscapes, they are also comprised of social relations and meanings (Mitchell, 2001). While a few foodscape studies have focused only on the physical arrangements of foods (see Lake, Burgoine, Greenhalgh, Stamp, & Tyrrell, 2010S; Sobal & Wansink, 2007), most have also considered ideas and meanings of food. Johnson et al. (2009) considered the foodscape as "a social construction that captures and constitutes cultural ideals of how food relates to specific places, people and food systems" (p. 512). Bildtgard (2009) considered foodscapes as "collective representations of place and food." Recent work by a new generation of cultural landscape scholars is calling for a greater consideration of combined material and discursive processes (Robertson & Richards, 2003; Wylie, 2007). This call has been picked up in some recent foodscape

writing, including Brembeck and Johansson (2010) who looked at foodscapes as processes in which food, bodies, and eating are generated. Similarly, Goodman et al. (2010) considered the “shifting material logics of production / consumption” in ethical foodscapes (p. 7).

Foodscapes, as presented in existing research, are complex social and material entities. They consist of the physical places in which food can be obtained as well as the meanings among people, places and food that emerge in and across these settings. However, in addition to being complex landscapes of foods, the foodscape may serve as a conceptual lens. Many existing studies use the foodscape as a way of looking at the spatial arrangements and meanings of foods in particular sites. Nonetheless, there is no one definition of what a ‘foodscape’ is or a clear theoretical framework for guiding foodscape research (Mikkelsen, 2011). While not trying to detract from what Adema (2009) called the “powerful ambiguity” of the foodscape (p.6), to develop the foodscape as a conceptual lens it is important to further distinguish some of its key features. To do this it is useful to turn to Appadurai’s (1990) pathbreaking work on global cultural flows in terms of ethnoscapescapes, mediascapescapes, technoscapescapes, financescapescapes, and ideoscapescapes.

Appadurai (1990) has been instrumental in promoting an understanding of scapes as “fluid, irregular” and “shifting” interactions among people and ideas (p. 297).

Consequently, because scapes are fluid and shifting, they do not look the same from every angle of vision, but rather are “deeply perspectival constructs, inflected very much by the...situatedness of different sorts of actors” (Appadurai, 1990, p. 296). Adema (2009)

similarly drew on Appadurai's conceptualization of scapes as perspectival constructs to refer to the "multidimensional layers" and meanings that make up foodscapes (p.5). In addition to being perspectival, Appadurai noted that scapes are "navigated by agents who both experience and constitute larger formations" (p. 296). Thus the interconnectedness among scapes is one of their basic features. As Adema pointed out, the scape is a useful framework for thinking about discourses and sites of food at multiple scales, from the individual, to the private space of the kitchen, to the public space of a region or country. At the same time, a scape approach can be attentive to where power is situated.

Appadurai used the idea of scape to illustrate the forces shaping global culture. There has also been some consideration of power in foodscapes research. For example, Friedberg (2010) and Goodman, Maye and Holloway looked (2010) at the relative power of different actors - from multinational corporations to food movements – in shaping the formation of 'ethical' foodscapes involving organic, local and fair trade foods. However, power remains loosely theorized in most foodscape accounts. As Khan & Neis (2013) pointed out, a well-developed, social-ecological approach to power that can make sense of the role of power dynamics in shaping social-ecological systems, such as those for food, is lacking. They adapt Gaventa's "power cube," a model for conceptualizing social power, for use in social-ecological systems by considering the social and ecological processes that shape power dynamics in different spaces and across multiple scales and time. This social-ecological approach to power may be particularly relevant to an analysis of foodscapes as different sites of food provisioning that are connected across spatial and temporal scales and involve both social and ecological elements.

In summary, an understanding of the foodscape as a perspectival construct that consists of sets of shifting interactions among people, places, and food, offers a new lens for the study of CFS. A CFS approach often begins with the goals of achieving local and sustainable food systems yet does not offer a theoretical frame for considering how these themes fit together (Anderson & Cook, 1999). In relation to CFS the foodscape allows a different set of questions to be asked: what does the local (or community) and sustainable mean in a particular place? What are the processes through which local and sustainable food systems are constituted? Whose understandings of community, food, and fisheries shape the development of CFS? A foodscape lens provides a new perspective for CFS by better highlighting the processes, actors, and power dynamics across a range of scales that are involved in working towards CFS goals. A foodscape approach thus responds to the need for a more “reflexive” approach to local food systems by not prioritizing the local scale (Dupuis & Goodman, 2005). By looking at how food places are part of broader formations and how they fit together across spatial and temporal scales, a foodscape approach substantiates recent calls for research to consider the relational and multi-scalar aspects of place in local food systems (see Allen, 2010; Levkoe & Wakefield, 2011; Mount, 2012). Further, by looking at interactions around food and how these shift in space and time, a foodscape lens encourages a consideration of the wider sets of social relations that come together in particular food settings and where power is situated across these networks.

While the foodscape lens is an important contribution to CFS, the idea of the foodscape also aligns with recent social science research encouraging a consideration of fisheries as

complex social-ecological entities. As foodscapes are complex social and material entities, fisheries are likewise complex systems that involve humans as integral components of marine ecosystems (Berkes, 2011). Ommer and Perry (2011) argued that management of many of the world's fisheries is problematic because fisheries are often not seen as linked social-ecological systems. As fisheries and coastal communities continue to undergo change, a foodscape lens, with its emphasis on changing people and place interactions, is amenable to understanding processes of ocean restructuring in relation to CFS.

Lastly, a foodscape approach responds to not only some of the challenges associated with understanding CFS, but to some of the well-recognized gaps in the field of food studies more broadly. This includes a need for more interdisciplinary approaches to the study of food. It is well accepted that studying food is an inherently interdisciplinary undertaking because food intersects biological, social and cultural realms (Hinrichs, 2010). CFS necessarily involves how food is produced, harvested, obtained, distributed, prepared, and eaten. And yet, many conceptual frameworks for the study of food remain restricted to examining particular aspects of food, often with a split among production/consumption lines (Dixon, 1999; D. Goodman, 2002; Holloway et al., 2007). As Cook (2006) noted, there have been relatively few "multilocal" studies showing the "diversely located people whose lives are connected through food" (p.662). Even much CFS research, within the broader field of food studies, often remains split along the lines of food culture/consumption and political economy/governance. By emphasizing cross-scale interactions and connections, a foodscape lens may be part of a postdisciplinary food

studies in which a “bridging of divides” becomes unnecessary (Cook, 2006, p. 657).

Others have used the idea of the scape in different contexts for similarly interdisciplinary directions. For example, by elaborating the idea of the waterscape Swyndegouw (1999) developed a theoretical perspective he described as “critical of traditional approaches” that have tended to separate various aspects of the hydrological cycle into “discrete and independent objects of study” (p. 43).

In this thesis, I bring the foodscape as a new conceptual lens to the study of CFS around Bonne Bay. More specifically, I look at food provisioning in the changing rural and coastal foodscape around Bonne Bay as way of understanding CFS. Unlike some studies that focus on a single stage in food provisioning, from a foodscape perspective I look at the connections among the various stages in food provisioning, including the acquisition, preparation and eating of food. In referring to the Bonne Bay foodscape I am using the term to collectively refer to the multiplicity of places and sets of relations that make up the foodscape around Bonne Bay. This includes food stores, fish plants, the ocean, hunting grounds, and kitchens, among other sites, as interconnected foodscapes in which the acquisition, preparation and eating of food takes place. By bringing the lens of the foodscape to CFS this study is contributing to what Gibson-Graham (2008) called an “ontological reframing” by “enlarging the field from which the unexpected can emerge” (p. 620). A foodscape approach enlarges the field from which we understand CFS. By doing so it allows a closer understanding of what constitutes CFS and may expand and interrogate existing ways in which we understand local and sustainable food systems and what it is possible for them to achieve.

Chapter 3 Methods

3.1 Introduction

This case study is set within an interpretivist approach which suggests that there are multiple, socially constructed realities that are best understood by exploring how people themselves make sense of their experiences (Guba & Lincoln, 1985). An interpretivist perspective works well with a foodscape approach that emphasizes the situatedness of different actors and their experiences with food. The Bonne Bay region on Newfoundland's west coast was selected as the case study for the research. According to Gagnon (2010), a single case study makes it possible to observe and analyze phenomena as an integrated whole while it can also support the development of historical perspectives and theoretical insights. Gerring (2004) defined a case study as "an intensive study of a single unit for the purpose of understanding a larger class of (similar) units." Thus while case studies allow a deep interrogation of a topic, insights can be drawn from case studies that have broader significance to other places.

To understand community food security and the foodscape around Bonne Bay this study used mixed methods by collecting data using three methods: semi-structured interviews about household food provisioning practice, participant observation with fish harvesters and tourism operators, and a quantitative household survey about seafood consumption. As case studies inherently deal with a wide variety of evidence, any findings are likely to be more convincing and accurate if they are based on several different sources of information (Yin, 1994). It is also typical for studies of food provisioning to draw upon

an ethnographic style of data collection that combines qualitative and quantitative approaches (Schubert, 2008). In addition to this original research, historical research based on a review of various writings from Newfoundland including ethnographies, folklore studies, food history and anthropological texts, and cookbooks was undertaken to understand longer-term patterns and changes in food provisioning across the island. The results of this research are presented in Chapter Four about traditional Newfoundland foodways. Ethics approval for the study was granted in accordance with the regulations of the Interdisciplinary Committee on Ethics in Human Research at Memorial University (Appendix I). This chapter provides a detailed description of the case study and then moves into a discussion of the methods used, how the data were analysed, and my point of view as a researcher.

3.2 Case study description: The Bonne Bay region

Bonne Bay is a fjord located in Gros Morne National Park on Newfoundland's west coast. The region consists of five communities located along the north and south sides of Bonne Bay, including Rocky Harbour and Norris Point on the north side and Woody Point, Glenburnie/Birchy Head/Shoal Brook and Trout River on the south (Figure 1). Gros Morne National Park was established in 1972 and since then these communities have been surrounded by the Park, with the exception of Trout River, which is located just beyond the Park boundary. A large number of tourists visit the region each year because of its location within the National Park, which is also a designated UNESCO world heritage site. In the 2010-2011 tourism season approximately 187 000 visitors came to Gros Morne (Parks Canada, 2011). While the population in the summer swells

with tourists, the year-round population is relatively small at approximately 3000 people. A highway through the park connects the region with small towns on the Peninsula to the north. The larger population centres, including Deer Lake and Corner Brook, are located to the south.

Early settlement around Bonne Bay, as on some other parts of the west coast, was linked to a combination of opportunities in forestry and fishing (Mannion, 1977). The marketing of commodities and distribution of imported goods was undertaken by merchants through a system of exchange involving the use of credit (Mannion, 1977). While settlers along the west coast came from England, France, Scotland, and Ireland, most settlers in Bonne Bay were of English descent, many of whom migrated from the South Coast of the island (Mannion, 1977).

From the late eighteenth to early twentieth century this area was part of the French Shore, with the French negotiating with the British the exclusive right to seasonally fish and cure cod (Thornton, 1977). While conflict between the countries shaped the development of this coast, Mannion (1977) suggests that relations overall were characterized “more by cooperation than conflict” (p.249). British residents settled and made use of the resources within the shelter of the bays, while the French exploited the cod fishery on islands in the Gulf.

One of the first fish species to be caught commercially along this part of the west coast was salmon, and it remained the main commercial commodity for the first part of the

nineteenth century (Mannion, 1977). Despite the importance of salmon to the west coast, the permanent population around Bonne Bay remained fairly small until the 1860s when the region began attracting immigrants linked to growth in the herring fishery. After 1860, herring was the main commercial staple around Bonne Bay, along with the Bay of Islands and Bay St. George to the south (Mannion, 1977). In the 1850s, a commercial trade also began in lobster. By the 1880s there was a large west coast lobster fishery with at least 33 factories including several in the Bonne Bay region. However, as lobster stocks declined from overfishing there was a shift from large, capital intensive operations to small operations run by one or several families (Korneski, 2012).

The cod fishery served as more of an “adjunct” to these other fisheries (Mannion, 1977, p. 266). According to Mannion (1977), Rocky Harbour and Trout River were the only settlements around Bonne Bay well placed to prosecute cod, as other settlements were situated further in the bay away from the productive cod grounds. After 1870, the cod fishery grew with the introduction of larger vessels and the subsequent reach of the fishery north to Labrador in response to declining stocks in the older east coast fishing areas. Many families around Bonne Bay participated in the annual seasonal migration to the Labrador coast to fish for cod. However, in the 1890s the Labrador fishery declined partly due to low catches for a number of years in a row and the cod fishery subsequently became more centralized in settlements around the edge of Bonne Bay. Rocky Harbour in particular became known as “the premier spot on the coast for cod” (Mannion, 1977, p. 248).



Illustration 3.1 Rocky Harbour wharf

In addition to these crucial fishing resources, subsistence agricultural production was important. While commercial agriculture did not take off in the region, household production was important for lessening dependence on food obtained on credit from merchants. An abundance of fuel in the shelter of the Bay combined with the possibility of winter employment in logging were also draws for settlers (Mannion, 1977). Until the mid-nineteenth century, forests had been considered an open-access resource like the fishery (Hiller, 1982). By the end of the century, a small commercial industry based on sawmilling was established and this subsequently grew into a pulp and paper industry in the early twentieth century (Hiller, 1982). The construction of schooners grew because of the abundant supply of timber, with over 40 vessels averaging 45 tons each constructed in Bonne Bay from 1873-1891 (Mannion, 1977).

By the beginning of the twentieth century there were over 1600 residents in Bonne Bay. Throughout much of the twentieth century residents continued to practice this kind of

occupational pluralism to make a living. More rapid social and economic changes came following Newfoundland's Confederation with Canada in 1949. In the years following Confederation, the shift from a commercial merchant economy to an industrial commercial economy intensified as government policy redirected the new province's economy towards an industrial growth strategy (Ommer 1994; Ommer, 2004). Instead of credit at the merchant store cash was increasingly paid directly to fishermen for their catches and prices for goods were less defined by the merchant credit system. Canadian government officials encouraged modernization of the fishery, although the benefits were not certain (Cadigan, 2009). Likewise, the forestry industry, now based on pulp and paper production, reached its height in the 1930s and in the second half of the century jobs started to decline due to technological advancements and as resource depletion became more evident (Cadigan, 2009; Hiller, 1982; House, 1998).

Bonne Bay is also different from other areas along the west coast because of the unique role that the establishment of Gros Morne National Park in 1972 had on its development. Leading up to the establishment of the Park some smaller communities were resettled into Rocky Harbour, Norris Point, and Woody Point. Although some families from Sally's Cove, located just north of Bonne Bay, moved to Rocky Harbour and Woody Point, protests from the remaining families who refused to move forced the park to develop around their community and later led the National Parks Board to introduce a policy for parks development that did not rely on expropriating local property (Cadigan, 2009).

Present-day change in many coastal communities across the island, including in the Bonne Bay region, has been particularly rapid since the early 1990s when almost all cod and other groundfish fisheries in Newfoundland and Labrador were placed under moratoria. A moratorium was imposed on the Northern Gulf cod fishery from 1994 - 1996 and again in 2003. Today, there is a small directed fishery for cod using only fixed gears along with a small recreational fishery. Leading up to the collapse, inshore fish harvesters warned about signs of stock decline in the late 1980s, although these concerns went unheeded until the stocks were declared collapsed (Palmer and Sinclair, 1997). Landings also decreased continuously from the mid-1980s until the moratorium in 1994 (Fisheries and Oceans Canada, 2012b). Alongside the cod moratorium, declining abundance of Atlantic salmon coupled with effective lobbying by recreational salmon fishing organizations led to a commercial salmon fishing moratorium across the island in 1992 and the fishery has not reopened since (Chase, 2003; Fisheries and Oceans Canada, 1997).

Today, the main economic activities in the region are fishing and tourism, which have a high level of seasonal employment. A growing but undocumented number of local residents also migrate for work elsewhere (MacDonald et al., 2013). As in the past, there is a high level of seasonal employment tied to these industries. Tourism has assumed an important role because of the region's location within a national park and also partly in response to the closure of the cod and salmon fisheries and related substantial downsizing that has taken place in fisheries employment in the region over the past 20 years.

Nonetheless, fishing remains an important industry, with about 17% of the workforce in

Bonne Bay employed in the industry in 2005, including 195 people in fish harvesting and 70 in fish processing (Newfoundland & Labrador Statistics Agency, 2009). Since the early 1990s, demographic changes in Bonne Bay are similar to those seen in other rural parts of the province, including a high rate of out-migration. Out-migration among young people has exacerbated the trend towards an aging population (Newfoundland and Labrador Department of Finance, 2006). Median household incomes are low compared to provincial and national averages. In 2006, the median family income in Newfoundland and Labrador was \$44 136, the lowest of any province or territory (Statistics Canada, 2010). In Bonne Bay, the median family income was even lower at \$33 700 in 2007 (Newfoundland and Labrador Statistics Agency, 2009). However, as this study will also demonstrate, there remains an active informal economy in the region that helps offset some of the lower incomes generated through formal paid work.

While the region as a whole has some shared history, there are important differences among communities. Rocky Harbour, Norris Point, and Woody Point in particular have developed hotels, restaurants, and other related services for tourists. Rocky Harbour and Norris Point also have more regional services, including a hospital and government offices. Trout River retains greater ties to fishing and farming activity, with more fish harvesters compared to other communities and greater engagement in subsistence agricultural activity.

The mixed economy in Bonne Bay makes it an excellent case study for understanding community food security. Many food producers and harvesters – along with other

families- combine fishing and tourism work to meet their livelihood goals. Tourism also has a direct influence on the food system in the region. Tourists bring with them their own sets of food preferences, at the same time that extra revenue from tourists in the summer helps small food stores remain open year-round and seafood purchased by the tourism sector creates a local market for some seafood (Lowitt, 2011b; Lowitt, 2012). A long history of commercial and subsistence fishing alongside subsistence agricultural production makes Bonne Bay an important case study for understanding the transition to a more global food economy and the impacts of the restructuring of fisheries production and processing on local food provisioning. A case study based in a coastal, fisheries-dependent region is also significant to CFS literature which has focused little attention on fisheries and fishing communities.

3.3 Data collection

To understand CFS in the Bonne Bay region I collected data using three methods: semi-structured interviews with households about their food provisioning practices, participant observation with fish harvesters and tourism operators, and a quantitative household survey about seafood consumption. Data collection took place in the course of five fieldwork trips of approximately two weeks each between April and October 2011. For the majority of the field research, I stayed at the Bonne Bay Marine Station in Norris Point, while for field research on the south side of Bonne Bay I stayed at bed and breakfasts in Trout River and Woody Point. This thesis also builds on a preliminary community food security assessment that I undertook in the Bonne Bay region in the summer of 2009 (see Lowitt, 2009). This assessment, which involved eleven interviews

with different food systems actors and food costing at eight stores in the region, helped inform the direction and more specific questions of this thesis.

3.3.1 Food provisioning interviews

The main form of data collection for this thesis was in-depth semi-structured interviews undertaken with 37 households in the region between June and October 2011 about their food provisioning practices. Food provisioning is generally understood to encompass food acquisition, preparation, cooking, eating, and disposal of food (Marshall, 1995). It extends research about food choice by looking at the sociocultural and environmental contexts in which food choices are made (Schubert, 2008). Sociological and anthropological research has emphasized that food practices can serve as an entryway into understanding both physical and sociocultural surroundings (Devault, 1991; Sharman, Theophano, Curtis, & Messer, 1991). An examination of household food provisioning practices in this study is the main point of entry into understanding the Bonne Bay foodscape and CFS.

Households were chosen as an entryway into understanding food provisioning practices as well as the local social and cultural environment. As Dyck (2005) says, households can serve as “a methodological entrapoint to theorizing the operation of processes at various scales” (p. 235). Household also has standing as a legal concept and is defined by Statistics Canada as “being composed of a person or group of persons who co-reside in, or occupy, a dwelling” (Statistics Canada, 2012). Similarly, I consider households in this study as dwellings in which any combination of people of different ages may live. I

did not include individuals living in care facilities (e.g. nursing homes), but seniors in retirement homes with access to their own kitchen were included. Traditionally in Newfoundland and Labrador, there were, and to some extent still remain, complex kinship networks that transcend the boundary of any individual household (Faris, 1972). Throughout this study, I consider the relationships among households, families, and communities, and what this means in the context of CFS.

To select households, maximum variation sampling was used by purposively selecting households to meet a range of characteristics and thus increasing the range of data exposed by my study (Kuzel, 1992). Guba and Lincoln (1985) argued that maximum variation sampling is the preferred strategy for qualitative inquiry as it brings forward the broadest range of perspectives to use as a basis for achieving local understanding. Further, as Curtis, Gleser, Smith and Washburn (2000) point out, sample selection in qualitative research is often driven by the conceptual framework, which guides the research. As this study is concerned with food security not only at the household but also at the community level, I purposively selected households to represent as many diverse community characteristics as possible. Specifically, I sought to include households that varied in size (number of members); conjugal status (single parent versus a conjugal pair); ages of household members; socio-economic status (SES); and involvement / non-involvement in the fishing industry (see Table 1 for characteristics of interviewed households). The main indicator of SES used was income, widely recognized as the key social determinant of food insecurity. I consider a household involved in the fishery as

one in which at least one member presently works in the fishing industry either part-time or full-time in harvesting or processing.

Key gatekeepers helped facilitate access to households and identify an initial list of interview informants. Gatekeepers included the CURRA Community Coordinator, the Family Resource Centres in Bonne Bay North and South, Brenda Elford, a resident of Rocky Harbour who I first met in 2009 when doing initial research in the area, and Tom and Doris Sheppard in Trout River who were involved in the participant observation portion of this study. A project flyer describing the study was provided to gatekeepers and some potential participants (see Appendix II). Recruitment flyers were also put up in key community locations and distributed at events (see Appendix III). The entire sample was recruited by using gatekeepers as no residents responded to the flyer. However, the flyers may have helped raise awareness of the study among local residents. This purposively selected list of initial interview informants provided a sampling frame (Dewalt & Dewalt, 2002). From this frame, a modified snowball approach was used in which these informants referred me to friends and family. This approach also helped ensure that intergenerational changes in food provisioning practices are captured within the sample. With four families, interviews spanned two and in one case three generations (for example, grandfather, mother, daughter in separate households). Collecting food histories with people from different generations can provide a better context for understanding practices in the present day (Hubert, 2004, p. 46).

A criticism of snowball sampling is that while it can quickly build a sample there is not any guarantee of representativeness (Leary, 2004). However, my initial sampling frame was quite large because of entry into the community via several different gatekeepers. Further, households selected were continually assessed against criteria set in advance related to age, income, household size, involvement or non-involvement in the fishery to help ensure maximum variability. Household interviews continued until data saturation was reached; that is, until little new material or themes were arising from the interviews. Table 1 presents the characteristics of households (total N=37) that participated in interviews.

Altogether 37 households participated in interviews but only 35 separate interviews were completed because in two instances separate households engaged in interviews together. Throughout the thesis, pseudonyms are used in place of real names to protect the anonymity of participants. See Appendix VI for the consent form. Table 1 characterizes the household sample (N=37) in terms of the community they live in, number and ages of household members, number of children, number of active income earners, types of employment, and whether the household was involved in the commercial fishery (past or present). Quantified data on income and age were not collected. Rather during the interviews a description of the household including economic situation, number and approximate age of members, and family history was elicited. Ages of household members are described in the table below in descriptive categories rather than numerical ranges. While there are debates about how to define the category 'seniors,' seniors in this study were defined according to Statistics Canada legal definition of 65 years of age and

older (Turcotte & Schellenberg, 2007). As noted in the table below, one interview was completed with a family from the town of Cow Head. Although Cow Head is located slightly north of Bonne Bay, I proceeded with the interview since initial contact had already been made through a Family Resource Center.

Table 3.1 Characteristics of households interviewed

Selected socio-demographic characteristics	Study households (N=37)	Percent of households
Community		
Rocky Harbour	9	24%
Norris Point	11	30%
Woody Point	3	8%
Glenburnie/Birchy Head/Shoal Brook	4	11%
Trout River	9	24%
Cow Head	1	3%
Number of household members		
One	11	30%
Two	15	41%
Three	2	5%
Four	7	19%
Five or more	2	5%
Ages of household members*		
Children (under 19 years)	12	32%
Young	6	16%
Younger middle age	10	27%
Older middle age	11	30%
Senior	15	41%
Number children in household (under 19 yrs)		
One	5	14%
Two	6	16%
Three	1	3%

Number of active income earners in household		
One	5	14%
Two	12	32%
More than two	1	3%
None		
Unemployed	1	3%
Retired from work	18	49%
Sources of household income*		
Year-round employment	10	27%
Seasonal employment	10	27%
Private pension	11	30%
Fixed income	9	24%
Presently in commercial fishery		
Owns fishing enterprise	3	8%
Crew member	1	3%
Previously in commercial fishery		
Harvesting	3	8%
Processing	3	8%

*Sums to greater than 100% because some households have members in more than one category. Percentages may not total 100% due to rounding.

The interviewed households have a similar socio-economic profile to the regional population. For example, 27% of interviewed households had a seasonally employed income earner. This is fairly consistent with the regional population, in which 34% of the population worked between twelve and twenty weeks in 2005 (Newfoundland and Labrador Statistics Agency, 2009). Eleven percent of interviewed households had a member who worked in the fishing industry, slightly less than 17% of households employed in the fishing industry regionally in 2005 (Newfoundland & Labrador Statistics Agency, 2009). The greater number of households composed of seniors in this study reflects the trend towards an aging population throughout the province, which is particularly pronounced in rural regions as young people continue to leave (Newfoundland and Labrador Department of Finance, 2006).

3.3.1.2 Interview process

Interviews were completed with at least one adult member of each household. Some interviews were done with multiple household members together, including three couples. While more than three couple families were interviewed, due to logistical reasons such as work schedules, it was not always feasible to interview couples together. In two instances, separate households (involving two cousins and a daughter and her parents) joined in interviews together. Several interviews also took place in the presence of other friends, family (including children), and homecare workers. These individuals would sometimes contribute to the interview taking place and any additional dialogue was noted in the transcripts. This additional conversation often prompted a fuller description to the questions being asked of the main informant while providing a better understanding of community connections around food beyond the immediate household level.

Interviews were between 45 minutes and an hour in length with a few lasting up to one and half hours. The interviews were usually carried out in the informant's home or kitchen. In many instances, the interview took place while sharing a meal or tea with the participants. Having an environment that is familiar to the participant is believed to increase the likelihood of achieving full and reliable data (Medina, 2004). Having the interview take place in the home also provided an opportunity during the interview for me to observe supports of food provisioning such as the kitchen, outdoor gardens, root cellars, fishing sheds and boats. Permission was obtained by some informants to take photos of these food provisioning supports, some of which are included in the thesis.

There were some instances in which interviews took place in a different location, including a friend or family member's home (3), a local coffee shop/restaurant (2), in the workplace (2), and at the Bonne Bay Marine Station (3).

Eighteen of the 35 interviews were audio recorded with written consent and transcribed following the interview. For the remaining 17 interviews, detailed notes were taken and written out fully immediately following the interview. The decision whether or not to audio record was made at the time of the interview. Some of the interviews that were not audio-recorded were with seniors who were less comfortable with the recording technology. After all the interviews were transcribed, a hard copy was mailed to each of the informants and they were invited to review the transcript. Only one informant suggested changes.

The interview guide was designed to foreground the social relations, processes, and the structure of various social and economic influences on the daily realities of food provisioning. The broad themes of the interview included meal planning and preparation; food acquisition; eating fish and seafood; and what could help them provide food to their household (See Appendix V for the interview guide). The interviews were semi-structured, allowing me to have a list of questions and prompts to cover the areas of interest while maintaining the flexibility to change the order of the questions and give the informants leeway in how to reply (Bryman, 2004). Being able to adapt questions allowed me to explore a more personal approach to each interview. Semi-structured interviews have been described by Burgess as "conversations with a purpose" (as cited in

Mason, 2002, p.62). As Davies and Dodd (2002) noted, interviewing is a form of social interaction based in “shared communication” and not just a linear flow of information from interviewee to researcher (p.283). Because food is such an engrained part of our personal daily practices, some have called for a need for a more “engaged anthropology” in food research (van Esterik, 2012). After learning about the household and establishing rapport through conversation, I began most interviews by asking participants to explain to me what they eat in a regular week. In a few instances with seniors, asking them to speak about what they ate growing up served as a way of starting the interview. Further information about the household (for example, economic situation) was gathered throughout the interview in the context of talking about food practices.

The interview guide was piloted in one interview with a local resident of Rocky Harbour prior to commencing the data collection. The data from this pilot interview is included in the research. The only substantive change to the original interview schedule following the pilot was that I decided not to administer the household food security survey module (HFSSM), a survey that quantifies the level of household food security. I chose not to administer the HFSSM for two main reasons. First, in some instances, interviews were done with other friend/family members present and it may have been inappropriate to collect sensitive information. At the same time, a description of household material circumstances was elicited throughout the course of the interview. In most cases, interviews were done in the home also providing an opportunity for direct observation of material food provisioning supports. Secondly, as the interviews were mainly about understanding the people and places involved in household food provisioning, I wanted to

maintain this emphasis on the community-level attributes of food security rather than conclude the interviews with a focus on household level food insecurity.

While relatively little literature has explored theoretical or methodological issues associated with transcription it is an important part of the qualitative analysis process (Lapadat & Lindsay, 1998). Researchers make choices about whether and what to transcribe and how to represent it (Lapadat & Lindsay, 1998). For interviews that were audio-recorded, the interview was transcribed as near verbatim as possible. Informal conversation that took place was not transcribed as part of the interview. A denaturalistic approach was used in which idiosyncratic elements of speech- such as stutters, pause, or laughter- were not all noted in the transcript (Oliver, Serovich, & Mason, 2005). A denaturalistic approach is less concerned with the analysis of speech patterns and more with the “substance” of the interview in terms of meanings and perspectives that are shared, and has gained currency in ethnography and grounded theory (Oliver et al., 2005, p. 1277).

3.3.1.3 Interview analysis

The interviews resulted in approximately 250 pages of typed qualitative data. Each interview transcript was saved as a separate file in Microsoft Word, assigned a number, and uploaded into the software program NVivo 9 (QSR International Pty Ltd) to assist with data analysis. An interpretivist orientation enables data to be transcribed into written text for analysis and organised in order to uncover patterns of human activity, action, and meaning (Berg, 2004). In line with an interpretivist approach that emphasizes how

people themselves make sense of their experiences (Guba & Lincoln, 1985), I used a constructivist grounded theory approach to data analysis which examines how participants construct meanings in certain situations, rather than attempting to predict or examine causality (Charmaz, 2006). However, I was aware that developing themes also came from my perspective on the material, which was shaped by existing theory as described in Chapter 2 and from my own research interests and questions. An interpretivist process of analysis involving opening and axial coding using the NVivo software program draws on that elaborated by Desjardins (2010) in her study about sense of place in food environments.

I began with a process of open coding to identify and code themes in the interview data (Berg, 2004; Dewalt & Dewalt, 2002). These themes were organised as 'free nodes' in NVivo. I assigned quotations from the interviews to each of these free nodes (or themes). I started with the broad themes of preparing and planning meals; managing food resources; grocery shopping and food choices; food self-provisioning; sharing and giving food; eating and accessing seafood; and buying and selling local foods. I then added other themes that did not fit into these categories but seemed deserving of consideration such as food traditions, food and health, and intergenerational food knowledge.

Once all the interviews were coded into themes, each 'free node' was added to the 'tree nodes' section in NVivo and I created a number of 'child nodes' or subthemes that emerged within each theme. This is similar to what is known as axial coding in which the research inter-relates categories of information (Creswell, 2007). Quotations were

recategorized as subthemes were re-defined, added, or taken out. Many quotations were assigned to more than one subtheme (e.g., a quotation may fit in ways of eating seafood and seafood and health) and each interview transcript usually contained multiple quotations for each theme. I continued until the point of theoretical saturation was reached, at which time no new significant themes emerged and no new information was found that added substantially to an understanding of the existing categories (Creswell, 2007; Lacey & Luff, 2001).

3.3.2 Participant observation

In addition to food provisioning interviews, participant observation was undertaken with selected fish harvesters and tourism operators in the region. In participant observation the researcher is, more or less, immersed in the day-to-day activities of the people being studied. Participant observation may be considered less a single method and more a "characteristic blend or combination of methods and techniques" which in this case involved social interaction in the field with subjects, direct observation of relevant events, formal and informal interviewing, and collection of documents (McCall, 1969, p. 1).

Participant observation was undertaken from April to July 2011 with host participants in the fisheries and tourism sectors as part of a study funded by NSERC's Mitacs-Accelerate Program and the Rural Secretariat, Government of Newfoundland and Labrador with support from the CURRA. It was co-supervised by Barbara Neis and Marion McCahon of the Rural Secretariat. The study focused on the relationship and synergies among fisheries, tourism, and local seafood consumption in the Bonne Bay region. Ethical

permission was obtained to use all data collected from the study in this thesis. Eight research participants willing to host me as a participant-observer with their business were identified by a project steering committee. They included: Darrell Burden and Greg Kennedy, fish harvesters, Norris Point; Glenn Samms, fish harvester, Norris Point; Ernie Decker and Lynn Halfyard, fish harvesters, Rocky Harbour; John and Roxanne Decker, fish harvesters, Rocky Harbour; Todd Wight, Ocean View Hotel and Restaurant, Rocky Harbour; Vince McCarthy, Sugar Hill Inn, Norris Point; Tom and Doris Sheppard, Sheppard's Bed and Breakfast, Trout River; and Ken Thomas, Lighthouse Restaurant, Woody Point (See Appendix IV for a description of the participant observation partners).

The participant observation was guided jointly by the research questions of this specific study as well as the research questions of the thesis. It focused on understanding local fish supply, markets, food security, and fisheries-tourism synergies from the perspectives of commercial fish harvesters and tourism operators. As an overt participant-observer, my purpose was to observe the setting as well as engage in activities as much as possible. I spent three to four days with each fishing enterprise and tourism business between April and July 2011. In most cases, these days were not spent consecutively but occurred as multiple shorter visits across this period. With fish harvesters, I observed activities related to the management of their enterprise such as licensing, taking care of gear, and took part in visits to fishing cabins as well as fishing trips on the water. With tourism businesses, I observed guest activities, ate meals at the establishments, participated in business activities such as grocery shopping, and completed informal interviews with guests and staff.

Throughout the participant observation detailed field notes were kept and written up fully at the end of each day. In addition to social interaction and direct observation, an interview was also completed with each host participant. With fish harvesters, the interview focused on documenting their catches and where it goes; understanding their views about the marketing of seafood and what they would like to see in regards to seafood marketing and fisheries-tourism opportunities; and exploring their seafood eating choices in their home. With tourism operators, the interview focused on documenting types of seafood served in the establishment; understanding the operator's experiences in sourcing seafood; and exploring their ideas about seafood marketing and fisheries-tourism opportunities (See Appendix V for the interview guide). Digital photos related to business activities, infrastructure, and food provisioning were also taken. Some of these photos are included throughout the thesis.

Anonymity of host participants for the participant observation was not possible so to give participants some control over publicly released information, participants were provided with a full set of research notes and digital photos to review prior to the data being used. These participant observation data are drawn on in this thesis. A co-authored plain language report was also developed with the host participants summarizing the results of the participant observation and the implications for understanding fisheries-tourism connections.

To broaden the relevance of the findings beyond lessons learned from the host participants, a small set of key informant interviews was carried out with others in the

area using the same interview guide (see Appendix V). These interviews involved people who owned/worked in fishing and tourism including one fish processing facility, one fishing enterprise, and four tourism businesses. Notes were taken for these interviews which were written up more fully afterwards. Pseudonyms have been assigned to protect identities of these key informants. See Appendix VI for the consent forms for participant observation and key informant fish harvester/tourism operator interviews. Similar to the semi-structured household interviews, participant observation data and key informant interviews were thematically analysed. Because of the comparatively small amount of data this was done manually without the assistance of the NVivo software program.

3.3.3 Survey

To look more closely at the contributions of local seafood to household diets a quantitative survey about seafood consumption was distributed by Canada Post to all residential post office boxes in the Bonne Bay region in April 2011. This included the towns of Rocky Harbour, Norris Point, Glenburnie/Birchy Head/Shoal Brook, Woody Point, Trout River, Sally's Cove, and St. Paul's. See Appendix VII for a copy of the survey. The survey was anonymous and to be completed by a household member responsible for shopping and cooking. Surveys were returned to the CURRA office in St. John's in a self-addressed, stamped envelope that was provided. The response rate was 27% (307 surveys).

The survey consisted of five sections: frequency and types of seafood eaten over time; sources of seafood; ways of eating seafood; seafood in the community; and

demographics. The question about frequency of eating seafood over time used the categories ‘often,’ ‘now and then,’ and ‘never,’ developed in a food survey of Newfoundland communities by Solberg, Canning, and Buehler (2006). All the questions were quantitative and most were multiple choice. Questions about seafood in the community used a Likert-type ranking scale to measure satisfaction with availability, affordability, and quality of seafood.

The survey data were entered from the completed paper surveys into a database file and analyzed using the Statistical Package for the Social Sciences (SPSS) version 19. Analysis involved computing response frequencies to provide a baseline of information for each question and using chi-square tests to look at the relationships among variables.

3.4 Point of view

In this study concerned with the intersection of food and fishing systems, an interdisciplinary approach and community-engaged research process were central to the study and to my perspective as a researcher. There are diverse approaches to community-based research ranging from “participation action research,” to “cooperative inquiry” to “action research” (Israel, Schulz, Parker, & Becker, 1998). Despite differences, these approaches share a common aim of benefiting participants through direct involvement or using research findings to inform action for change (Israel et al., 1998). Israel et al. suggested there are eight guiding principles of community-based research for health that may be situated along a continuum as goals to strive towards. While they focus on health, most of the principles they outline are of broader relevance to other community-based

projects. Further, while this study is not foremost about health, health is inextricably linked to food security. I will briefly address how this project incorporated each of the elements of community-based research outlined by Israel et al. These are: recognizes community as a unit of identity; builds on community strengths and resources; facilitates collaborative partnerships; integrates knowledge and action for mutual benefit; promotes co-learning; involves a cyclical process; addresses health from well-being and ecological perspectives; and disseminates knowledge and findings.

The project began by recognizing the community as an important unit of study by adopting a case study approach focused on the Bonne Bay region. At the same time, I sought to untangle what community meant in this region particularly in the context of food. A critical part of the community-based aspect of this project is that it took place through the Community-University Research for Recover Alliance (CURRA), an interdisciplinary research project concerned with the recovery of fisheries and fisheries communities. The CURRA had already identified and was working with a number of communities in the Bonne Bay region, and elsewhere along the west coast, to address some of the social, economic, and environmental changes they face related to fisheries.

The study also built on community strengths and facilitated partnerships by involving community members in the guidance of this project at different stages. First, in the summer of 2009 I undertook an initial community food security assessment in the region and put in place a community steering committee consisting of four individuals with different knowledge of local food systems issues. For the Mitacs-funded portion of this

thesis, another community steering committee was assembled involving fish harvesters, tourism sectors, and representatives from local government departments and community groups. I also worked closely with eight participants from the fisheries and tourism sectors who hosted me as a participant observer to learn about their businesses. Further along a community-based continuum, partners would share full control over all stages of the research. This was not fully realized in this project in which I maintained control over the data collection and analysis procedures. However, findings and analysis from the participant observation were shared with partners for their input and feedback.

The integration of knowledge for mutual benefit and co-learning are also goals of community-based research. Ideally, a project would work with participants throughout all stages of the research to promote co-learning. While this was not realistic in the timeline and resources available for this thesis, there were opportunities for co-learning. For example, the partners for the participant observation co-authored a community report with me about the findings from the internship I spent with them. Another aspect of a well-developed community-based research project is a cyclical or iterative process involving partnership development, research, and action. In this project, findings and insights from one stage of the research informed later stages. For example, initial discussions and interviews with community members in 2009 shaped the form of my full thesis project, which began in 2011. Further, opportunities for action and discussion that came out of CURRA community events were an important part of the context that informed more fully my analysis of research findings.

In community-based projects focused on health, Israel et al. (1998) also propose these should address health from an ecological perspective. This project addresses health, broadly understood, from an ecological perspective by focusing on the relationships among people and their local food systems. Lastly, a key aspect of community-based research is knowledge mobilization. Findings from the project were mobilized and shared through the CURRA. Reports from different stages of this research are available on the CURRA website (www.curra.ca/new_initiatives_food_security.html). Further, I participated in numerous CURRA events and workshops throughout the duration of this research. This included a series of community workshops in 2009, a fisheries-tourism workshop in 2011, and the international Rebuilding Collapsed Fisheries and Threatened Communities Symposium in 2012 that involved researchers, politicians, and representatives of a broad range of community groups. Additionally, through a course offered by CURRA, I produced a radio documentary to share insights from my research and feature some of the community members that collaborated in my research. There are plans for this documentary to be aired on the Voice of Bonne Bay community radio station and it is available on the CURRA website at the link above.

Alongside a community-based approach, this study uses an interdisciplinary approach to the study of food and fisheries. Some have suggested that interdisciplinary approaches and working in interdisciplinary teams are useful in helping meet the diverse skills and methodological complexity that is often necessary to do community-based research (Israel et al., 1998). Working with the interdisciplinary CURRA team provided me with

access to a range of researchers working on various aspects of sustainability in fisheries and fisheries communities.

An interdisciplinary approach to this study also responds to the need for more interdisciplinary approaches to the study of food and fisheries. Pursuing this research through the Interdisciplinary Studies PhD program was a way of bringing these interdisciplinary connections to the forefront. The growing complexity of many of the problems we face makes them ill-suited to a single disciplinary perspective. This is particularly true in the case of food and fisheries, which involve resource sustainability, health, access to food, and community development. Hinrichs (2010) argued that greater interdisciplinary in food research may help us move forward in the work of conceptualizing more sustainable food system for which there is no single “recipe” (p. 19). This project drew upon interdisciplinary approaches by reviewing and making connections among bodies of literature that span multiple disciplines; establishing a PhD committee of five scholars in different disciplines; and working across disciplinary divides to the study of food and fisheries by using an integrated conceptual lens drawing on the idea of the foodscape.

Lastly, alongside using a community-engaged and interdisciplinary approach, it is important to reflect on my positionality as a researcher, including how my personal characteristics, history, and social location influenced my research and interactions with participants, as well as the ways in which this project provided me with unique opportunities to “mix” research with action and practice (Cook, 2008). As Atkinson

(2006) wrote, a researcher's observations and interpretations necessarily emerge from their own engagement in the social world. Prior to arriving to Newfoundland in the spring of 2009, I lived in Nova Scotia for three years. During this time I completed a Master of Environmental Studies (MES) degree at Dalhousie University, following which I worked for one year at the Nova Scotia Agricultural College. This time in Nova Scotia sparked my interest in issues related to rural communities and food security. My MES research was a study of producer-consumer relationships in farmers' markets, and involved visits to farmers' markets and interviews with farmers across the province. Moving from Toronto, this was my first real foray into the history and society of rural Atlantic Canada communities, and in particular the farming families that are an integral part of them. During my graduate studies at Dalhousie University I also worked as a Research Assistant with Patty Williams, Canada Research Chair in Food Security and Policy Change at Mount Saint Vincent University. This opportunity, including involvement in the hands-on organizing of a participatory food security project, was foundational to my understanding of the field of food security and to developing in me an appreciation of the importance of involving community participants in research and being attentive to the range of voices involved in food system issues. My time living and doing food research in Nova Scotia informed the development of this PhD thesis in substantial ways. In developing the initial research ideas for this thesis, I reflected on my time with farmers and in farming communities in Nova Scotia, and was drawn to exploring the potential parallels with fishing communities in Newfoundland in the context of sustainable food systems.

While my previous experiences shaped my positionality as a researcher, this was also informed by the opportunities I had throughout this research to “mix” food research and action (Cook, 2008). While I wrote about the food system around Bonne Bay, I also actively participated in it. There were many instances in which I shared meals with research participants, or in which I was provided with food to take home at the end of an interview. In one instance, I gave food to a woman I interviewed. In the case of local farmers I purchased food. My active participation in the food system around Bonne Bay widened my realm of experience from which to make meaning of the findings emerging from this research. At the same time, being new to the region, and in particular growing up in Ontario, I was introduced to many Newfoundland foods and dishes for the first time during my fieldwork. Being “from away,” many of the people I interviewed took extra care to introduce and explain to me the sorts of food they eat, the history of the region, and often brought their own curiosity to interviews, asking me if I had heard of these things before or tried some of these foods.

My research in Bonne Bay also encouraged me to take action in other ways. For example, in the spring of 2011 I established a fisheries committee with the Food Security Network of Newfoundland and Labrador to facilitate discussion and bring awareness of the role of fisheries in the food security of the province. The meetings of this committee provided me with an important opportunity to engage with others interested in the intersection of food and fisheries issues, and to reflect on the relevance of my case study research in Bonne Bay for broader debates about food security in the province.

Finally, ethical concerns permeated this research process and were informed by my position in the community. As Sultana (2007) points out, particularly in community-based research, ethics often involve not only institutional commitments around confidentiality and minimizing harm, but also a personal commitment to maintaining mutually supportive relationships with research participants and communities that are based in trust. Heggin & Guillemin (2012) refer to this as “situated ethics.” The process of conducting research and spending time in the communities around Bonne Bay made me aware of local politics and power relationships, including the multiple interests and identities that constitute these communities. While attention to these interests and identities are a part of my analysis of CFS throughout this thesis, how I approach writing and discussing these themes also necessarily heeds careful consideration of confidentiality, minimizing potential harm and maintaining supportive community relationships.

In conclusion, this study used mixed methods involving semi-structured interviews, participant observation, and a quantitative survey in an interpretivist framework that seeks to understand how research participants themselves understand and experience the food system around Bonne Bay. I also acknowledge my positionality as a researcher, including how my personal history and social location influenced my interactions with participants in the field and informed my interpretation of the findings emerging from this research. The following chapters provide a deeper historical context for understanding the Bonne Bay case study, and present the results and future directions for the study of community food security and fisheries emerging from this research.

Chapter 4 Traditional Foodways on the Island of Newfoundland

4.1 Introduction

Newfoundland's social and cultural identity is intimately linked to the sea and seafaring traditions, reflective of an economic history tied to the fishery that produced fish for home consumption and for sale. Kin-based units worked together in fishing enterprises, and cod and other seafoods became staples in the diet from the time of the first fish planters. However, the settlers recognized that an economy based on the fishery alone could not support them. They also turned to the land, working out a "delicate balance of fishing and farming," using farming to supplement low and uncertain incomes in the fishery (Cadigan, 2002, p. 243). This chapter describes Newfoundland foodways beginning with the diet of early fish planters, through 'traditional' foodways from the late seventeenth to mid-twentieth century, and moving into contemporary changes following Newfoundland's Confederation with Canada. I look specifically at the island of Newfoundland, recognizing that foodways in Labrador are shaped by a unique set of influences including a much larger Aboriginal population. Within this discussion of Newfoundland foodways, I focus where possible along the west coast and in the Bonne Bay region where this research takes place.

Foodways is a relatively recent term that has sprung into popular use among social scientists to refer to socio-culturally informed patterns of food use (Smith, 2007). The term broadly refers to ways of procuring, preparing, presenting, and eating food as well as the tangible (material) and intangible (attitudes, rituals, customs, traditions) aspects of

food (Smith, 2007; Thursby, 2008). Foodways are understood to have close links with individual, family and cultural identity (Thursby, 2008). While folklorists and anthropologists originally studied foodways as part of the cultural system, they are now deemed “worthy of focused study in and of themselves” because of the rise of the interdisciplinary fields of food studies and food history (Smith, 2007, p.233). I understand foodways as a part of the foodscape. Foodways, in terms of socially and culturally informed patterns of food use, may be understood as one influence shaping the food practices that make up contemporary foodscapes. Foodways are an important part of a foodscape approach, which is concerned with understanding changing interactions among people, places and food not only across space but also across time.

Further, to this discussion about traditional Newfoundland foodways, I bring a foodscape perspective. This allows me to explore themes that are often not picked up in foodways studies. Although the study of foodways is becoming more interdisciplinary, the concept stills remains closely tied to its roots in folklore with an emphasis in most studies on the socio-cultural and symbolic meanings of food. From an interdisciplinary foodscape perspective, I bring political economy themes related to control of property, kinship structures, and changing management regimes into this foodways discussion. This chapter about traditional foodways sets the stage for looking at the present-day foodscapes around Bonne Bay in Part Two of this thesis. Parts of this chapter have been previously published in *World small-scale fisheries: Contemporary visions* (Lowitt, 2011a) and *Newfoundland and Labrador Studies* (Lowitt, 2012).

4.2 Diet of the early fish planters and settlers

Newfoundland foodways have their origins in the food traditions of the early migratory fishers and settlers who came to Newfoundland. The first English, French, Scottish and Irish settlers, along with the migratory fishers before them, brought with them their own foodways and adapted them to the Newfoundland environment. From the beginning, cod and other types of seafood, became a staple in the diet. However, as Pope (2004) explained, the practice of catching and processing cod into a salted dried food is much older than the Newfoundland fishery. While it is no longer known who developed the salt cure method for fish, it was used as early as late-medieval times by Breton fishermen to cure hake (Pope, 2004). As Pope explained in *From Fish to Wine*, the dry salt cure worked particularly well in the warm Atlantic climate and produced a stable product for export, with the first recorded cargo of salt cod leaving Newfoundland in 1502 on the Gabriel of Bristol. This choice of cure was also a result of consumer habits in England which preferred salted dry cod over other types of green-cured wet fish, while the trade in salt cod offered a solution to a balance-of-payments problem for the English, whose imports of wine from France were not balanced by their exports.

Prior to the early seventeenth century, the Newfoundland fishery was mostly seasonal, with few Europeans overwintering. By 1510, Bretons, Normans, Basques and the English had established seasonal fishing settlements. Godbout (2008) is one of the few researchers to have examined archaeological evidence of the foodways of these early fishers, looking at remains of bread ovens from the Breton fishing stations on the Great

Northern Peninsula. She found that French migratory fishers arriving to Newfoundland continued their traditional practice of bread making “far from the mother continent” (p. 145). She argued that the bread ovens played a crucial role in the domestic foodscape and patterns of social activity in the fishing stations.

In the early seventeenth century, the English began establishing a resident fishery with the most basic social distinction that between the masters and servants. As explained by Pope (2004), “...Newfoundland had only one social edifice, and its economic foundation was the fishery. Those who owned boats were in a very different position from those who did not, and there was little in the way of intermediate status” (p. 259). The other broad class of residents was the servants, usually male, employed by the boatkeepers to work in the fishery. While the English families were the most established in the seventeenth century, data suggest a comparable social structure among the small population of French households later in the seventeenth century, consisting of ‘habitants’ and ‘engages.’

Robert’s (2003) book *For Maids Who Brew & Bake* is one of the few collections of seventeenth century Newfoundland recipes. Gathered from old English manuscripts and recipe books it lends insights into what families of the time were eating. The fish and seafood recipes in this collection indicate that early settlers most likely ate salt cod with mustard, butter, or vinegar. While salt cod was a staple, other types of fish including capelin, herring, mackerel, eel, halibut, salmon and trout were also eaten and usually prepared stewed, stuffed or baked. This fish was often served on “sops”, slices of bread

with melted butter poured on top, as the potato was not yet commonly eaten. According to Roberts, many seventeenth century families were also fond of shellfish and ate mussels, periwinkles, lobsters, crabs, shrimps, and prawns. A favourite method of cooking shrimp was to “seeth them in equal parts water and ale, salt and savoury” (2003, p. 29). Another 17th century recipe details how to prepare barnacles. Entitled ‘barnacle with short broath,’ the recipe reads “Dreste and lard it, then seeth it with water, and season it well, when it is half sod, put to it a quarte of white wine, and seeth it well, then serve it with parsley over it” (2003, p. 29).

Aside from readily available fish and seafood, censuses from this time indicate that most families maintained gardens and small livestock (Omohundro, 1994). Immigrants to Newfoundland likely brought with them a “whole bundle” of Old World horticultural knowledge (Omohundro, 1994, p. 100). Available data from the period indicate that the agricultural effort was greater in households in which there was a female present, as women continued their traditional contributions to baking, brewing, dairying, and caring for animals (Pope, 2004). However, women were also important economic participants in the fishery, with some of the largest plantations operated by women (Pope, 2004).

Other staple foods were imported to the island. Exchange, which operated on systems of credit with West Country English merchants, as well as with the Dutch until the 1660s and a growing number of New England enterprises later on, brought in a range of food and non-food commodities (Pope, 2004). In 1677, the most commonly imported food provisions were bread, flour, salt beef, peas, oil, sugar, molasses, rum, and salt (Gray,

1977). According to Pope, the diet suggested by these imports was “unexceptional,” typical of foods from the Old Country (2004, p. 365). Nonetheless, these items were adequately scarce that meals alone were wages enough for the fishing servants who overwintered and were referred to as “dieters” (Handcock as cited in Omohundro, 1994, p.95).

As both resident and migrant fishers in the late seventeenth century faced the threat of war with France, planters intensified their use of local resources, including diversification in diets to use more locally-available sources of food, such as seal (Pope, 2004). In reference to this new dietary addition, the Commodore John Graydon is cited as saying “which they and none but they could eat,” also adding “such people such stomachs” (Pope, 2004, p. 427). Along with offshore banks fisheries and the practice of winter-housing, salmon, seal, and the introduction of the potato were key to increasing the island’s carrying capacity (Pope, 2004). In the early eighteenth century, serious Irish immigration began and settlement expanded into Placentia, Bonavista, and Notre Dame Bays. Thus, as Pope wrote, “Newfoundland’s traditional culture had emerged, in a form still remembered, strongly shaped by these developments in subsistence and migrations” (p. 427). These developments shaped the formation of what is now commonly considered ‘traditional’ Newfoundland foodways. Old World knowledge and practices blended with new economic, social and environmental circumstances to create distinct foodways on the island of Newfoundland.

4.3 Traditional foodways from the late seventeenth to the mid-twentieth century

I refer to 'traditional' Newfoundland foodways as the pattern of practice that came about with the establishment of the fishing household unit at the end of the eighteenth century and persisted until the influx of more modern goods, services, and money following Newfoundland's Confederation with Canada in 1949 (Porter, 1995). While fishing enterprises eventually grew smaller and did not include servants, the fishery remained kin-based, with enterprises located in households (Pope, 2004). Kinship structures strongly influenced fishing activities (Faris, 1972). As documented in Faris' study about Cat Harbour, a small town on the North East coast, the same "crowd" often fished together. Crowds were based in biological relationships and common land ownership. Because no one alone had all the necessary supplies and gear they needed for an economically productive fishing crew, brothers, fathers, and sons would often fish together. Over time, fishing enterprises were handed down time from father to son.

In addition to fishing, as migrants continued to come from England and Ireland throughout the eighteenth century, they had to be hunters, trappers, and gardeners in order to survive (Omohundro, 1994). While many came with the intention of prosecuting the cod fishery, along with the herring and salmon fisheries on the west coast, some Scottish immigrants from Cape Breton settled in the Codroy Valley on Newfoundland's west coast "lured" by stories about the "wonderful fertility of the soil" to be cultivated (Bennett, 1989, p. 34).

Across the island, settlers developed a system of “occupational pluralism” in which they prosecuted a range of food resources and provided for themselves as much food as they could in order to take out less credit from the merchant store (Ommer, Turner, MacDonald, & Sinclair, 2008, p. 118). Cadigan (2002) described the importance of a diversified strategy based on fishing and supplementary farming. He said, “The inshore fishery dictated that settlements were scattered along the rugged coastline, but gardens were just as important features of communities as were flakes, stages, and ships” (p.250). As the shopkeeper, the merchant facilitated transactions with the outside world, and for the most part it was a fairly effective way to operate in cash-poor, remote regions and provided a stable source of goods (Omohundro, 1994). Minimizing the extent of food provided on credit to families was also important to the merchants’ survival so they encouraged home food production (Omohundro, 1994).

Newfoundland foodways developed as part of this adaptive survival strategy, producing as much food for home consumption as possible. Despite the importance of an adaptive strategy based on fishing and subsistence farming, these activities have not always had an easy relationship within the foodways of Newfoundlanders. By prosecuting the fishery as well as subsistence production on land, Newfoundlanders were engaged in two distinct spheres of experience as, “Newfoundland’s farming had to compete with many other demands for the family’s labour during the mild months” (Omohundro, 1994, p. 146). Fishing was the main reason for settlement in many communities, including around Bonne Bay, and allowed for the vital import of molasses, cotton, tea, iron, and flour. As

important as it was to survival, gardening took a “subordinate position” to fishing (Omohundro, 1994, p. 148).

A number of ethnographic studies lend insights into traditional patterns of food provisioning in Newfoundland communities including John Omohundro’s (1994) book *Rough Food* about home production on the Northern Peninsula; James Faris’ (1972) book *Cat Harbour* about this settlement on the northeast coast; and Margaret Bennett’s (1989) book *The Last Stronghold* about Scottish settlement in the Codroy Valley. I draw closely upon these works, supported by recipe collections and original interview data from this thesis, to paint a picture of what Omohundro (1994) called the “seasons of subsistence” in traditional Newfoundland foodways. Across these accounts, nuances and variations in food strategies and eating patterns emerge, suggesting that local resource conditions and social customs were important mediating factors in shaping the Island’s foodscape.

Across Newfoundland, the summer season from June to August was the most active time for household food production and commercial fishing. Seedlings were started earlier in the spring, usually indoors by the women, and sacks of seed potatoes would be brought up from the root cellar to sprout (Omohundro, 1994). Once the ground was thawed, digging and planting could begin in late May and early June. Potatoes, turnips, and cabbages were among the staple crops (Faris, 1972; Omohundro, 1994). For example, 1901 census data for Bonne Bay indicate that a population of about 1600 residents grew over 41 000 heads of cabbage. The annual capelin run in June, while a source of food, also provided ample fertilizer for gardens (Omohundro, 1994). Most of the responsibility

for gardening fell to the women and children (Cadigan, 2002; Faris, 1972; Murray, 1979).

Women took pride in maintaining well-kept gardens, with the production for food so important that no resources were directed to ornamental gardening (Cadigan, 2002).

Being a good housewife became associated with having a neat garden, and a poorly tended garden was seen as a “sign of laziness on the part of the woman in the household” (Murray, 1979, p.19).

For many households, keeping animals was another important aspect of a diversified household strategy (Omohundro, 1994). Omohundro (1994) suggested variation in terms of species raised and the feeding and handling of animals likely was due to differences in environmental conditions and local employment. For example, Omohundro noted that the town of Main Brook on the Northern Peninsula traditionally raised fewer cattle and sheep per household than the town of Conche, 60 kilometres away. He partly attributed this to Main Brook being carved out of forested coastline in the 1920s while Conche’s land had been domesticated for much longer. He also suggested occupational differences played a role, since Conche men cut grass for winter fodder during downtime in the summer cod fishery while men from Main Brook were working full days in logging. Likewise, people in the Codroy Valley, with its greater abundance of arable pasture, produced livestock and dairy products more easily than many other parts of the island (Bennett, 1989). Bennett’s (1989) description of Scottish settlement in the Codroy Valley suggests that social customs contributed to further variation in animal husbandry practices. For instance, when people slaughtered animals they followed traditional Scottish customs, such as always killing a pig two to three days after the new moon

believing “the pork will taste better and the meat won’t shrink when you cook it”

(Bennett, 1989, p. 86).

Census data from around the turn of the twentieth century show that households around Bonne Bay similarly kept a range of animals including chickens, sheep, goats, and cattle. The importance of animals was also described by Charlie and Howard, two informants from this study. However, the type of and number of animals kept depended on how much money families had and their access to land. Charlie, who grew up in the region in the 1920s, explained that households that didn’t have enough land for a cow usually kept a goat, known as a “poor man’s cow.” Charlie said: “Mother was good at providing food...Had a goat, a poor man’s cow. We ate the meat too. Needed more land for a cow see.” Chickens were often kept for eggs and these could be stored using left over salt from the fishery. Howard described preserving eggs in salt: “...you get a nice big wooden box and put a row of salt in the bottom. Then you put your eggs in there. Then you put another row of salt and that’s the way you do it. When I was born there was no electricity.” While there were some animals around Bonne Bay in the 1870s, census data show this number grew substantially over the coming decades as settlement increased. By 1901, most households were keeping sheep and fowl. Cows and goats were much less common. Trout River had the highest number of cows at 66 in 1901, as many as all the other communities combined.

In the summer, the main organizing activity in most communities was the cod fishery, timed to take place during the annual inshore cod migration. Along the west coast, the

cod fishery, while undeniably important, took place alongside salmon, herring, and lobster fisheries more than in some other parts of the island where the cod fishery was the principal activity (Mannion, 1977). It wasn't uncommon for families to migrate seasonally to summer fishing stations (Porter, 1995). Some families around Bonne Bay followed the cod north during the summer and fished along the Labrador coast (Mannion, 1977).

Communities had customary ways of regulating the fishery. These ranged from implicitly understood rules to community laws, and were designed to help ensure the greatest number of households had the potential to earn a living from fishing (Matthews, 1993). For example, fish harvesters in some communities tended to use the same locations for their cod traps from year to year (Matthews, 1993). Firestone (2003) documented how cod trap berths were passed down from father to son in the town of Savage Cove on the Northern Peninsula. Other communities, such as Fermeuse along the east coast of the island, shifted to a lottery system to assign berths in order to allocate berths less contentiously throughout the community (Matthews, 1993; Matthews, 1995). Yet some other communities, such as Bonavista, resisted the introduction of a lottery system because this would have meant having to acknowledge the territorial claims of nearby communities (Matthews, 1993; Matthews, 1995).

Historically, as Cadigan (1999) argued, fishing people in Newfoundland viewed access to marine resources as "a right imbued with moral responsibilities" (p.11). Throughout the nineteenth century, fishing people sought to maintain their customary and equitable

access to fish in opposition to the “individualistic and accumulative values” of a newly-forming capitalist political economy (Cadigan, 2003, p. 15). Until the early nineteenth century, the most common method for fishing cod was using the traditional handline, a fishing line with a baited hook attached and pulled up and down in the water to attract cod (Higgins, 2007). Fluctuations in cod landings in the early nineteenth century led to new fishing technologies being introduced, including jiggers, seines (large nets which circle schools of fish), trawls (hundreds of baited hooks attached to long fishing lines), and cod traps (box-shaped stationary nets that were anchored in the water) (Bavington, 2010; Higgins, 2007). This was accompanied by a shift in fishing effort to new grounds (Bavington, 2010). The introduction of these technologies was resisted by some fishing people who argued that the gear resulted in needless harm by ensnaring both juvenile and adult codfish, while also increasing inequality between those using the new technologies and those who could only afford the traditional hand line (Bavington, 2010; Cadigan, 1999).

Both men and women had their own roles, with men involved in the hunting of fish and women in the home processing. Women worked on shore making fish harvested by their male relatives into salted products for the commercial and household economies (Ferguson, 1996). Indicative of their central role, Porter (1995) called women the “skipper of the shore crew” (p. 33). Like the men who had well worked out fishing crew structures, women’s work was governed by a number of patterns with, for example, married women working together often directed by a more experienced or senior woman (Ferguson, 1996). Sally grew up in Rocky Harbour in the 1930s and described the

importance of salt fish to their diet: "Oh we ate a lot of fish. But mostly it was salt fish. In the winter we had salt fish because there was no electricity. Everything we ate in the winter was salted." Women worked hard to produce good quality fish to sell and their work generated substantially more value for the product (Ferguson, 1996). The proper washing and drying of fish was critical to making a living in the salt fishery (Ferguson, 1996). While women often led the on-shore processing, they did not get a share of the catch and it was the men who were involved in trade dealings with the merchants (Faris, 1972).

In his study of salt cod processing in Newfoundland, Ferguson (1996) described the various classes of salted fish that were made. The two most basic cures were the light salted and the heavy salted fish. The heavy salted cure was used mainly on offshore fishing ships because the higher concentration of salt allowed for shorter drying times. Lightly salted fish was produced in the inshore fishery, required the longest and most complex drying phase (up to six weeks), and became preferred in most markets because of its higher quality. As Ferguson explained, the lightly salted fish reverted back nearest its original form when soaked in water, since it could take up more water than the heavier salted fish. However, as further elaborated by Ferguson, there was some variation across places in the making of light salted based in the modes and amounts of salting, leading to two distinct inshore styles: fish pickled in brine and fish dry salted in bulks, with the latter method being more common. In the making of dry salted fish, some variation likewise existed, specifically due to differences in weather across the island, which affected how much salt and drying time was needed. Ferguson thus suggested it "...might be possible

to make a case for the existence of regionally distinct salt fish- whether or not conscious [salting] techniques played any role” (1996, p. 197).

While the cod fishery was undoubtedly a central part of the summer fishery, communities diversified to various degrees into other fisheries, such as lobster, salmon, and herring. Along the west coast including Bonne Bay, salmon and herring fisheries had long been important to residents and traders (Korneski, 2012). Also starting in the mid-nineteenth century was the first recorded commercial trade for lobsters, although it is likely that lobsters contributed to the diet in Newfoundland, as elsewhere along the eastern seaboard, long before a commercial trade began (Korneski, 2012). By the 1880s there were at least 33 factories on the west coast including several in the Bonne Bay region. However, as Korneski explained, later on as stocks declined and large operations could not be supported, there was a transition to smaller, family-run operations. The division of labour in these small factories paralleled that of the cod fishery with men fishing for lobster and women and children processing and canning the lobsters.

Also at the peak of summer, berry picking started and continued into the fall (Omohundro, 1994). From the marshlands, marsh berries, bakeapples, currants, and cranberries were harvested, while raspberries, blueberries, and blackberries came from the barrens (Faris, 1972). Berry picking provided a social outing for women which Omohundro likened as akin to the importance of moose hunting among men. Berries were a very important fruit source, and would be “put up” in jars to last until the next berry season (Faris, 1972, p. 33). They also offered some protection against vitamin C

deficiency (Omohundro, 1994). For some families the fall berry harvest brought extra earning potential as they could be bartered or sold to the merchant or used for credit on purchases made (Bennett, 1989). Some women on the west coast accompanied their husbands to the Labrador coast for the summery fishery to pick bakeapples and sell them on the wharfs where the men sold their catches (Omohundro, 1994).

Fall was the time for harvesting crops and getting in the winter's diet or "rough food," understood among Newfoundlanders to be "your staples, your winter's diet" (Omohundro, 1994, p. xiii). Accordingly, the fall fishery placed more emphasis on fishing for home use, and was often less formally arranged than the summer fishery (Faris, 1972; Omohundro, 1994). Before roads were built to many communities around the second half of the twentieth century, Omohundro explained that rough food was set aside for six to eight months. The importance of "rough food" documented by Omohundro is also apparent in other investigations of Newfoundlander's understandings and experiences with food from this time. Anderson, Crellin and O'Dwyer (1998) in their exploration of Newfoundland healthways- that is health care and practices- of the early twentieth century, for example, found that Newfoundland elders recalled a time of resourcefulness and food self-sufficiency, often expressing the sentiment that "rough" and "good plain food," that was homegrown and homecooked, was more nutritious than canned or convenience foods (p. 60).

Also integral to getting in the winter's diet was the men's hunting and trapping of moose, rabbit, caribou, and other wild game, which continued through the winter (Faris, 1972;

Omohundro, 1994). On some parts of the island including around Bonne Bay caribou were hunted long before moose were introduced just over a century ago (Bennett, 1989; Omohundro, 1994). Bird hunting also provided an important source of fresh meat. An annual schedule marked the time when various species, such as black ducks, mallards, partridge, or turrs were "spatially concentrated, near at hand, feeding on what made it taste best, and convenient to transport or keep fresh" (Omohundro, 1994, p. 211). Because food was more bountiful at this time, the fall was the season for scoffs, cooked meals that took place usually in the evening and often as part of an impromptu party (Kirwin, Story, & Widdowson, 1999). They were often decadent spreads, featuring home produce and country foods often prepared by older women, while each person who attended brought a share of the vegetables (Kirwin et al., 1999).

Winter was a less busy time in home food production, with more time for home cooking and some seabird hunting and trapping (Omohundro, 1994). Families who lived out on exposed headlands would often move into the more sheltered arms of bays (Porter, 1995). Starting in March, ice fishing would begin, and sealing would commence in April and May (Faris, 1972; Omohundro, 1994). Sealing has been an important component in adaptation for northern outport communities over the past two centuries, undertaken for subsistence and commercially to pay for materials for the summer fishery (Omohundro, 1994). However, Bonne Bay and other bays to the south were beyond the zone of commercial sealing, and it didn't become as much of a tradition along this part of the west coast as places further north (Mannion, 1977). Similar to animal husbandry, sealing was done in a way that respected local ideals about what was socially acceptable. For

example, in Cat Harbour, marine mammals were seen as a category of sea creature that was “more like a man” and it was therefore a “sin” to kill seals indiscriminately or inhumanely (Faris, 1972, p. 27).

Meal plans, based on this seasonal round of food production, were typical across the Island. Omohundro (1994) described a traditional meal plan common to the Northern Peninsula, the Strait of Belle Isle, the South Coast, and the Avalon Peninsula. This plan specified that on Tuesdays, Thursdays, and Sundays the main meal, served at midday, was a ‘boiled dinner’ comprised of salt beef, carrots, cabbage, potatoes and bread pudding or ‘duff’. On Sunday, boiled salt beef was supplemented with moose, caribou, rabbit or duck. On Wednesday and Friday fish (cod) was served with potatoes. Sunday breakfast was fish and brewis (salt cod cooked with hard bread, originally developed for sailors at sea), and supper featured potato salad and hard boiled eggs. On Monday, leftovers were eaten from Sunday. Saturday’s dinner was a pea soup made with salt beef or pork and served with baked beans. While imported foods are apparent, the prominence of wild and home-grown foods, including cod, rabbit, moose, duck, potatoes, cabbage, and carrots is readily evident. There is evidence that some of these meal patterns still hold today (Everett, 2009). Many households interviewed as part of this study still enjoy a boiled dinner, such as Jiggs’ dinner, on Sunday.

These traditional meals are reflected in collections of old Newfoundland recipes.

Margaret’s (1980) *Fish & Brewis, Toutens & Tales* is a set of traditional recipes and recollections from the community of St Leonard’s on the Burin Peninsula. An entire

section devoted to “fish and other accompaniments” includes recipes for fish and brewis, basic salt fish and potatoes (the author notes that boiled turnips and parsnips would be served with the potatoes in the fall), fish hash (salt cod and mashed potatoes), as well as more specialty dishes such as cod tongues and fried cod heads. Many parts of the cod were traditionally eaten, including the heads, britches (roe), tongues, sounds (swim bladders), and puttocks (intestines) (N. Power, 2000). Some parts, such as britches, sounds, and puttocks were eaten in the fall when they are hard compared to their softer texture in the summer (N. Power, 2000). One of the best known Newfoundland recipe books is *Fat-Back & Molasses*, a collection of old recipes from across Newfoundland edited by clergyman Ivan Jespersen (1974). The recipes in this collection reflect Newfoundland’s rich sea and land activities, such as ‘fishermen’s fresh fish stew,’ ‘sailor’s duff,’ and ‘trapper’s bread.’ Expressions from the sea infiltrated the realm of food in Cat Harbour (Faris, 1972). As explained by Faris (1972), since the sea is salt as opposed to fresh water, any food that was ‘fresh,’ such as fresh bread or fresh meat, was understood to mean free from salt.

The Jubilee Guilds of Newfoundland and Labrador also compiled a pamphlet of recipes entitled “Fish Favourites.” The exact date of publication isn’t known but it is dated by O’Dea in the *Bibliography of Newfoundland* to the 1940s (as cited in Driver, 2008). The introduction to this pamphlet argues that, “Newfoundlanders, on the whole, do not eat enough fish.” The booklet contains recipes suited to “every taste and economy” (Jubilee Guilds of Newfoundland and Labrador, n.d., p. 6), and features a range of fish and shellfish including cod, herring, salmon, turbot, smelts, halibut, flounder, mackerel,

oysters and clams. Many of the recipes are based on baking, steaming, and stewing, methods of cooking that the Jubilee Guilds promoted as being healthier because they “retain the greatest percentage of nutrients” compared to the more popular method of boiling (n.d., p. 6).

As well as traditional staples from the land and sea, some imported and commercial foods have assumed places of significance in the foodways of Newfoundlanders. Tye (2008) documented the significance of molasses in the personal foodways of Atlantic Canadians as it connected them with a cultural and family history. Molasses was an important part of the early economy of the Atlantic region as part of the West Indies trade exchange (Tye, 2008). Gray (1977) noted in her study of traditional Newfoundland foodways that people she interviewed considered commercial products such as Purity brand Lemon Cream biscuits and bologna to be traditional foods. During one of my early fieldwork trips to Bonne Bay I was greeted to a lunch in one home with Purity brand Jam Jam cookies and Pineapple Crush (a flavour only available on the island), alongside fried cod tongues and grilled salmon.

4.4 Changes following Confederation

While adaptation has been a persistent feature in Newfoundland foodways more rapid changes to traditional patterns of food provisioning and consumption came in the 1950s with the influx of more modern goods, services, and money in the post-Confederation days (Hanrahan, 2002; Omohundro, 1994). In the years following Confederation, the shift from a commercial merchant economy to an industrial commercial economy

intensified as government policy redirected the new province's economy towards an industrial growth strategy (Ommer 1994; Ommer, 2004). Instead of credit at the merchant store, cash was increasingly paid to fishermen for their catches and a new price system that was less defined by merchant credit practices became important. Foodways based mainly in the harvesting of local food transitioned to a commodification of food resources in an increasingly global economy (Parrish et al., 2007). Imported foods became more readily available, while new media influences served to spread new culinary ideas (Omohundro, 1994). Many older residents I interviewed described a shift in eating towards more purchased and processed foods over the past forty to fifty years. For example, Sue, who grew up in the region in the 1930s and proceeded to raise her own family said, "...[we] mostly got [food] ourselves. Weiners came later, when we were growing up here it was the salt fish. Dad grew all our own vegetables. Then came our crowd. Came the bologna, Kraft dinner, all that stuff." Similarly, Sylvia described a difference between the lunches she ate and the lunches her children ate growing up in the 1970s:

There was more canned food and stuff available when they were growing up than we used to have. When I went to high school I had to take a lunch box every day, we had sandwiches or some leftovers and salads and stuff. When they grew up they probably had money to take to the canteen to buy their lunches more so than taking lunch boxes.

In some parts of the province, including St. John's and Argentia, where military bases were established by the United States in the 1940s, changes in food and eating habits likely began earlier. For example, Mary, who grew up near the military base in Argentia, described the foods she ate growing up as "culturally deprived:"

Culturally deprived. Grew up next to a naval station where everything Newfoundland was thumbs down...everything American. Didn't taste fish and brewis or half of the fish species until I came to Bonne Bay. Once a year an uncle in Grand Bank would send a few bottles of wild foods. My father didn't hunt...We were having bananas, watermelons, whatever we wanted from Argentina...We had fads before St. John's.

The changes that have and continue to take place to diets across Newfoundland are part of a broader "nutrition transition" seen across many developed countries over the past several decades, characterized by eating patterns that include a greater proportion of pre-prepared, packaged and convenience foods (Caraher & Coveney, 2004; Hawkes, 2006; Hawkes, 2007).

In the post-Confederation era, significant changes also took place in fisheries and the social organization of work (Matthews, 1993). As described by Matthews (1993), harvesting was increasingly transformed through the introduction of longliners and a nearshore fleet, while processing changed with the introduction of fish processing plants. The introduction of longliners transformed previous class relations in the inshore fishery. Traditionally, small inshore boats were owned in common and the income from the catch was split equally; however, the longliners were owned by a skipper who took on financial responsibility for the boat, paid crew members as 'sharemen,' and kept any extra profit for themselves. Women's work also shifted from the home processing of fish to their wage labour in fish processing plants. Many previous limits on fishing effort, such as traditional fishing methods and limited labour and space, were overturned by fish processing plants which in some instances encouraged more fishing effort and lead to the replacement of a small-scale seasonal fishery with a year-round trawler-based fishery.

Alongside these changes in the technology and social organization of fishing, the regulation of the fishery underwent major change beginning in the late 1960s. There was a shift in fisheries policy away from the purely biological aspects of fish stock conservation to a broader consideration of the social and economic aspects of the fishery (Matthews, 1993). Increasingly, the economic theory of common property was applied to the fishery. As Matthews (1993) explained, this perspective on fisheries policy accepts that a common-property fishery leads to overcrowding and depletion of stocks, as each fisherman will attempt to catch as much as they can before it is taken by others. From this perspective, some form of property rights is a preferable way of regulating the fishery, and measures to limit entry and move excess labour out of the fishery are necessary. Licensing fishers became a matter of state policy in 1981 (Matthews, 1993). This licensing differentiated among part and full-time fishers and led to restrictions on 'non bona fide fishers,' the majority of part-time fishers (Matthews, 1993). This adherence to the 'tragedy of the commons' perspective in fisheries policy continues to this day, as seen in recent efforts in both provincial and federal fisheries policy to 'rationalize' and 'professionalize' the industry (Matthews, 1993; Walsh, 2011).

There is some evidence that these changes in the fishery in the decades following Confederation affected the foodways of Newfoundland families in terms of the quality and amount of fish they ate. For example, N. Power (2000) interviewed fish processing workers on the Bonavista Peninsula. The older women N. Power spoke with who had been making salt fish in the 1950s and 1960s reported feeding fish to their family every day during the fishing season and salting fish for the winter. They also thought that in the

past, relative to more recent years, cod fish had met good standards for quality in terms of size and texture. When women started working in plants, cooking fish for meals became more difficult because they spent less time at home. Hanrahan (2002) similarly noted that cod and salt fish declined in the Newfoundland diet since the 1950s. She suggested that, “fish, salted or otherwise, will never again be at the core of the Newfoundland diet” (2002, p. iv). Also in the 1950s, efforts in gardening waned because of constraints on time related to women’s work in fish plants and greater cash income to buy food (Omohundro, 1994). In the Bonne Bay Region, an important shift in eating patterns occurred when the road was put through to Deer Lake in 1967, opening up relatively easy access to supermarkets for the first time. As one resident from the town of Rocky Harbour said, “People came out of the gardens and went to the stores” (Lowitt, 2009).

In Part Two of the thesis, I transition from this description of traditional foodways to a discussion of present day foodscapes around Bonne Bay. Throughout the chapters that follow an important theme is the role that traditional foodways play in contemporary foodscapes around Bonne Bay.

PART TWO

Chapter 5 The Contribution of Seafood to Local Diets

As highlighted in the previous chapter about traditional foodways, fish has long been an important part of the diet for communities across the island. However, there have been significant changes to fisheries over the past number of decades. These include a transition from small-scale to more industrial and commercial production, and a shift from targeting a mixture of seals, groundfish (cod, turbot and halibut), Atlantic salmon, and herring and capelin to greater focus on lobster, shrimp and snow crab. Increasingly these are harvested by fewer fishers in shorter seasons and processed in plants rather than households, and now in fewer plants. Change has been particularly rapid since the collapse of groundfish stocks and reductions in traditional groundfish fisheries at the level of the fishing industry and fishing communities.

However, there is a lack of knowledge about the implications of these changes for the diets and food security of communities across the island, and little research has tried to quantify changes in seafood consumption. To examine more closely the role that local seafood plays in diets today this chapter presents findings from a quantitative survey about seafood consumption distributed to Bonne Bay households in April 2011. The survey collected information about the frequency of consumption from local and non-local sources; types of local seafood eaten; sources of local seafood; ways of eating seafood; satisfaction with availability, affordability, and quality of local seafood; and basic demographic information. For a detailed description of the survey method and analysis see Chapter Three. A discussion of the survey results is provided at the end of

this chapter, with comparisons drawn between these survey findings and available provincial and national level data about seafood consumption. An analysis of survey findings within a foodscape context is provided in the remaining chapters of the thesis. Material in this chapter has been previously published in the *Journal of Hunger and Environmental Nutrition* (Lowitt, 2013).

5.1 Results

5.1.1 Demographic characteristics of surveyed households

Demographic data were collected on age, sex and education level of the household respondent and on household income, household employment in the fishing industry, household size and on whether the household included dependent children. See Table 5.1. A comparison of the survey sample with regional demographic data from the Newfoundland and Labrador *Community Accounts* (<http://nl.communityaccounts.ca>) indicates the survey sample has a similar socioeconomic profile to the larger population. Over 50% of the surveyed households had an annual income of \$39 999 or less which is consistent with a regional median income across family types of \$33 700 in 2007. There were fewer young respondents than older ones, consistent with regional trends showing fewer people in younger age categories. Employment in the fishing sector among the surveyed households was 13%, which is slightly less than in the larger population at 17% in 2005.

Table 5.1 Characteristics of surveyed households

Demographic characteristic	N	% Households
SEX		
Male	111	36
Female	196	64
AGE		
21 and under	0	0
22-34	19	6
35-44	47	16
45-54	72	24
55-64	92	30
65 and over	73	24
EDUCATION		
Less than high school	31	10
Some high school	56	19
High school diploma	66	22
Some college	10	3
College diploma	21	7
Trade certificate/diploma	48	16
Some university	20	7
Bachelor degree	36	12
Graduate degree	13	4
HOUSEHOLD GROSS ANNUAL INCOME		
Under \$10 000	16	6
\$10-19 999	41	15
\$20-\$29 999	41	15
\$30-\$39 999	43	16
\$40-\$49 999	35	13
\$50-\$59 999	25	9
\$60-\$69 999	21	8
Over \$75 000	22	8
Over \$100 000	22	8
HOUSEHOLD MEMBER EMPLOYED IN FISHING INDUSTRY		
Yes	37	13
No	260	88
CHILDREN IN HOUSEHOLD		
Yes	76	25
No	229	75
NUMBER OF HOUSEHOLD MEMBERS		
1	39	13
2	162	54
3	51	17
4	33	11
5 or more	15	5

Note: Missing data is not included in denominator. Data on sex, age, and education are for household respondent. Percentages may not total 100% due to rounding.

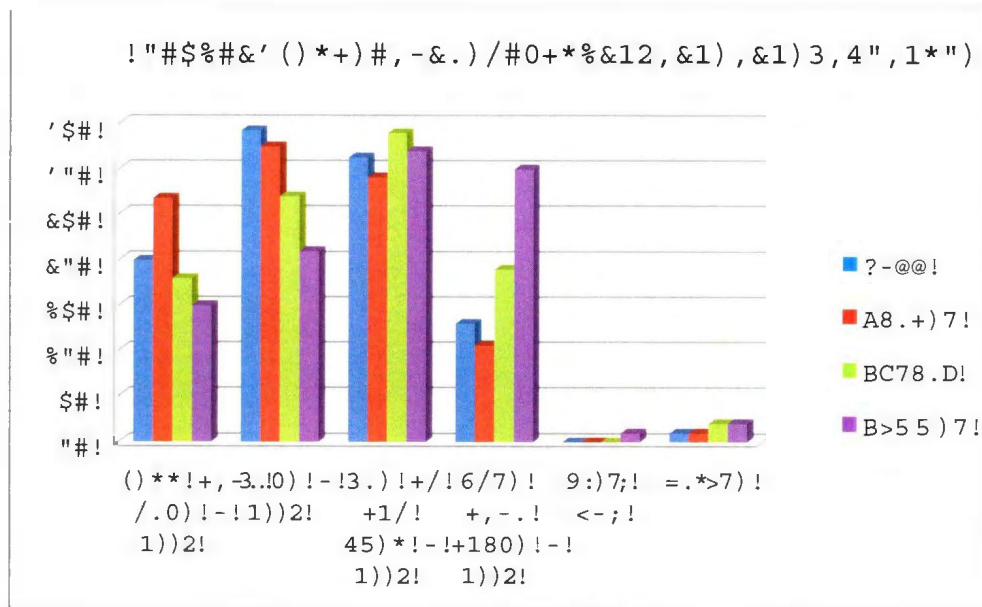
A main difference between the survey sample and the regional population related to education levels, with 71% of survey respondents indicating they have a high school diploma or higher compared to only 53% of people in the region with a high school education or more in 2005.

5.1.2 Frequency of local and non-local seafood consumption

The first section of the survey asked households how frequently they eat local and non-local seafood during the fall, winter, spring, and summer. Local seafood was defined as seafood from Newfoundland and Labrador and non-local seafood was defined as seafood not from Newfoundland and Labrador. Results indicated very different trends in the frequency of consumption of local and non-local seafood (Figures 5.1 and 5.2). Overall, households reported eating local seafood much more than seafood from out of the province. The frequency of local seafood consumption varied across seasons while the frequency of non-local seafood consumption changed little. Specifically, households reported eating local seafood most often in the summer, followed by the spring, fall, and winter. Thirty percent of households said they eat seafood more than twice weekly in the summer, compared to 18% in spring, 13% in fall, and 11% in winter. More households ate seafood once a week in the fall and winter (approximately 33%) compared to the spring (26%) and summer (21%). The higher frequency of seafood consumption in the summer corresponds with the season for most local commercial and recreational fisheries.

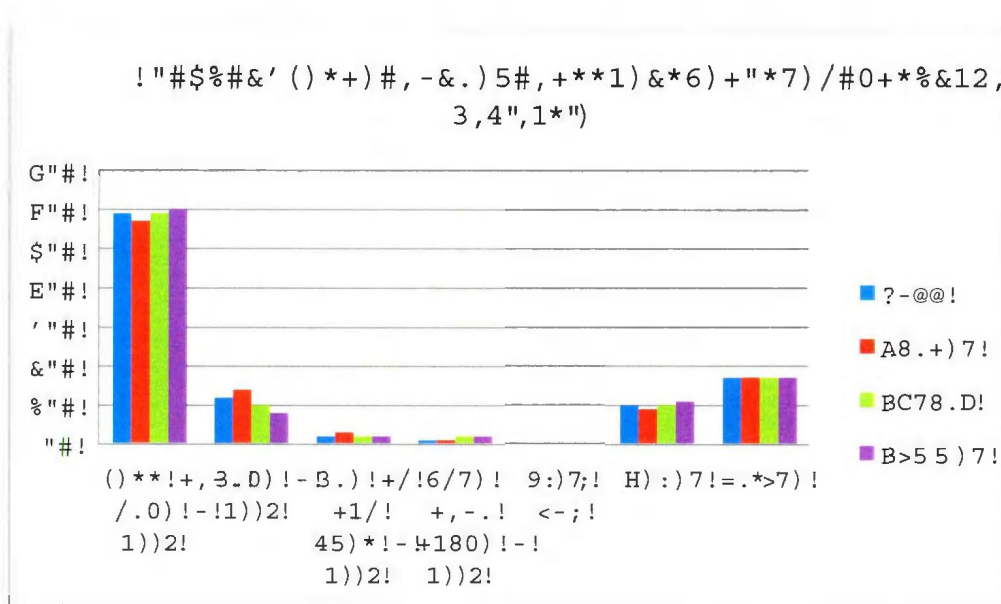
In contrast to local seafood consumption, 56% to 59% of households reported eating non-local seafood less than once a week during all seasons. Eating non-local seafood once a

week ranged from only 8% of households in the summer to 14% in the winter, suggesting households are not eating more non-local seafood in the winter to make up for the lack of fresh local seafood.



Note: Missing data are not included in denominator.

Figure 5.1 Frequency of local seafood consumption



Note: Missing data are not included in denominator.

Figure 5.2 Frequency of non-local seafood consumption

5.1.3 Types of local seafood eaten over time

The survey also asked about changes in frequency of eating local seafood over time. For a list of 15 types of local seafood, households were asked to indicate if they ate them “often,” “now and then,” or “never” for the present day and five years ago. The present day at the time the survey was administered was 2011. There are fisheries for most of these 15 types of seafood in the Bonne Bay area (NAFO fishing division 4R), including commercial fisheries for crab, lobster, cod, mackerel, halibut, herring, capelin, shrimp, and turbot as well as recreational fisheries for cod, trout, smelt, and salmon. There is a small fishery for squid in the region, some of which is caught for bait, and catfish (the local name for wolffish) is sometimes caught as bycatch but most species must be returned because of a listing under the Species at Risk Act (Dawe & Neis, 2012). Sea

scallops are harvested in surrounding areas. In addition to commercial fisheries, there are recreational fisheries for cod, salmon, and trout. The recreational cod fishery is open for about three weeks from the end of July to early August and again for one week at the end of September and is regulated by the federal Department of Fisheries and Oceans (Fisheries and Oceans Canada, 2012d). Other groundfish that are caught as bycatch must also be retained. All non-groundfish species that are incidentally caught must be released, except for mackerel, capelin, and squid which may be kept (Fisheries and Oceans Canada, 2012d). Recreational fisheries for salmon and trout are managed jointly by the federal and provincial governments (Fisheries and Oceans Canada, 2012a). A limited number of salmon can be caught from rivers between June and September and the province issues salmon licenses (Fisheries and Oceans Canada, 2012a). In most parts of the province no license is required for trout in coastal or inland waters although retention limits apply; special licenses for fishing inland waters within national parks are required (Fisheries and Oceans Canada, 2012a).

Table 5.2 shows the percentage of households that ate each of the 15 types of seafood “often,” “now and then,” and “never” for the two time periods. The final column shows the percent difference in consumption for each species over this time period. The types of seafood in Table 5.2 are ranked from highest to lowest frequency of consumption according to “often” consumption in the present day. Two main trends in local seafood consumption emerged over the five-year timeframe. First, households reported eating most types of local seafood less “often” in the present day than five years earlier. For example, 81% of households said they eat cod often in the present day compared to 86%

of households eating cod often five years earlier. This is a 5% decline in the percentage of households eating cod often over the five-year period. This decline held for nearly all types of seafood. In contrast, households reported eating shrimp and scallops more often over the same five year time period. Survey results also indicated that the supermarket was a more important source for shrimp and scallops, compared to most other types of seafood, suggesting that an increase in the consumption of these species may be related to how they are sourced. Secondly, as households ate most types of local seafood less often in the present day, more ate seafood “now and then” compared to five years earlier. For example, 19% of households said they presently eat cod now and then compared to 14% of households eating cod now and then five years previously. This is a 5% increase in households eating cod now and then over the five year time period. An upward trend in eating seafood now and then held for most types of seafood. Shrimp and scallops, which were eaten more often over the five-year period, had the largest decline in now and then consumption.

Table 5.2 Frequency of local seafood consumption over time

Type of local seafood	I now use (%)			5 years ago I used (%)			% difference		
	Often	Now and then	Never	Often	Now and then	Never	Often	Now and then	Never
Cod	81	19	0	86	14	0	-5	+5	0
Salmon	42	55	4	43	55	2	-1	0	+2
Shrimp	31	57	12	24	62	14	+7	-5	-2
Lobster	27	69	4	32	64	4	-5	+5	0
Halibut	27	63	10	31	61	8	-4	+2	+2
Scallops	21	58	21	15	64	21	+6	-6	0
Crab	17	75	9	24	66	10	-7	+9	-1
Trout	17	71	12	21	67	13	-4	+4	-1
Turbot	10	48	42	16	43	41	-6	+5	+1
Mackerel	9	45	45	11	44	44	-2	+1	+1
Capelin	7	72	21	22	65	13	-15	+7	+8
Herring	7	57	35	14	55	31	-7	+2	+4
Smelts	6	36	58	8	35	56	-2	+1	+2
Squid	3	43	54	7	41	52	-4	+2	+2
Catfish	0	12	88	1	14	85	-1	-2	+3

Note: Data were only included for households that answered both parts of the question

5.1.4 Sources for local seafood

For the same 15 types of local seafood, households were asked to identify the sources for each type of seafood they eat (Table 5.3). Sources included friends/family, local fish plant, local grocery store, supermarket, superstore, and other (such as own catch or recreational fishery). A definition of friends/family was not provided but potentially includes seafood given to households or purchased from friends/family working in the fishing industry. There are four seafood processing plants in the region including Harbour Seafoods in Rocky Harbour, 3Ts in Woody Point, and Allen's Fisheries

(formerly owned by J.W. Hiscock Sons) and 3Ts in Trout River. Table 5.3 shows the percentage of households that used each of these sources for 15 types of seafood.

Table 5.3 Sources for local seafood

Type of local seafood	Seafood sources (%)					
	Friends/ family	Local fish plant	Local grocery store	Supermar- ket	Super- store	Other/own catch/ recreational fishery
Capelin	53	14	3	3	0	28
Catfish	5	7	1	1	0	4
Cod	58	56	15	17	1	44
Crab	41	53	4	5	0	11
Halibut	36	50	4	10	0	9
Herring	46	18	3	3	0	10
Lobster	41	70	5	5	0	13
Mackerel	29	7	1	3	1	22
Salmon	21	49	20	38	2	18
Shrimp	15	32	16	37	7	3
Scallops	17	42	11	24	2	4
Smelts	31	4	1	1	0	16
Squid	26	7	1	6	0	10
Trout	46	7	2	8	1	39
Turbot	26	24	8	7	1	6

Note: The numbers shown are actual percent's based on 307 households for each type of seafood. Percentages do not total 100% for each type of seafood type because households could select multiple sources for each type of seafood they ate.

For all types of seafood with the exception of shrimp, friends/family or the local fish plant was the main source. The supermarket was the most common source for shrimp and was also important for scallops and salmon. However, it is also possible that, while the survey asked specifically about consumption of local seafood, a reported increase in consumption for shrimp and scallops may be coming from non-local fisheries. For example, farmed tropical shrimp is readily available in supermarkets. Likewise, scallops

purchased in supermarkets may be coming from the much larger scallop fishery off the southwest coast of Nova Scotia. Other sources, such as the recreational (subsistence) fishery, were important for capelin, cod, mackerel, and trout.

In addition to selecting sources for different types of seafood, households were asked to choose their overall main source and their preferred source of local seafood. The results add up to more than 100% because many households selected more than one option for each. The main sources of Newfoundland and Labrador seafood were local fish plants (50%), followed by friends/family (36%), recreational fishery (26%), other (10%), large supermarkets (9%), and grocery stores (7%). The preferred sources for seafood followed a similar trend, with local fish plants as the most preferred source (38%), followed closely by friends/family (35%) and recreational fishery (34%) with grocery stores (5%), large supermarkets (4%), and other sources (9%) much less preferred. There are two key differences between main and preferred sources for seafood (Figures 5.3 and 5.4). First, the recreational fishery was ranked higher as a preferred source as compared to a main source of seafood. Secondly, while grocery stores and supermarkets ranked low as a main source of seafood they ranked even lower as a preferred source.

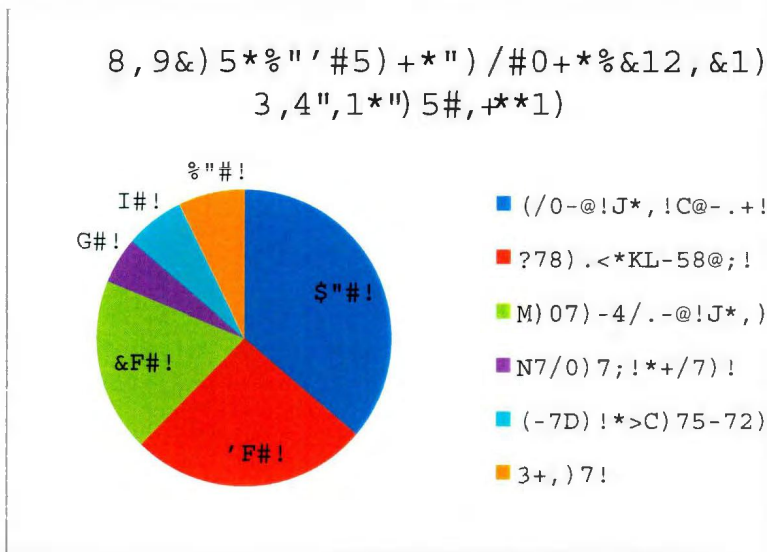


Figure 5.3 Main sources for local seafood

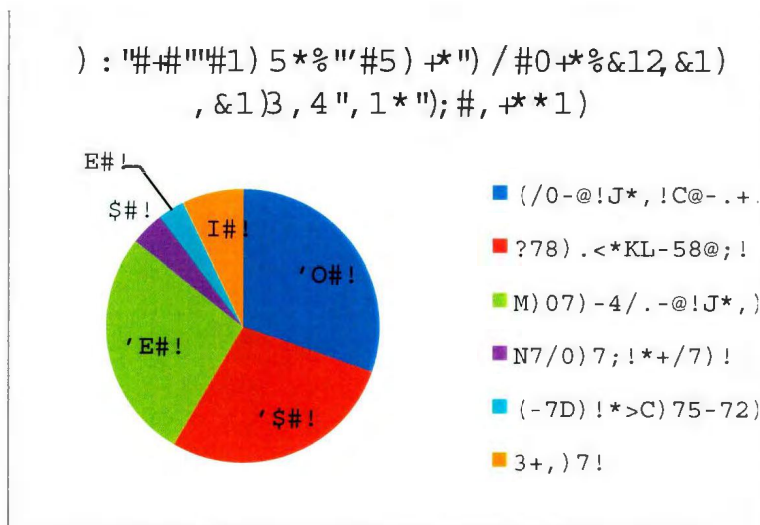


Figure 5.4 Preferred sources for local seafood

5.1.5 Favourite types of local seafood

Households were asked to list their five favourite types of local seafood. Cod was listed as a favourite type of seafood by 97% of households followed by lobster (77%), salmon

(74%), halibut (57%), and crab (50%). These were also among the most frequently eaten (see Table 5.2).

5.1.6 Ways of eating seafood

The survey asked about ways of eating seafood. Seafood is most likely to be eaten for supper (90%) followed by lunch (35%) and breakfast (1%). Of the 25% of households that have children, 55% said their children eat the same amount of seafood as the adults in the household. Thirty-five percent reported that their children eat less seafood, and only 9% eat more.

In terms of forms of seafood, nearly all households (98.4%) said fresh was the preferred form of fish to eat. This was followed by frozen (76%), salted (70%), pickled (33%), and canned (25%). The survey didn't gather information about forms of seafood eaten at different times of the year. However, in interviews, households described eating fresh fish the most in the summer and frozen and salted forms more in the winter. Households were also asked about other parts of the fish they eat in addition to the fillets. Tongues were eaten most often (91%), followed by cheeks (77%), heads (45%), and britches (43%).

In terms of cooking seafood, nearly all households (98%) chose pan-fried as a preferred cooking method followed by fish and brewis (73%), baked (63%), au gratin (43%), deep fried (47%), poached (24%), barbecued (39%), soup/chowder (33%), smoked (20%), and other (14%). Households were also asked to indicate any ways they preserve seafood.

The most common method for preserving seafood is freezing (95%) followed by salting (70%), pickling (38%), and other methods such as bottling (20%). Traditionally, fish was salted to keep through the winter because refrigeration was not available. Despite the availability of refrigeration today, 70% of households reported continuing this practice today. Salting fish was also positively and significantly associated with frequency of eating local seafood across all seasons.

Lastly, the survey asked households about eating seafood at restaurants. Fifty percent of the surveyed households ate at a restaurant less than once a month followed by three times a month (21%), once a month (20%), and many fewer households ate out once a week or more (7%). When eating out, 35% of households said it was very likely a household member would order seafood, followed by likely (32%), not likely (22%), and never (11%).

5.1.7 Factors influencing frequency of local seafood consumption

To examine factors that may influence local seafood consumption, Pearson's chi-square values were generated using cross tabulations. Relationships between demographic characteristics and frequency of eating local seafood were examined as well as the relationship between preserving seafood and frequency of local seafood consumption. The threshold for significance was set at $P = <.05$. For the purpose of these tests, the response categories "unsure" and "every day" were excluded from frequency of local seafood consumption. There were very few respondents in these categories so their removal had minimal impact on the results. Some analyses did not meet the assumptions

of the chi-square test because of low cell counts (e.g more than 20% of cells had an expected count of less than 5). Less weight can be attributed to these results and these are noted in the text.

For income, the hypothesis was that household income would influence the frequency of eating local seafood. However, the results indicated no significant relationship between income and frequency of eating local seafood throughout the year (Table 5.4). For household food security, this is a positive finding because it suggests equitable access to local seafood across income levels. Household size, having a household member employed in the fishing industry, as well as age, sex, and educational level of the household respondent, similarly had no significant relationship with how often a household ate local seafood throughout the year. However, age, sex, education, and household size had low cell counts so less weight can be attributed to these results.

Table 5.4 Crosstabulation of household income and frequency of local seafood consumption

Frequency of local seafood consumption	Household gross annual income				Total N	P value
	\$29 999 or less	\$30 - \$49 999	\$50 - \$69 999	Greater than \$75 000		
FALL					257	.946
Less than once a week	21% (20)	22% (16)	18% (8)	23% (10)		
Once a week	32% (30)	39% (29)	38% (17)	39% (17)		
1-2 times a week	31% (29)	26% (19)	36% (16)	27% (12)		
More than twice a week	16% (15)	14% (10)	9% (4)	11% (5)		
WINTER					259	.155
Less than once a week	24% (23)	24% (18)	29% (13)	43% (19)		
Once a week	30% (29)	45% (33)	31% (14)	25% (11)		
1-2 times a week	32% (31)	22% (16)	33% (15)	21% (9)		
More than twice a week	14% (13)	10% (7)	7% (3)	11% (5)		
SPRING					252	.899
Less than once a week	18% (17)	23% (16)	13% (6)	21% (9)		
Once a week	26% (24)	34% (24)	31% (14)	26% (11)		
1-2 times a week	34% (32)	30% (21)	36% (16)	33% (14)		
More than twice a week	22% (20)	14% (10)	20% (9)	21% (9)		
SUMMER					254	.852
Less than once a week	18% (17)	14% (10)	13% (6)	16% (41)		
Once a week	22% (21)	28% (20)	22% (10)	23% (59)		
1-2 times a week	25% (24)	34% (24)	31% (14)	30% (76)		
More than twice a week	35% (33)	24% (17)	33% (15)	31% (78)		

Note: Percentages may not total 100% due to rounding.

The relationship between preserving seafood and frequency of eating local seafood was also examined. The hypothesis was that preserving seafood would influence how often

local seafood was eaten. For freezing, pickling, and other activities such as bottling, results showed no significant relationship with frequency of local seafood consumption. Freezing seafood had low cell counts so this result is less reliable. However, results showed that salting fish was significantly associated with frequency of eating local seafood during all seasons at the $P < .05$ significance level (Table 5.5). Households that salted fish were significantly more likely to eat more local seafood throughout the year. During all seasons households that salted fish were more likely to eat seafood 1-2 times a week than households that didn't salt fish. For example, in the fall, 35% of households that salted fish ate seafood 1-2 times a week compared to 24% of households that didn't salt fish. Conversely, households that didn't salt fish were more likely to eat seafood less than once a week during all seasons. These results, interpreted further in the discussion, suggest salting fish is a positive indicator of how often a household eats local seafood throughout the year. It is also a traditional foodway.

Table 5.5 Crosstabulation of salting fish and frequency of local seafood consumption

Frequency of local seafood consumption	Household participation in salting fish			
	No	Yes	Total N	P value
FALL			295	.043
Less than once a week	29% (26)	17% (34)		
Once a week	32% (28)	36% (75)		
1-2 times a week	24% (21)	35% (71)		
More than twice a week	16% (14)	13% (26)		
WINTER			297	.001
Less than once a week	42% (38)	21% (43)		
Once a week	29% (26)	35% (72)		
1-2 times a week	19% (17)	34% (70)		
More than twice a week	10% (9)	11% (22)		
SPRING			289	.021
Less than once a week	27% (24)	14% (29)		
Once a week	30% (26)	27% (54)		
1-2 times a week	32% (28)	37% (74)		
More than twice a week	11% (10)	22% (44)		
SUMMER			292	.007
Less than once a week	24% (21)	12% (25)		
Once a week	28% (25)	19% (39)		
1-2 times a week	24% (21)	36% (73)		
More than twice a week	24% (21)	33% (67)		

Note: Percentages may not total 100% due to rounding.

5.1.8 Seafood in the community

Households were asked to rate their satisfaction with the availability, affordability, and quality of local seafood in their community. About 40% of households were satisfied with availability and affordability and a further 30% were dissatisfied or very dissatisfied.

Approximately 13% of households were neither satisfied nor dissatisfied with the availability of seafood and 16% were neither satisfied nor dissatisfied with affordability. The very satisfied category ranked lower in both cases, with only 14% of households very satisfied with availability and even fewer at 7% very satisfied with affordability. Quality of seafood was rated more highly than availability and affordability. Over half of the surveyed households (52%) reported being satisfied, 26% were very satisfied, and only 9% said they were dissatisfied or very dissatisfied.

5.2 Survey limitations

There are several limitations to the survey results. First, the education level of respondents in the survey sample is higher than in the regional population, indicating the survey respondents may have been biased towards those with a higher education level. Further, data on age, education, and sex were only collected for the household respondent, limiting analysis of the influence of these characteristics on seafood consumption. For chi-square tests, some analyses did not meet the assumptions of this test and less weight can be attributed to these results.

5.3 Discussion of results

This section provides a discussion of the survey results and draws on interviews with households and fish harvesters to contextualize the survey findings. A more detailed analysis of the findings that places them within the foodscape conceptual framework is provided in Chapter 6, 7, and 8.

5.3.1 Trends in seafood consumption

This is the first survey about seafood consumption in the Bonne Bay region and one of few surveys undertaken in the province. The results of this survey can, however, be compared to findings from two earlier surveys undertaken on the west coast of the island, including a food survey in the region north of Bonne Bay in 2006 (Solberg, Canning, & Buehler, 2007) and a fish products survey undertaken across the province in 1978 (Omnifacts Research Ltd., 1978). The 1978 survey involved 241 households along the west coast. I also compare the results of this survey to national trends in seafood consumption.

At a provincial level, there are no data collected about per capita seafood consumption (S. Lewis, personal communication, August 4, 2011). Nationally, the Department of Fisheries and Oceans (DFO) uses the Food and Agriculture Organization (FAO) food balance sheets to present per capita statistics on seafood consumption. The most recent *Canadian Fisheries Statistics* report published by DFO in 2008 did not include seafood consumption statistics. However, using 2005 FAO data, DFO estimated per capita seafood consumption of Canadians at 23 kilograms per year (Fisheries and Oceans Canada, 2006). DFO combined FAO categories of “fish” and “aquatic products, other” to come up with estimates of per capita seafood consumption. Fish as defined by the FAO includes all aquatic organisms including freshwater and sea fish, crustaceans, and molluscs, but not aquatic mammals such as whales and seals (Food and Agriculture Organisation, 2009b).

However, according to Statistics Canada, per capita consumption of seafood was 5.43 kilograms in 2009 (Statistics Canada, 2010). In comparison, poultry and red meat consumption were estimated at 11.1 and 23.4 kilograms respectively (Statistics Canada, 2010). The most recent year for which national food consumption statistics are available is 2009 because the Canadian Food Stats database maintained by Statistics Canada was discontinued as of April 2010. The difference between FAO and Statistics Canada data is accounted for by different measures of food consumption. Statistics Canada presents a much lower estimate of fish consumption because estimates exclude food losses throughout the system (such as in retail and in households) and thus more closely approximate the amount of food actually consumed; in comparison, FAO food balance data sheets present a measure of the total food supply not adjusted for losses. Similar to FAO, “fish” was defined by Statistics Canada (2010) to include both sea and freshwater fish. This survey in Bonne Bay collected information about approximate frequency of seafood consumption (measured on an ordinal scale) and not quantity of fish consumed, making direct comparison with national per capita seafood consumption data impossible.

Over time, an analysis of Canadian food trends prepared for Agriculture and Agri-Food Canada using Statistics Canada data shows that fish consumption increased from the mid-1980s to 2005 (Serecon Management Consulting Inc, 2005). Further, this analysis projected that fish consumption would continue to increase by 2020. Conversely, over the same time period from the mid-1980s to 2005, the consumption of red meat declined while poultry, like fish, saw an increase in consumption (Serecon Management Consulting Inc., 2005). Some of the suggested reasons for an increase in seafood

consumption over this period included changing tastes, healthier eating, influence of ethnic cuisines, and improved availability (Serecon Management Consulting Inc., 2005). However, since this analysis was published in 2005, Statistics Canada data show a decline in per capita seafood consumption through to 2009 (Statistics Canada, 2010). For example, seafood consumption in 2009 was estimated at 5.43 kilograms per person, lower than the 1991 estimate of 5.97 kilograms per person (Statistics Canada, 2010).

There are some important gaps in existing datasets. Statistics Canada and FAO which estimate consumption based on food trade and supply data, do not distinguish where the seafood being eaten comes from, break down consumption across income or age groups, or provide any indication as to the nutritional quality of the seafood being consumed. This survey in the Bonne Bay region asked about local and non-local seafood consumption to understand where the seafood households are eating comes from. With an emphasis on consumption of local seafood (from NL fisheries), this survey is also much more attentive to changes in eating seafood that reflect changes in local fisheries compared to national level data.

However, some general comparisons in trends can be made among local and national trends. First, in contrast to an increase in seafood consumption nationally from the mid-1980s to 2005 (Serecon Management Consulting Inc., 2005), findings from a 2006 survey undertaken in the area directly north of Bonne Bay including the towns of St. Paul's, Cow Head, and Parsons Pond found a small decline (1996-2006) in consumption for all species they surveyed including cod, herring, salmon, crab, and lobster (Solberg et al., 2007).

This is consistent with the findings from this survey of Bonne Bay households, which found a decline in consumption for most types of local seafood (2006-2011). More in line with local trends, there has been a decline in national seafood consumption since 2005 (Statistics Canada, 2010). Understanding more closely the nature of the relationship between local and national trends in seafood consumption is difficult because of the different levels of analysis and measurement categories used in collecting these data.

Interestingly, in contrast to a decline for most local species, my survey found an increase in consumption of local shrimp and scallops. Salmon saw only a 1% decline.

Households reported getting these three types of seafood more from supermarkets compared to other species. More consistent consumption of these species may suggest greater and more consistent availability of these species from supermarkets compared to fish plants (which are open seasonally) and friends/family. For example, salmon is farmed in the province and in other parts of the world and is available year-round in supermarkets. In the past, there was a local commercial fishery for wild salmon (closed in 1992) and a recreational fishery. The recreational salmon fishery still exists, although only a limited number of salmon from rivers can be retained. Further, there has been a shift over the past decade both regionally and across much of the province from fisheries focused on groundfish to fisheries much more focused on shellfish and to some degree pelagics (including mackerel). An increase in shrimp consumption may be a way households are gradually adapting their diets. However, it is also possible that, while the survey asked specifically about consumption of local seafood, a reported increase in consumption for shrimp and scallops may be coming from non-local fisheries. For

example, farmed tropical shrimp is readily available in supermarkets. While local shrimp is also available in supermarkets, it is not always easy to find. Likewise, scallops purchased in supermarkets may be coming from the much larger scallop fishery off the southwest coast of Nova Scotia.

Lastly, this survey also examined demographic factors that may impact how frequently local seafood is eaten at the household level. An analysis of results shows that income did not significantly influence how often a household ate local seafood. At a national level, estimates of seafood consumption are not broken down across income groups. However, like the Bonne Bay survey, data from the 1978 fish products survey for the west coast region shows minimal variation in frequency of seafood consumption across income levels (Omnifacts Research Ltd., 1978). In this study equitable access to seafood across income levels may be related to obtaining seafood from fish plants and friends/family for a lower cost compared to supermarket retail prices. In contrast to income, survey results showed a significant relationship between salting fish and the frequency of eating local seafood. Seventy percent of households said they salt fish, a practice traditionally done to keep fish through the winter before refrigeration was available. Households that salted fish were significantly more likely to eat more local seafood throughout the year. Salting is a skilled activity (Chapter Four). Interview findings suggest that many households continue to salt fish because they value traditional foodways (Chapter Seven). However, some young families described a lack of knowledge about how to properly prepare and preserve seafood. The transfer of intergenerational knowledge about salting fish will be crucial to maintaining this practice.

5.3.2. Sources for seafood

In addition to collecting data about trends in local seafood consumption over time, the survey collected information about sources for local seafood. These results indicate that local seafood is sourced primarily from local fish plants and networks of friends/family. Informal sales and barter and subsistence consumption of commercially landed seafood by harvesting families that emerged as very important in this region are not accounted for in FAO and Statistics Canada datasets which estimate consumption based on food trade and supply data. Seafood from recreational fisheries would also not be included. In interviews, households expressed a preference for eating local seafood citing reasons such as taste, knowing where it comes from, and supporting the local fishing industry.

Comparing the results of the Bonne Bay survey to findings from the 1978 survey for the west coast region shows consistency over time in types of seafood eaten along with some differences in how this is sourced. Cod (81%) and salmon (42%) were the two types of seafood eaten most “often” by Bonne Bay households in the present day. Similarly, in 1978 cod (88%) and salmon (68%) were ranked as the two most frequently served types of fresh fish at home (Omnifacts Research Ltd., 1978) - but at that time the salmon would have been sourced from wild commercial and recreational fisheries. In the Bonne Bay survey, friends/family (36%) and local fish plants (50%) were reported as the two main sources of local seafood. Similarly, 34% of households in 1978 reported getting seafood from friends and family. However, the 1978 survey reported a larger percentage of households (about 50%) obtaining seafood from their own catch (Omnifacts Research

Ltd., 1978), compared to this survey in which own catch/recreational fishery accounted for at most 44% of households in the case of sourcing cod and many fewer households for other species.

5.3.3 Restructuring of the fishing industry

Understanding the decline in local seafood consumption suggested by these survey findings also requires looking more closely at how restructuring of the provincial fishing industry may be influencing changes in consumption of local seafood. Availability of local seafood was not ranked highly among the surveyed households, with only 40% of households satisfied with the availability of local seafood. Potential factors contributing to a decline in consumption and dissatisfaction with availability of local seafood include low commercial quotas and declining catch rates for many species, a decreasing number of commercial fish harvesters, short fishing seasons, low participation in the recreational cod fishery, and increasing restrictions on subsistence seafood access compared to the past. In the longer term, recruitment and retention of workers is a key challenge facing the industry, with potential implications for the amount of seafood being landed and available for consumption locally.

There are also strong pressures to eliminate many more fish harvesters and more plants from the industry. This was evident in the Memorandum of Understanding (MOU) signed in 2009 by the NL Department of Fisheries and Aquaculture, the Association of Seafood Producers, and the Fish Food and Allied Workers' Union (see Cliff, 2011) which promoted restructuring and rationalizing the industry, in particular through reducing

inshore fleets and small processing plants in more rural parts of the province (Walsh, 2011). Along similar lines, in late 2011 Fisheries and Oceans Canada released *The Future of Canada's Commercial Fisheries*, a document discussing changes to fisheries policy and management. Reactions to this document by fish harvester organizations, researchers, and community based groups focused on the lack of public consultation involved in the policy process; the strong focus on deregulating the fishery; and lack of attention to fisheries communities and livelihoods (CURRA, 2012; Lowitt et al., 2013).

The implications of these trends in the fishery industry for local seafood access are elaborated in Chapters Six and Seven which look more closely at how households access local seafood through both purchasing and self-provisioning.

5.3.4 Fishing livelihoods

While local seafood is important to household diets – with a range of factors potentially influencing the access and availability of local seafood – fisheries are also important to livelihoods in the harvesting and processing sectors. Fish harvesters sell most of their catches to fish processing plants in the region, although they can also keep some for their own subsistence. The majority of these catches are exported although most plants sell some seafood locally. Some fishing families also noted that direct sales in the community are important for allowing them to get a higher price for a portion of their catch compared to selling it all to a licensed buyer or fish processor. In interviews, some households similarly noted that they preferred purchasing seafood directly from fish harvesters.

Although direct sales take place informally, provincial regulations under the *Fish Inspection Act* stipulate that fish harvesters must sell to a licensed buyer or fish processor and are not allowed to sell directly to customers (Murphy & Neis, 2011). At the same time, having sufficient sales to a fish processor or licensed buyer is important for fish harvesters to qualify for Employment Insurance (EI) benefits in the off-season.

Employment insurance, formerly called Unemployment Insurance (UI), has long played an important role in the Newfoundland fishery (Schrack, 2005). Since 1996, EI benefits for fish harvesters have been based on earnings as opposed to numbers of weeks worked (MacDonald, Neis, & Murray, 2008). While overall there has been an increase in benefits following this change, research has suggested these benefits are unequal and reflect differentiation within the fishery, such as who has access to high value fisheries (MacDonald, Neis, & Murray, 2008). Many fishing families interviewed in this study described selling the majority of their catches, and in particular the most commercially lucrative species such as crab and lobster, to licensed buyers. In the last few years, with low prices for many species, some described having to sell even more of their catches to licensed buyers in order to receive maximum EI benefits. As elaborated throughout this thesis, this has implications for how much seafood fishing families keep for their own subsistence, as well as how much they sell or share informally with friends and family. At the same time, ongoing changes to social policy, including recent changes to EI since January 2013 (Service Canada, 2013), are an important part of fisheries restructuring with implications for livelihoods in the fishing industry. The economic viability of independent fishing enterprises appears to be critical to sustained seafood security and CFS, particularly as households prefer to eat local seafood and often access this directly

from fishing people living in their community. The challenges and opportunities facing the livelihoods of fishing families and their role in the Bonne Bay foodscape is elaborated in the remaining chapters.

5.3.5 Summary

In summary, the survey results indicate that households eat local seafood much more often than non-local seafood. Local fish plants and networks of friends and family were the main sources for most types of local seafood. Results indicate that how often local seafood is eaten is not significantly related to household income. From a CFS perspective, this is positive because it suggests equitable access to seafood across income levels. However, the survey results also show a downward trend in consumption of most species of local seafood (2006-2011), consistent with the findings from a 2006 survey in the area north of Bonne Bay (Solberg et al., 2007). The remaining chapters of this thesis contextualize these survey results within a foodscape analysis that looks more closely at the interrelated influence - from changes at the level of the fishing industry and fishing communities to factors at a household level - that may be influencing consumption of local seafood.

Chapter 6 The Role of Purchased Foods and the Retail Foodscape in Food Acquisition

The following three chapters look at household food provisioning practices as a way of understanding the changing foodscape around Bonne Bay. Food provisioning begins with the acquisition of food (Marshall, 1995). For most households, food acquisition involved a combination of food purchasing and self-provisioning. This chapter examines the retail foodscape around Bonne Bay. I describe the retail venues at which households purchase food and examine how these venues are interconnected through the acquisition of food. I also look at the particular strategies households use for interacting with a changing retail foodscape. Chapter 7 looks at food self-provisioning and makes links among food purchasing and self-provisioning in the Bonne Bay foodscape. The analysis in this chapter draws primarily from qualitative interviews undertaken with households about their food provisioning practices supported with key findings from the seafood survey and interviews and participant observation with fish harvesters and tourism operators.

6.1 Changing retail food environments

Over the past decade, changes in retail food environments, in terms of access to food stores and cost of food, have received substantial attention for their potential influence on food access and health. Research about retail food environments has taken place as part of the broader study of food environments, an area of research concerned with understanding the conditions that influence how people access, choose, prepare, and eat food (Pouliot & Hamelin, 2009).

Over the past number of decades, the retail food environment around Bonne Bay has changed substantially. Purchased foods from retail stores play a much more prominent role in household food acquisition today than in the past. As described in Chapter Four, households have always relied on some purchased and imported foods, originally obtained on credit from merchants and then through a cash-based economy beginning in the 1950s. While many households continue to engage in some food self-provisioning activities (see Chapter 7), the reliance on purchased foods from stores has become much more substantial over the past several decades (Parrish et al., 2007). Traditional patterns of food provisioning particularly began to change following Newfoundland's Confederation with Canada in 1949. These changes have accelerated over the past forty or so years as roads began to connect communities along the Northern Peninsula, including the Bonne Bay region, to the rest of the island (Omohundro, 1994). In the Bonne Bay area an important shift in access to food stores was linked to the construction of the road into the region from Deer Lake and up the coast to St. Anthony in 1967. This gradually opened up easier household access to supermarkets for many for the first time. Even more recently, the greater number of supermarkets in Corner Brook compared to Deer Lake have attracted many residents despite the extra distance from Bonne Bay. Older residents interviewed as part of this study described a shift in eating towards more purchased foods over the past fifty years. As Clifford from Rocky Harbour said, "People came out of the gardens and went to the stores" (Lowitt, 2009).

Retail food stores including supermarkets located in Deer Lake and Corner Brook have become important sites of food access for many Bonne Bay households. Most food

environments studies have measured food access in terms of distance to stores, and in particular supermarkets, and cost of food. Relatively few food environment studies have looked at the social contexts and practices shaping how people interact with these environments (Cummins, 2007). From a foodscape perspective, these social practices are inseparable from the physical retail environment. In this chapter, I examine the places available for food purchasing around Bonne Bay and the practices shaping how households interact with these retail venues. Further, while most food environment studies have used supermarkets and grocery stores as the main measures of food access, this study looks at how other types of retail venues, such as retail outlets based at fish plants, are important for diversifying the foods available for purchase (See Table 6.1 for an inventory of retail food sources in the region). This chapter focuses specifically on food purchasing from formal retail venues. A consideration of non-retail sources (including direct purchases from fish harvesters or farmers) is provided in the next chapter.

Table 6.1 Inventory of retail food sources in Bonne Bay

	Small grocery & convenience stores	Fish plants	Restaurants	Other
Trout River	Hanns Confectionary Ltd. F&V. Dairy. Frozen meat.	3Ts Ltd. Limited sales at plant.	Sunset Café (reduced winter hours)	
		Allen's Fisheries. Limited sales at plant.	Seaside Restaurant (seasonal)	
Woody Point	3Ts Store. Fruits and vegetables, dairy, frozen meat, fresh lobster in season, frozen cod and halibut.	3Ts Ltd. Limited sales at plant.	The Old Loft (seasonal)	
	Pete's One Stop. Fruits and vegetables, dairy, frozen meat.		The Granite Coffee House (seasonal)	
			Lighthouse Restaurant (restaurant seasonal. Take-out open in winter)	
			Woody Point Motel Restaurant (year-round)	
Glenburnie/Birchy Head/Shoal Brook	Roy Young Limited. Fruits and vegetables, dairy.		The Chocolate Mousse Bakery & Café (reduced winter hours)	Farmers' market (seasonal)
Norris Point	C & J Rumbolt Ltd. Fruits and vegetables, dairy, frozen meat, bakery.		Sugar Hill Inn (seasonal)	Farmers' market (seasonal)
			Neddie's Harbour Inn (seasonal)	Community garden and greenhouse at

				Bonne Bay Cottage Hospital (seasonal)
			Pittman's Restaurant (seasonal)	Howell Farm. Fresh product and eggs on farm (seasonal)
			Cat Stop Pub (seasonal)	
Rocky Harbour	Endicotts Crafts and Convenience Fruits and vegetables, dairy, frozen meat.	Harbour Seafoods. Fresh and frozen seafood (seasonal)	Jackie's Restaurant (reduced winter hours)	
	C&J Rumbolt Ltd. Fruits and vegetables, dairy, frozen meat, bakery.		Earle's Restaurant (reduced winter hours)	
	Cloverfarm. Fruits and vegetables, dairy, frozen meat.		Ocean View Restaurant (seasonal)	
	Earle's Video & Convenience. Bakery.		Fisherman's Landing Restaurant (year-round)	
			Java Jack's Café (seasonal)	

Before discussing more closely the retail foodscape around Bonne Bay, I first review existing research in the area of food environments, and in particular trends in rural food environments. Evidence is growing that food environments, and specifically the accessibility of healthy food, influences a range of dietary health indicators including fruit and vegetable consumption and obesity (Dean & Sharkey, 2011; Pouliot & Hamelin, 2009). Increasingly, supportive environments for healthy eating are receiving attention in public health promotion efforts (Pouliot & Hamelin, 2009). A main focus of food

environments research has been looking at spatial and social disparities in access to retail food stores (Dean & Sharkey, 2011). For example, research in the United States has found there are fewer supermarkets in urban low-income neighbourhoods and those with a high proportion of African-American residents, and that these neighbourhoods have a poorer availability of fresh fruits and vegetables (Beaulac, Kristjansson, & Cummins, 2009). In contrast, in Canada there is no consistent evidence that the spatial distribution of food stores reflects socioeconomic status (Beaulac et al., 2009).

However, most studies of food access have focused on urban rather than rural environments, with much less known about spatial inequalities and access to food stores in rural areas (Pouliot & Hamelin, 2009; Sharkey & Horel, 2008). To my knowledge, research has yet to explore rural food access in the province. This chapter is an important contribution to understanding access to retail food stores in a rural setting. Research that has been done about food access in rural and remote regions of Canada shows these regions have overall higher food prices, poorer access to food stores especially for non-motorised households, and poorer availability of fresh fruits and vegetables (Lawn, Robbins, & Hill, 1998; Nova Scotia Participatory Food Costing Project, 2010; Pouliot & Hamelin, 2009; Travers, Cogdon, McDonald, Wright, Anderson, & MacLean, 1997). Similar trends have been found for rural food access in the United Kingdom, United States, and Australia (Burns, Gibbon, Boak, Baudinette, & Dunbar, 2004; Dean & Sharkey, 2011; Sharkey & Horel, 2008; Smith, Cummins, Marshall, Sparks, & Anderson, 2010).

Poor availability of fruits and vegetables in rural regions is a particular health concern because fruit and vegetable consumption is a key part of a healthy diet and associated with a decreased risk of many chronic diseases (Health Canada, 2007; World Health Organisation, 2003). Research from Canada has shown that rural residents are less likely to eat the recommended five servings or more of fruit and vegetables a day compared to urban residents (Canadian Institute for Health Information, 2006). A lack of fresh foods and higher food prices has particular implications for the food access of more vulnerable populations, with seniors, those with low incomes, and non-motorized households some of the groups that have received attention in rural research (Pouliot & Hamelin, 2009).

Today, the retail food environment around Bonne Bay is fairly similar to that observed in other rural regions. In recent years the retail food industry globally has been characterised by increasing consolidation with fewer retailers dominating food chains (Hendrickson, Wilkinson, Herrerman, & Gronski, 2008). For rural populations, increasing consolidation has led to fewer and larger food stores, which has meant adjusting to new travel patterns to buy food (Morton, Bitto, Oakland, & Sand, 2005). Some residents in the Bonne Bay region described more full-service grocery stores in the 1970s and 80s compared to what exist in the region today. Elaine described this shift: "...there were so many stores around here. Small stores. You'd go to one place get something, you'd go to another place. A lot more than now I guess. Yes, now we got Deer Lake. Not convenient, so expensive round here now." For Bonne Bay residents, the nearest supermarkets are located in the larger centres of Deer Lake and Corner Brook approximately 75 and 125 kilometres to the south respectively.

Within the region there are a number of small grocery and convenience stores.

Preliminary food costing completed in this region in 2009 indicated these stores sell a limited selection of fresh fruits, vegetables, and meats (Lowitt, 2009). Other studies have indicated that the availability of fruits and vegetables is particularly poor in rural communities in which convenience or small grocery stores predominate (Pouliot & Hamelin, 2009). At the same time, processed foods are less perishable and easier for small rural stores to stock. Food policy has encouraged production of commodity crops, making sugar and fats some of the most inexpensive food inputs to produce and contributing to the proliferation of processed foods (Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008). The stores in the Bonne Bay area are served by three food distribution companies that make deliveries once a week and up to twice a week in the summer. Additional business from tourists in the summer allows stores to stock more perishable goods such as fruits and vegetables during this season, while the extra tourist revenue is vital to stores remaining open year-round. Nonetheless, small store owners face growing competition from large supermarkets and superstores and are operating at an increasingly marginal scale, making it difficult for them to stock fresh fruits and vegetables (Lowitt, 2009).

Food prices are also often higher in rural regions. Newfoundland and Labrador Department of Health and Community Services 2011 food costing data indicate that the average cost of a nutritious food basket for a family of four is higher in rural compared to urban regions of the province (Newfoundland and Labrador Department of Health and Community Services, 2011). Similarly, research in Nova Scotia found a statistically

significant difference between the costs of a nutritious diet in rural compared to urban areas (Nova Scotia Participatory Food Costing Project, 2010). The same study also found a statistically significant difference in the cost of food between large and small grocery stores, with a basic nutritious diet purchased at smaller grocery stores costing more per month on average than the same basket purchased at larger grocery stores.

As a result of higher food prices and a lack of fresh fruits and vegetables in local stores most households did the bulk of their food purchasing at supermarkets outside of the region. A shopping trip to supermarkets in Deer Lake and Corner Brook every two weeks was a regular part of the food routine for most households. Sharon's description of food shopping for her family of four is representative of many households:

I do pick up some things here. It's only say when I run out of something I go around here and get it. But on a regular week I try to get it when I go through [Deer Lake] because they don't carry a lot of the vegetables and a bigger variety of stuff. It's not so bad in the summer months to go and get some peppers and some cauliflower and that, but aside from that you're not getting much.

Residents who recently moved to the region from larger cities described having to adjust to less frequent shopping trips and greater distances to supermarkets. Ellen moved with her husband and two kids to the Bonne Bay from Ontario two years ago. She said:

I've noticed that every two weeks we try to go to Deer Lake or Corner Brook. That's an adjustment for us too...I'm used to going to get what I want and coming home. Going after work, picking up a few things, and coming home right. But, here you actually have to plan a full day to go get groceries and other things.

Others noted they would like to support local stores but were constrained in doing so because of higher prices. Sam explained:

Well you know those small stores can't compete with those big grocereterias. Probably here you might pay \$1.40 for a liter of orange juice, but probably

sometimes you go to Deer Lake and there's a sale on, 88 cents a liter. I mean that's a big difference. You pretty much got to buy- you like to buy in your community, but when it comes to them prices you pretty well got to buy.

Purchases from local stores supplemented food between trips to supermarkets. Other types of retail venues, including fish plants, pharmacies, restaurants and farmers' markets, among others, were also important in diversifying the foods available for purchase from supermarkets and local food stores.

In most households, women were primarily responsible for food shopping. This is consistent with other research that shows women are more likely to undertake food shopping on behalf of their family than men (Lake, Hyland, Mathers, Rugg-Gunn, Wood, & Adamson, 2006). However, there were instances in which men contributed to the shopping or helped prepare grocery lists. Particularly because of the long driving distance to supermarkets, shopping trips were often done with multiple family members present, including men and women.

6.2 Household strategies for accessing supermarkets and grocery stores in the retail foodscape

Most food environment studies have focused on supermarkets and grocery stores as key measures of food access (Smith et al., 2010). These venues were likewise the main sites for food purchasing among Bonne Bay households. However, unlike most food environment studies which have paid little attention to social context, from a foodscape perspective, I examine the strategies households in the Bonne Bay region use for accessing a changing retail food environment. Some of the main challenges they face

include long distances to supermarkets and fewer fresh foods and higher prices in local stores. An examination of supermarkets and grocery stores is followed by a look at other types of retail venues, such as fish plants, pharmacies, and farmers markets, and their role in diversifying the retail foodscape around Bonne Bay.

Practices important to understanding how households interact with supermarkets and grocery stores include bulking up on food; purchasing frozen and canned fruits and vegetables; purchasing food on sale; and combining grocery trips with other appointments and activities. For seniors and those with low incomes, utilizing personal connections with friends and family was particularly important in ensuring access to food. First, many households referred to “stocking up” or “bulking up” when shopping at supermarkets. The practice of stocking up on food arises out of a longer tradition in Newfoundland of putting away “rough food” for the winter (Omohundro, 1994). Traditionally, harvesting crops, fishing, and hunting were an important part of getting in the winter’s diet, along with bulk purchases from the merchant. Today, the storing of food is increasingly done through food purchasing, often in supermarkets, in combination with some self-provisioning. Historically, root cellars were common-place for storing food through the winter. In the present day, some households interviewed had root cellars but nearly all had a deep freeze.

Lynn lives with her husband and two kids and described buying two of every item so she doesn’t run out: “I’ll go and buy the snacks and stuff and stock up and have it in the cupboard. Like the ritz snacks. I know they like a particular kind. And the hard cheese.

And that'll be a snack. So I never run out. I have almost two of everything." Bulking up was important not only to run out of food that may not be available in local stores, but also to save money by not having to make more expensive purchases locally. Lynn continued to explain:

If the ketchup's going on sale for \$2.99, hey I'm buying two. There's only one income. But on one income it's working for me because look at our pantry... There's two boxes of triscuits, and bananas, and there's two, three jars of peanut butter... I don't have to run to the corner store and say oh the miracle whip and pay \$5 for it right when I got it for \$2.99 last week.

Some households also purchased fresh fruits and vegetables from local stores as they were available, but this was usually as a supplement to purchases from supermarkets and was highly dependent on knowing the schedule for food deliveries. Lynn explained:

Sometimes like bananas where they rot so quick you might go down on a certain day and the ones that are there they're not really fresh because over three or four days they'll get soft. But then when the truck comes in, maybe once a week, you can get fresh ones again.

An important part of bulking up on food involved buying frozen and canned fruits and vegetables. Most households bought canned and frozen produce in supermarkets, although seniors were more likely to buy canned goods, such as fruits, in local stores when they were on sale. Joanie described how fresh fruits and vegetables purchased in the supermarket did not last her and her husband until the next shopping trip so she purchased frozen: "I think most of the time I use vegetables for meals- roast dinners and stuff- I use frozen, that way they'll always be there. I do like fresh vegetables. When it comes to salads, I pick up very, very fresh salads and we have to eat them in the first couple of days." Ellen described buying more frozen foods compared to when her family lived in Ontario in closer proximity to supermarkets:

...in Ontario we had a lot more fresh. Cause you go pick it up whenever we wanted it. Whereas here you have to freeze a lot more. Where we lived was very close to one of the major supermarkets in Ontario- Fortino's. We could go in anytime and get whatever we wanted. But here it's a lot more frozen things.

In addition to buying already frozen fruits and vegetables, some would buy fresh vegetables and freeze them separately or as part of a meal. Tina, a mother of two, said, "I only make spaghetti if I can go to the grocery store and I'm thinking I need red pepper, green pepper, celery and then I'll make enough and freeze it." Research has shown that the nutritional content is similar among fresh, frozen, and canned vegetables, although the higher sodium content in some canned vegetables has raised health concerns (Danesi & Bordoni, 2008; Rickman, Bruhn, & Barrett, 2007). Despite buying frozen and canned produce, many noted they preferred the taste of fresh produce, while others said it was harder to plan meals without it. For example, Debbie, a mother of three, described herself as a bulk shopper for canned and frozen produce. Nonetheless she said, "It's still hard to plan unless you've got staples- mushrooms, onions, peppers, grapes, apples. They should be available but they're not. ...My deep freeze now is full. But in my mind I have no groceries- no apples, no strawberries, no grapes."

While buying frozen fruits and vegetables was common, buying frozen meat was not. Frozen meat was available in local stores but nearly all households bought meat from the supermarkets because it was fresh and many said it cost less. Some households would freeze fresh meat as needed. For seniors who relied more on local stores, a lack of fresh meat was a particular challenge. Edith, a senior woman who lived by herself, described not being able to buy frozen meat from local stores because of inappropriate portion sizes:

Cause we can't get meat here. Only frozen. In Deer Lake you can buy it- you can buy a big chunk and cut it up into meal size pieces and freeze it. Like if I buy a pound of bacon and that's not frozen- buy it here it's frozen- I can cut it up into four meals. I don't eat much bacon. But if you buy a package of bacon frozen not much you can do with it- only eat it when you got company.

Bulking up on food also changed throughout the seasons. Many households bulked up on food for the winter months when they made fewer trips to supermarkets because of poor winter driving conditions. Pat, a senior woman, described starting to bulk up for the winter during the summer: "The other day I went down there [Walmart] and started stocking up for the winter, next winter. Son says to me this is only June."

The extent to which income affected food purchasing and the strategy of bulking up on food varied across households. Some households did not have a budget but knew approximately how much they would spend on food each week. For example, Nancy who shops for her family of four said, "Budgeting, not really. When it comes to grocery shopping there's not really a budget. I can't help it if it cost me \$5 more this week than it did last week. That's gonna have to be cause that's what I want, that's what I need. I don't really have a budget as such." However, for other households that relied on seasonal employment the timing of income changes was more important. Many stocked up on food during the summer months when income was coming in. For example, Cathy has two young children and her husband is a crewmember on a commercial fishing boat. She said, "Usually spring of the year before he goes fishing, that's when our food stores go down. You're waiting on the fish. This [summer] is time now when he makes the money. I stocks up on stuff I need." In Cathy's case, her family waited on the fish not only to have it as part of their diet but also to earn money to purchase more food.

Lynn's husband also works seasonally. She said, "Bill's working now, I stock up."

Likewise, Lynn budgeted food purchases more in the winter when her husband wasn't

working: "[Budget] especially in the winter. Just about a hundred bucks a week." Karen

and her husband fish seasonally. Karen managed her family's food resources by buying

more food when they were fishing and less in the winter when they collect Employment

Insurance: "When we draw EI we don't take out anything. We make sure bills are paid

monthly. Maybe go on snowmobile. You can't go to a movie- nothing like that here.

Don't have to go to the store. In the fish now [summer] I keep stocking up." As Karen

demonstrates, money spent on food was also a part of the broader management of

household resources. Women were usually responsible for managing the money spent on

food. For example, Billy said, "If I gotta buy something at the store I just go buy it and

that's it right- but you women tend to look at the prices more." Similarly, Tina said, "The

past year we tried to have more of a budget...Now we're trying to spend

\$250/week...Now that my husband is participating more in cooking he also realizes you

can't feed a family of four on \$100 a week."

In addition to stocking up on food, another important strategy was buying food on sale.

Most households, regardless of income, looked at flyers in advance of going to

supermarkets and shopped at more than one supermarket to pick up specials. Buying on

sale helped offset costs in transportation to drive long distances to supermarkets.

Marilyn's description of looking at flyers and making a grocery list was common for

many households:

We usually have a list. We look at the flyers, pick out the specials. If you see meats on special you make sure you buy enough for a couple of weeks. Cause usually they run in a sort of a cycle. Meats and vegetables and that. You watch for the specials and pick out the ones you need.

Buying food on sale was especially crucial for households with limited incomes as illustrated by Jane, who relies on income assistance. She described only buying food that was on sale, but pointed to some challenges in doing so:

...problem here is you do find something on sale, then the truck or the ferry doesn't come in. And you've gone all that way. Good thing is they do give rain cheques. Store in Rocky Harbour, they had lovely sales on. But none of it was there. They bring the ad out on Friday but the truck comes in on Tuesday. They're banana bread by Friday.

Jane exemplifies how those with limited incomes may also be particularly vulnerable to other challenges facing rural regions such as instability of food supply. Further, during weeks when money was particularly tight Jane purchased minimal ingredients that could be prepared in different ways: "...if I'm getting low I'm buying eggs. Eggs for breakfast, egg salad. And I have egg salad one time I put green onions in, if celery's on sale I put that in."

As well as buying food on sale, combining supermarket shopping with other social activities, work schedules, and appointments helped reduce extra travel time and transportation costs. Some said they rarely made a trip just for grocery shopping alone. For example, Deanna explained, "I would generally incorporate it [grocery shopping] into another trip and over the years my work practices have let me be on the road a lot." Some even completed grocery shopping in multiple locations as they made longer trips across the island. For example, Deanna's mother Mary said, "When I'm travelling from St.

John's, I make stops along the way in Grand Falls, Gander, get what I can. Never, ever purposefully go to Deer Lake for groceries. I have enough appointments and reasons to go out of town, I buy it [groceries] as I go."

Relatedly, many households emphasized the social aspects of supermarket shopping trips. For example, Joanie and her husband Howard are a senior couple who described the enjoyment of grocery shopping so they could "get away." As Howard said, "You got to get away too. We got to go to Tim's." Similarly, Elaine said, "...it's just the experience and knowing, you know, just to get away. A person needs that ...you know what I mean. It's very secluded here and stuff." Mary and her daughter Deanna both emphasized the importance of understanding the "culture" of trips to the supermarket. Mary explained, "You have to understand the dynamics behind it all [grocery shopping]. It's a social event, an outing, an event, a break, to get groceries in Deer Lake, Corner Brook."

Similarly, Deanna said:

I think going to Deer Lake and Corner Brook is as much of a culture as it is a necessity. I think people love that every second Thursday to get that little run. I think people like that, so even if Coleman's was up the road in Norris Point or Rocky Harbour, people would still buy stuff in Deer Lake or Corner Brook when they went.

Thus purchasing food from supermarkets was linked to positive social connections and a chance to get away. In the CFS literature, alternative retail venues such as farmers' markets have been described extensively in terms of social connectivity (Hinrichs, 2000; Lowitt, 2010a; Sage, 2003). However, supermarkets are rarely portrayed as positive community spaces. Some have started to argue that research needs to think about the hybridity of local food systems, in terms of how they overlap and co-evolve alongside

conventional food systems (Mount, 2012). On the other hand, this study suggests a need for more consideration of the hybrid qualities of conventional food sources, such as their potential for social connectivity. A foodscape perspective is amenable to thinking about these hybridities because it does not prioritize the local as the only site of positive social outcomes.

In addition to the food purchasing strategies utilized by most households, more vulnerable groups, including seniors and those with low incomes, relied on personal connections with friends and family to access food. Some seniors no longer owned their own vehicle and relied on others with vehicles to take them to the supermarket or pick up food for them. For example, Sally is a senior who lives alone and goes to the supermarket in Deer Lake every two or three weeks to pick up groceries. She described having neighbours - some of whom were seniors who continued to drive and some of whom were younger members of the community - that would drive her there: "So Carrie got a car, and Stephanie got a car, and Walt got a car. I got to stay friendly with everybody." Edith, who also lives alone, described getting others to pick up food for her: "My daughter and them are always going [to the supermarket], so I tell them pick me up this or that. Usually I get what I wants." Some seniors had caregivers who brought back food from supermarkets for them. For seniors and others with limited incomes and mobility, the sharing of purchased foods was also important. This was especially true for Jane who relied on income assistance: "I don't buy, I only borrow milk." This study supports previous research that has indicated personal relationships, based in trust and obligation, have the potential to help seniors and others with low incomes meet their food sufficiency

needs (Martin, Rogers, Cook, & Joseph, 2004; Morton et al., 2005; United States Department of Agriculture, 1999). Research about rural communities has shown that this social capital and these reciprocal social obligations may be particularly strong in rural communities (Martin et al., 2004; Ommer, 2004). Communities throughout Newfoundland have a particularly strong history of informal economic networks that involve food sharing among households as a means of surviving in isolated regions. These connections may also provide other benefits, such as a sense of social connectivity. However, in terms of addressing underlying food security issues, Morton et al. (2005) have cautioned that relying on personal connections alone is insufficient. Similarly, Wakefield and Poland (2005) argued that the role of social capital in public health must be thought about in the context of underlying economic and political structures. Social and policy change is necessary to address systemic causes of food security in the long term, such as having sufficient income to buy food.

This study shows that residents around Bonne Bay, similar to other rural regions, face food access challenges including long distances to supermarkets and higher food prices and a lack of fresh foods in local stores. However, households have developed strategies for adapting to this retail food environment, including bulking up on food, buying food on sale, substituting frozen for fresh food, combining grocery shopping with other appointments, and utilizing community networks to access stores and purchased foods. Although an understanding of this social context has been absent from many food environment studies, from a foodscape perspective looking at these practices can provide

important insights into how households ensure food sufficiency (McIntyre, Rondeau, Kirkpatrick, Hatfield, Islam, & Huda, 2011).

Understanding how households interact with this retail food environment is also important for developing rural and place appropriate health interventions. Studies have noted a need for more rural relevant policies and interventions for reducing inequities in food access. For example, some have proposed investments in better transportation networks for rural residents to access supermarkets, along with support for more local food stores and production facilities (Canadian Institute for Health Information, 2006; Morton, Bitto, Oakland, & Sand, 2008; Nova Scotia Participatory Food Costing Project, 2010). At the same time, the civic structure and social reciprocities existing in rural regions could be supported to help improve food access. In this study, civic structure at the personal level of family and friends was important to the food access of low-income households and those without access to a vehicle. However, when supported at a community level it may also contribute to the capacity of rural problem solving and mobilize efforts to support local food infrastructure and food security (Morton et al., 2005).

Policy recommendations for addressing income-related food insecurity are also vital to making sure people have enough money to purchase food. Addressing income-related food insecurity means ensuring adequate living wages, indexing the personal allowance portion of Income Assistance rates to reflect the actual cost of a nutritious diet, and reviewing public pension systems to ensure income adequacy among seniors (Nova

Scotia Participatory Food Costing Project, 2010). Many single-member senior households in this study described “making do” in terms of food purchases. Most of these were women who were now living on their own after their husbands had passed away. Research has shown that single-member households on Canada’s public pensions, including Old Age Security and Canada Pension Plan, lack the necessary funds for a nutritious diet (Green, Williams, Johnson, & Blum, 2008). For example, Stephanie is in her late 70s and lives by herself since her husband passed away. She described the challenges facing single-member senior households in buying food:

I do now [budget food] but I didn’t one time...See when you’re alone you only have one income. My husband left me insurance and I had to live on that until 65 I got pension...There’s a lot of people just take out \$400 to spend that’s it. I’m not there yet but I’m getting to it. And you can’t put anything back in.

Lastly, alongside recommendations for supporting economic access to food, there is a need for a more consistent supply of fresh fruits and vegetables in rural regions.

Compared to forty years ago, apples, oranges and bananas are much more available in the Bonne Bay region than previously. Nonetheless, there are still clear inequities in access to fruit and vegetable supply among rural and urban centres. Small independent stores in rural areas are having a hard time maintaining their market share (Pouliot & Hamelin, 2009). These changes affect the availability of food products and, as Pouliot and Hamelin have argued, from a population health perspective it is necessary to ensure the changing nature of the retail sector supports an increase in the fresh fruit and vegetable supply and its access. When households interviewed as part of this study were asked if anything could be done in the region to help them get the food they wanted, better access to fresh fruits and vegetables in local stores was consistently named a priority. Better access to

fresh foods was also a reason that some households provision some of their own foods through activities such as gardening and berry picking (Chapter Seven).

However, there were generational differences in fruit and vegetable preferences. Older residents usually preferred to eat the more traditional root crops. Emily is in her 80s and in regards to green vegetables said, “Now all that stuff- green peppers, lettuce- I can’t eat that...I call, that’s rabbit food.” However, Emily described eating turnips, potatoes, cabbages, carrots, and berries. Recently, critical nutrition studies have critiqued the proliferation of a “hegemonic” approach to nutrition that solidifies an idea of what is “right to eat” across a range of populations and doesn’t meaningfully respond to social and cultural differences (Hayes-Conroy & Hayes-Conroy, 2012). It has been argued that more holistic nutrition interventions need to account for local ways of understanding how to be nourished (Hayes-Conroy, 2012). Among older residents in Bonne Bay, this may include promoting the benefit of more “rough” fruits and vegetables such as cabbage, carrots, or berries- foods that have long been harvested locally and are understood to be healthy (Crellin & O'Dwyer, 1998).

6.3 Fish plants to farmers’ markets: Diversifying the retail foodscape

So far this discussion has focused mainly on supermarkets and grocery stores. However, there are also other types of retail venues in the region that are important to household food acquisition including fish plants with retail outlets, restaurants, pharmacies, farmgate sales, and farmers’ markets, and community gardens. Very few studies have paid attention to how other types of retail venues interact with supermarkets and grocery stores

to influence food access and choices (Walker, Keane, & Burke, 2010). A foodscape perspective is attentive to uncovering the connections among different sites of food retail. For example, many households described local pharmacies as the best local place to buy fresh milk for the lowest cost. At the same time, while there are no supermarkets in the region and fresh fruits and vegetables are scarce in local stores, other types of food, such as seafood, are comparatively more available because of fish plants. For example, Ellen recently moved back to the region with her family from Ontario. While she was not satisfied with the availability of fresh produce in the region, she was much more satisfied with the availability of local seafood which she often purchased from a fish plant:

...now that we're home I find we're eating more fish now than we did in Ontario. Cause it's a lot fresher, right? So we get it fresh. Right now I've got halibut steaks in my fridge to cook for supper for tonight. So that kind of thing- halibut, salmon, trout, cod.

Obtaining seafood, and in particular local seafood, was an important part of food acquisition for most households. The seafood survey results (Chapter Five) indicate that this local seafood comes from a combination of sources including fish plants, friends/family, recreational (food) fisheries, and supermarkets. I focus here on the purchasing of seafood from fish plants and retail sources, and look at non-retail sources, including informal seafood purchases from fish harvesters, in the next chapter.

Fish plants today play a vital role in the retail foodscape around Bonne Bay. In the seafood survey, fish plants were ranked by households as the main source of local seafood. Increasingly, they play a more important role as purchasing fish becomes more common and subsistence fishing and family connections to active commercial fish

harvesters are gradually declining. Billy is in his mid-fifties and grew up in Woody Point. He described a shift over the last several decades from subsistence provisioning to more purchasing of fish:

Now when we were younger we were allowed to catch them any time. We used to catch our own codfish and stuff. And when we were kids Dad had a lobster license and he had his salmon license for a long time. So we caught a lot of our, well all of it I guess. Fish was something that you kind of didn't buy. Even if you wanted to get one from somebody that was fishing, usually they just give you the fish... it's [cod] not as available as it used to be. You just can't go out and jig a fish any more. And for the most part what fish we get we buy.

There is a combination of factors making subsistence fishing and gifting fish by local fish harvesters more challenging, including resource decline, tighter rules around subsistence seafood access, and other demands on household labour during the summer months.

These challenges are elaborated in Chapter 7 about food self-provisioning.

Fish plants today are important as both buyers and sellers of local seafood. According to provincial regulations, fish harvesters are not allowed to sell their catch directly at the wharf or to local residents, except to fish buyers and processors who also need licenses to do so (Murphy & Neis, 2011). The majority of the catches purchased by fish plants and licensed buyers are exported off the island, although most sell some seafood locally to residents, tourists, and restaurants. There are four seafood processing plants in the region including Harbour Seafoods in Rocky Harbour, 3Ts in Woody Point, and Allen's Fisheries (formerly owned by J.W. Hiscock Sons) and 3Ts in Trout River. Allen's Fisheries is presently not doing any processing in Trout River and is only acting as a buyer. Harbour Seafoods in Rocky Harbour and 3Ts in Woody Point both have licenses

for processing groundfish, pelagics, lobster and lumpfish, and 3Ts also has a crab processing license (Great Northern Peninsula Fisheries Task Force, 2006).



Illustration 6.1 Fish plant in Trout River

Harbour Seafoods in Rocky Harbour is the largest fish processing plant in the region, buying from approximately 260 fish harvesters across the west coast of the island (Russo Payne, personal communication, April 2011). It has had a retail storefront for about ten years at which they sell local seafood. The store is open full-time during the summer. Many types of seafood can be purchased fresh including cod, crab, lobster, halibut, turbot, herring, mackerel, capelin, flounder, whelks, scallops, salmon, and mussels. The plant doesn't process shrimp but brings in frozen shrimp from a processing plant further north in Port aux Choix to sell. Other fish plants in the region do not have storefronts although most will sell some seafood if residents go to the plant. 3Ts in Woody Point also owns a small grocery store in the town at which they sell some of the seafood from the plant and residents in Woody Point were more likely to purchase seafood there. However, because

of the retail store and its regular hours of operation, Harbour Seafoods was an important source of seafood for residents living on both the north and south sides of Bonne Bay. For example, Deatra and her parents live on the south side of Bonne Bay. Nonetheless, she said, “we don’t miss it [fish plant] if we go down there [Rocky Harbour]. Fish is from local people somewhere.” Similarly, Kate who lives north of Rocky Harbour said, “They have a fish plant here but I’ve never been to it cause the times and everything, when it opens, it’s really weird. So I just go down there [Rocky Harbour].” The store is also popular among tourists visiting the region.

Households described a number of reasons for purchasing from fish plants. A main reason was to buy seafood that was local. As Deatra said about fish plants, “Fish is from local people somewhere.” Sylvia, who lives in the Rocky Harbour area said, “Fish we try to buy around home - we don’t buy much in the supermarket. Only when we can’t get any at home.” In addition, many described the seafood from local plants as “cheaper and fresher” than seafood in supermarkets. For example, Sam explained, “They [3Ts fish plant] got a store, they have fillets...halibut steaks, the other day, \$7 per pound. I was over to Corner Brook the other week and I see halibut steaks \$13.50 per pound. I thought... that’s the place to get halibut steaks. That’s half price.” Seafood generally retails for much higher at supermarkets because of handling and transportation costs (Khan, 2011).

Another reason for purchasing from fish plants for some households was convenience. For Sylvia, purchasing from the fish plant was an easier option on days both she and her

husband were working. She explained, “We don’t have any particular menu. But days that we’re home and we catch some fresh fish early in the morning we might cook it for lunch. Days we’re working we might go to the local fish plant and cook it for supper.” The establishment of fish plants in the 1950s contributed to a shift from household to industrial labour, as women became the waged labour force for fish plants (N. Power, 2000). Some have described industrial food production in terms of a “subsumption of household labor processes by corporate capital” (Jaffe & Gertler, 2006, p. 147). Today, paid employment can compete with household self-provisioning, including the catching and processing of fish, and purchasing from fish plants can be a convenient alternative.

Purchasing seafood was also closely tied to food preferences and preparation skills. Fish plants sell filleted fish, which was preferred by some households over whole or split fish. For example, Joanie said that ever since she was young she didn’t like bones in fish. She recalled: “...I didn’t like cod because my mother didn’t bone things like I do. I don’t like bone in it. So halibut was my fish of choice because you just take the one bone out of that and you’ve pretty well got them all.” Today she prefers to buy fish from the plant for herself and her husband because it comes filleted. She said, “We go to the fish store. What we do a lot of times is go and get just the fillets.” Some young families described not having the skills to prepare fish and ate less fish for this reason. For example, Michael, who lives with his wife and young son, said, “A lot of my generation we don’t have cooking skills. Don’t know what to do with it [fish].” When Michael’s family purchased fish it was usually a combination of filleted fish from plants and what he called “breaded stuff” such as fish sticks from supermarkets. The operator of a local fish plant

similarly described generational differences in purchasing habits. He noted that salt split cod, a more traditional form of fish with just the sound bone removed, is preferred by older residents while salted filleted cod is popular with most families for general use in meals such as fish cakes.

However, fish plants are also facing constraints with potential implications for seafood purchasing. First, the actual number of fish plants has declined across the province and the Northern Peninsula over the last two decades. Of 221 plants across the province active in 1990, there are now only 121 (Newfoundland and Labrador Department of Fisheries and Aquaculture, 2011; Schrank, 2005). In the Northern Peninsula region, there were 37 processing plants in 1988 and in 2010 there were 17 (McManus, 1991; Newfoundland and Labrador Department of Fisheries and Aquaculture, 2011). The three processing plants around Bonne Bay remained open during this time. However, a decline in the number of plants across the peninsula and the island has implications for seafood access as some households purchased seafood from plants outside the immediate area. For example, Stephanie who lives in Norris Point described getting fish: “Out to the fish plant. And I’ve got relatives down to Port aux Choix and they have a big plant down there.” Others described purchasing seafood when they made trips across the island. For example, Mary purchased cartons of cod tongues from the fish plant in Arnold’s Cove when traveling to St. John’s. The fish plant in Arnold’s Cove is the largest cod processor left in the province and also does some secondary cod processing (Khan, 2011). Mary said if she could get the amount of cod tongues she wanted from Rocky Harbour: “I wouldn’t be bringing them back from Arnold’s.”

While the number of plants has declined there is also resource uncertainty and are small quotas for some species. One fish plant operator in the region described not having “large amounts” of anything because quotas have been cut. The total allowable catch for cod is only a small portion of historic levels and has not been caught for the last several years (Fisheries and Oceans Canada, 2012b). Quota allocation was also an issue raised by fish harvesters, as expressed by Nancy who fishes commercially with her husband: “Quebec only takes about half of its quota [for turbot] but it’s not reallocated to us.”

In addition to groundfish, there is also resource uncertainty for shellfish and pelagic species. The crab fishery in Bonne Bay was reopened in 2011 following a two-year voluntary closure due to concerns about the stock. The exploitable biomass for crab in the offshore in the Northern Gulf remains low (Fisheries and Oceans Canada, 2012c). There was also concern among some harvesters about fishing practices for mackerel. Large purse seiners fish extensively for mackerel in Bonne Bay every fall and some harvesters felt this was contributing to a decline in the stock. Both herring and mackerel stocks in the region are declining (Paterson, 2013). While still quite widely-eaten, survey results (Chapter Five) indicate that these pelagic species, including mackerel and herring, are eaten less often in comparison to groundfish (including cod and halibut), salmon (likely farmed), and shellfish.

At the same time, fishing seasons for many species are becoming shorter. For example, the halibut fishery was only open for 24 hours in the 2011 season. This was a challenge for Nancy and her husband, particularly when seasons for multiple species are open at the

same time. She said, “The seasons are so short. And halibut, lobster, turbot all open together.” A related effect of short seasons is that fresh seafood is available for purchase for fewer months of the year. This was described by Deatra who said, “...[I] used to be able to buy [from the fish plant] whatever’s in season. Now you can’t. Even I gotta ask when crab will close. Last year, I never got any crab because the season was so short.”

Nearly all food environments research has focused on access to supermarkets and grocery stores (Short, Guthman, & Raskin, 2007). Using a foodscape lens, this study demonstrates the important role that other types of retail outlets, such as fish plants, may play in food access for rural and coastal regions. Short et al. similarly argued that a focus on supermarkets has precluded a consideration of other types of food retail venues that may be important to CFS. Identifying these others types of retail venues requires greater attentiveness to the role of place in retail food environments (Cummins, 2007). A foodscape lens, with its focus on people and food interactions is necessarily attentive to place and may help uncover the range of food sites significant to CFS. In the case of fish plants, improving access is related not only to spatial proximity, the key measure of access in most studies. While spatial proximity is important in terms of plant closures and travel distances, improving seafood access must also consider how changes and regulations in harvesting, processing, and marketing affect the types and supply of seafood available for purchase.

Fish plants are not the only retail sources for purchasing seafood. Supermarkets, while ranked low by surveyed households as a preferred source for seafood, were important for

purchases of salmon, shrimp, and scallops. Supermarkets may be more common sources for these species because these types of seafood are available year-round in consistent supply. Salmon is farmed in the province and in other parts of the world. The purchase of farmed from supermarkets has likely become more common as wild Atlantic stocks have declined substantially and in the wake of the closure of commercial salmon fishery in 1992 coupled with a very limited recreational fishery. Northern shrimp is fished year-round by the offshore sector and seasonally by 65-foot trawlers in the Northern Gulf. Most of this shrimp is destined for export and not necessarily easily available in supermarkets or restaurants, with a limited amount of cooked and peeled product available in supermarkets (Mather & Joensen, 2010). While the survey asked specifically about sources for local seafood, it is very possible that households are eating non-local shrimp and scallops. Tropical, often farmed, shrimp is readily available in supermarkets. Scallops are likely coming from the much larger scallop fishery in Nova Scotia. In 2011, 1420 tonnes of scallops were landed in Newfoundland fisheries compared to nearly 55 000 tonnes in Nova Scotia fisheries (Fisheries and Oceans Canada, 2013). The largest scallop fishery in Nova Scotia is the offshore fishery which operates on a year round basis (Nova Scotia Department of Fisheries and Aquaculture, 2010).

Significantly, while the supermarket is important for the purchase of some types of seafood, surveyed households did not report eating more imported seafood overall in the winter when local seafood is not available. However, when seafood was purchased from supermarkets, it was usually done during the late winter and early spring before local fisheries opened up. For more occasional meals of seafood, restaurants were also

important venues. Many households enjoyed a meal out of fish and chips. Joanie explained: "...if we really have a craving for fish and chips and we haven't got any we go over to Jackie's or out to Ivan's. They cook it better than I do anyway." Nearly 70% of surveyed households said they were very likely or likely to order seafood when eating out at a restaurant. Kyle linked eating seafood in restaurants to visitors who also wanted to taste local seafood: "I eat more seafood out- cause I'm often going out with people visiting the area and that sort of thing." As elaborated in Lowitt (2012), tourists are increasingly looking to experience the foods local to the region they are visiting. While both tourists and residents enjoyed seafood when eating out, not all types of seafood were equally enjoyed. For example, cod tongues were described by one restaurant operator as "hugely popular" among locals but not among tourists. Beyond seafood, there were other differences in the dining experiences tourists and locals were looking for. For example, some households in this study enjoyed a meal out once in a while of fish and chips or hamburgers. However, these "fast foods" often don't hold a place for tourists looking for more "local" and "traditional" foods (Everett, 2009).

Restaurants were not only patronized for seafood. Most restaurants are open seasonally for the summer, closing down or operating with reduced hours in the winter. Some households ate out more during the summer for this reason. The summer was also a busier time for many households and eating out was more convenient. Debbie and her husband have three kids and both work. She said, "We eat out in the summer time cause our schedule's crazy, which is not good. Sometimes I grab a salad. On a busy day I might order pizza, soup and sandwich." Seasonal employment in the summer also

affected patterns of eating out. For example, Lilith described eating out more when her husband was away working during the summer: “My husband and her [daughter’s] husband travel as far as central Newfoundland. Usually go to Labrador too... So my meals. Usually only me. Lots of times I go out to the restaurants.”

Households that had recently moved to the region described poorer access to restaurants compared to living in urban centres. However, this was often framed positively in terms of healthier eating and saving money. A number of studies have linked frequent eating out to higher caloric intake and weight gain (Story et al., 2008). For example, Kate recently moved to the area with her husband and young daughter and explained:

We used to eat out a lot more when we were in Ontario because there were more fast food places around. So it’s what for supper, oh I don’t know, let’s just go. But not so much anymore. Which I’m glad because it’s easier on our pocket and it’s healthier now too...we’re very convenient eaters sometimes. So if there was a MacDonald’s right there we’d just be like, let’s go there. Or if we saw a commercial for MacDonald’s on TV, we’d be like that sounds good and we’d just go there. So it’s kind of a good thing that they don’t have anything like that around.

Similarly, Jane described eating out more when she used to live and work outside of the region: “Definitely working two days a week I ate out. Only one restaurant open here in the winter... So it’s probably good I’m here.” While many households described poor access to restaurants in the region compared to larger centres, sharing meals at home with friends and family was fairly common (Chapter Eight).

In addition to these established retail venues for food purchasing, some alternative food retail outlets are emerging in the region including a community garden and greenhouse

and two farmers' markets. In the CFS literature, these types of food networks are seen as vital to strengthening local food systems by providing alternatives to the conventional food system. The community garden and green house began in 2011 in Norris Point. The community garden and green house are situated on the site of the old cottage hospital and were established by the not-for profit Bonne Bay Cottage Hospital Heritage Corporation whose mandate is the adaptive re-use of the old cottage hospital. In the summer of 2011 a garden coordinator was hired to oversee the garden and green house. Plots in the community garden were available to local residents and produce from the green house was sold at the Norris Point farmers' market and directly to residents and tourists who visited the greenhouse. Proceeds from the sale of produce went back to supporting the operations of the garden and greenhouse. The community garden offers residents a way of reconnecting with traditional foodways but in a new form that brings together community members in a shared space and provides direct access to gardening resources and supports.

There are also seasonal farmers' markets in Glenburnie and Norris Point. Farmers' markets have been widely written about in the CFS and local food systems literature as a way of reconnecting producers and consumers, and enabling producers to directly market their goods and capture more of the retail dollar (Lowitt, 2010a). 2011 was the third season for the Norris Point market and the fourth season for the Glenburnie market. The Norris Point farmers' market sold a small amount of locally-grown produce from the cottage hospital greenhouse, some eggs from a local farm, jams and jellies, and a variety of crafts. The scale of the market is still very small. Henry, who lives in Norris Point,

noted, “They [farmers’ markets] don’t constitute a huge portion of what we buy. Jams occasionally you see at a market, that sort of thing. We’ll buy things like that.” Purchases from the farmers’ market did not offset the regular trips to the supermarket that were necessary for households. Across Canada, direct marketing outlets account for a tiny percentage of food sales although they are critical to supporting the livelihoods of some small food producers and harvesters (Roberts, Morton, McGuire, & Royle, 2008).

Farmers’ markets and community gardens can also be important community spaces. Research has shown that alternative food projects rely on collaborative community efforts and may strengthen social capital and community relations (Baker, 2004; Conner & Levine, 2008). The Norris Point farmers’ market depends on the efforts of multiple community groups including the Lion’s Club and the Bonne Bay Cottage Hospital Heritage Corporation. The local organizer of the market said it was enjoyed by both local residents and tourists to the region. Elaine, who participated in the community garden, similarly described it as an important space for socializing and meeting new people: “Well we went once a month. Learned about planting and stuff like that. But I mean stuff that I already knew, you know what I mean. But it was still nice and be around different people right.”

Nonetheless, there are tensions in ensuring equitable economic access to these alternative food venues. For example, Henry, a retired teacher, said he would gladly pay more for local and organic lettuce: “I wouldn’t care if I had to pay way more for lettuce if it was being grown locally, it was being grown organically, all that. I mean, I’d happily do that.” On the other hand, one informant with a limited income expressed concern about

who could afford to purchase the expensive salad greens for sale at the farmers' market. This tension between social equity and the economic viability of food producers has been identified as a key tension in the development of CFS (Guthman, Morris, & Allen, 2006). In addition to the farmers' markets and the community garden, there are some small farms in the region that sell directly. One farm has a storefront with fairly regular hours, while other small farmers sell less formally and rely on word of mouth for sales. Often, households purchased produce from small farm markets and roadside stands in the Cormack area just outside of Deer Lake. Cormack is part of the Humber Valley, one of the most fertile agricultural areas in the province. There are a number of roadside stands in this area through which farmers' directly sell their produce. There are also some markets operated by individual farms. These are individual farm markets, not farmers' markets *per se* in terms of a collective marketplace where many producers sell their goods. Purchases from these outlets were more common than at the farmers' markets around Bonne Bay because they were larger and more established. These roadside stands, while not within the region, were still described by residents as 'local.' In the fall, some farmers from Cormack would drive up to Bonne Bay and make door-to-door sales. Households preferred to purchase from these smaller-scale outlets because of the opportunity to know the growers. Nancy explained, "If I have a bag of potatoes that's not so good, I can tell them. I know them on a first-name basis so I'm a bit comfortable doing that." Some bought local food because of concerns about food safety and traceability. Deatra said, "You buy from locals. Little stands along the way between here and Deer Lake. Whatever you can get fresh you buy fresh. I wouldn't bother to go in to buy from the grocery store unless I find local. You don't know what's on it." Similarly,

Marilyn said, “We also pick up in the fall a lot of vegetables at roadside stands in Cormack. So we know where that’s coming from cause we know a lot of the people that grow it.” The increasing distance over which food travels has become a source of uncertainty for consumers (Nygard & Storsad, 1998). Research has shown that transactions in which consumers and producers have the opportunity to know one another enhance trust and are important to developing consumer confidence in food safety (Nygard & Storsad, 1998).

However, buying from small roadside stands and farm markets in the Cormack area was only feasible because these venues could be accessed as part of the same shopping trip to the supermarket. Elaine explained, “You’re going to Deer Lake to buy groceries anyway, so you buy your veggies from them [in Cormack].” This foodscape analysis demonstrates that local and conventional food systems can be interlinked in household food provisioning, challenging the idea that local food systems operate independently of food systems at other scales. Furthermore, buying local was not unanimously preferred by households; for example, purchasing local meat usually required buying larger quantities, such as a whole lamb or part of a cow. Some seniors, such as Molly, were less able to make this commitment. Molly said, “For me, it’s better to go to the store and pick up a small piece of meat, just pick it up gradually.”

In summary, a foodscape lens shows that food acquisition takes place at the interface of different forms of food retail. Households obtain food from a range of retail venues.

Some of these retail outlets, such as fish plants, are located within the region and others,

such as supermarkets, are located in larger centres. Collectively they make up the retail foodscape around Bonne Bay. Food practices and social relations span these sites of food retail and scales of food production. A foodscape lens that follows people and food interactions across landscapes is amenable to uncovering the interconnections among sites of food provisioning. This analysis of the Bonne Bay retail foodscape substantiates the need for more research, as raised by Walker et al. (2010), to consider the “dynamic interaction” among supermarkets, grocery stores and other types of retail outlets in contributing to CFS (p.882). In Chapter Seven, I extend this foodscape analysis to consider the interactions among food purchasing and self-provisioning.

Chapter 7 Grown, Harvested, and Hunted: The Social and Material Contributions of Food Self-provisioning

The retail foodscape (Chapter Six) is one aspect of the larger foodscape around Bonne Bay. Yet for most households, food acquisition was based on a combination of food purchasing and self-provisioning such as fishing, gardening, harvesting edibles, and hunting. Fishing and hunting grounds, berry patches, and backyard gardens are all important parts of larger foodscapes. This chapter draws on household food provisioning interviews supported with key findings from the seafood survey and participant observation to examine the role of self-provisioning in household food acquisition. This includes enabling and constraining factors for participating in food self-provisioning; the role of informal economic networks in facilitating the distribution of self-provisioned and other locally-harvested and grown foods; and the relationship among purchased and self-provisioned foods.

7.1 Self-provisioning and the informal economy

Self-provisioning refers to activities that produce materials goods, such as food (Teitelbaum & Beckley, 2006). Self-provisioning has historically played an important role in rural life. It is closely related to the idea of subsistence, and occasionally I use these terms interchangeably. However, drawing on Teitelbaum and Beckley (2006), I generally use the term self-provisioning because I am looking at households where these activities are a complement to purchased foods rather than a means of survival. The term subsistence economy has been used extensively by anthropologists and is often associated with the traditional activities of Aboriginal peoples such as hunting, trapping, and fishing

(Teitelbaum & Beckley, 2006). Most research about self-provisioning in developed countries has focused on Aboriginal communities, although there are some case studies of self-provisioning in non-Aboriginal communities including some focused specifically in Newfoundland and Labrador. For example, Felt and Sinclair (1992) demonstrated how communities along the Northern Peninsula of Newfoundland adapted to geographical and economic marginality by developing an informal economic sector based on unpaid work among households. Omohundro (1994) looked specifically at seasonal patterns of food subsistence in two communities on the Northern Peninsula.

Self-provisioning and informal economic activities are closely linked. Self-provisioning may be seen as a subset of activities that falls within the broader category of informal economy (Teitelbaum & Beckley, 2006). The informal economy is generally understood to consist of the sets of activities that take place outside the formal legalized structures of a nation's capitalist economy and may consist of hidden paid and unpaid productive work (Ommer, 2004; Teitelbaum & Beckley, 2006). While self-provisioning among rural households has declined compared to the past it has certainly not disappeared (Teitelbaum & Beckley, 2006). A recent survey by Teitelbaum and Beckley (2006) of rural households across Canada found that over 80% of households were engaged in some form of self-provisioning, including growing vegetables, harvesting wild foods, raising domestic meat, hunting wild game, or harvesting firewood. The consumption and production of domestic vegetables was particularly common, with 62% of surveyed households reporting eating vegetables that were not purchased and 42% reporting that they grew vegetables themselves.

Self-provisioning has been recognized as an aspect of CFS. The Dietitians of Canada (2007) recognized subsistence activities as a part of CFS efforts, particularly among indigenous communities that have historically relied on these activities. Similarly, E. Power (2000) suggested that local food systems consist of two main types of activities: alternative retail venues and self-provisioning. Nonetheless, most CFS research has focused on alternative market-based ways of procuring food such as through farmers' markets and community-supported agriculture (Guthman, 2012; Qazi & Selfa, 2005). When self-provisioning has been considered, it has been mostly in the context of individual community food projects, such as gardens and kitchens and their role in improving food access and building food skills. Much less CFS research has looked at self-provisioning in rural communities in which these activities are a vital part of diversified household livelihoods and of rural economies. Relatedly, there is very little research looking at the role of wild foods, such as fish and game, in contributing to CFS.

A foodscape lens highlights these aspects of the food system, including self-provisioning, informal economies, and wild foods, which are often ignored in more traditional approaches to CFS. At the beginning of the twenty-first century we find ourselves, as Gibson-Graham (2008) argued, in "an altogether different landscape" in which diverse economic projects are proliferating (p.2). In this context, Gibson-Graham suggest that academic subjects must become "more open to possibility rather than limits on the possible" (2008, p.2). A foodscape approach, in bringing to light alternative food systems formations that often go unnoticed in CFS research, provides what Gibson-Graham calls an "ontological reframing" by increasing the realm of what can be seen (2008, p.8).

Recent social science research is challenging long held ideas about the nature of work and enterprise, emphasizing the complexities of rural household strategies that combine paid and unpaid labour and monetary and non-monetary exchanges (Hinrichs, 1998). Informal economic activities are based in community and family ties and reciprocities and are usually found in combination with self-provisioning activities in what might be classified as an “occupational pluralism” that involves multiple types of work to meet livelihood goals (Ommer, 2004). Ommer (2004) argued that today it is in rural regions that ecology and subsistence economic activities come together as they did in the pre-industrial world. Accordingly, most research about informal economies has focused on rural regions (Teitelbaum & Beckley, 2006). Reimer (2001) also suggested that the role of the informal economy may be unique in rural compared to urban areas because people may have greater access to resources, such as land, to produce their own goods; the pluriactive nature of livelihoods may increase the scope of skills people can draw on to produce goods; and the potentially lower levels of mobility along with closer kinship ties bolsters opportunities for informal exchange.

Historically, informal economies were vital to the survival of communities throughout Newfoundland, with the informal and commercial merchant economies closely tied. The mercantile economy relied upon an informal system because of its seasonal use of a range of resources that allowed the settlement of a labour force that would have otherwise been prohibitively expensive (Ommer, 2004). Confederation brought many changes to the province’s economy, including a series of “safety net” devices for the informal economy that replaced the earlier merchant credit system and are provided today through programs

such as Income Assistance and Employment Insurance (Ommer, 2004). Charlie, a senior who lives in Bonne Bay, suggested an increase in social programs has contributed to less sharing among households than in the past: "If a neighbor comes along I'll give them some. That was the system one time. Now we got social programs, the state does a lot of that." While there have undoubtedly been changes to the economic structures of rural communities, this study still found a fairly active informal economy. However, state programs, and in particular Employment Insurance, are important in providing the initial capital that is needed to keep the informal system viable. Many households during the winter months collect Employment Insurance, allowing them, as Ommer (2004) argued, to "work," whether in provisioning food or home repair or volunteering, even if not employed in the formal sector.

Because of the basis of informal economic activities in community and family reciprocities these activities have been analyzed in terms of the theory of social embeddedness. Social embeddedness conveys how economic action depends on and influences relations with other household members, the larger community, and even the resource environment (Granovetter, 1985; Hinrichs, 1998). The ethical obligations that have historically underlain economic activities in Newfoundland have been described by Cadigan (1999) as constituting a "moral economy." In contrast, in neoclassical economics, the fact that people may have social relations with one another has been seen as a "frictional drag" hindering the competitiveness of markets (Granovetter, 1985, p. 484). Within food scholarship, alternative food networks (such as farmers' markets) have been looked at extensively in terms of social embeddedness, with much of this work

stressing how embeddedness encourages trust among producers and consumers (Alaimo, 2008; Andreatta & Wickliffe, 2002; Sage, 2003). However, a foodscape lens draws attention to how food provisioning in rural communities may also be based in socially-embedded reciprocal exchanges. A foodscape approach highlights the interconnections among work, livelihoods, and social and environmental contexts.

Teitelbaum and Beckley (2006), in their review of the literature on the informal economy, suggested that as a whole, research about informal economies is paying attention to who participates in the rural informal economy, what activities they participate in, their motivations for doing so, along with a growing interest in understanding the relationships of reciprocity surrounding the informal economy. In this chapter, I look at the types of food self-provisioning activities in which households are engaged along with their motivations for and the potential constraints they described to participating in these activities. Following this, I look at the reciprocal exchanges surrounding food self-provisioning activities. Drawing on a foodscape lens, this study addresses a key gap in research by linking existing knowledge about informal economies with CFS research.

7.2 Seasons of self-provisioning around Bonne Bay

Most households interviewed were directly engaged in some form of food self-provisioning or consumed self-provisioned goods given to them by other households. Table 7.1 shows the number of households interviewed involved in different food self-provisioning activities. Drawing on the survey categories used by Teitelbaum and

Beckley (2006), these are organized as domestically-raised meat, wild harvested meat and fish, domestically-grown vegetables, and wild foraged edibles (e.g. berries).

Table 7.1 Household participation in food self-provisioning

Types of food provisioning activities	Households involved in self-provisioning (N=37)	
	N	%
Fish (recreational or commercial)	16	43%
Grow vegetables and fruits	15	41%
Hunt	12	32%
Harvest edibles (e.g. berries)	4	11%
Raise animals	3	8%

The most common type of self-provisioning was fishing. Forty-three percent of households interviewed caught their own fish either recreationally or commercially. All commercial fishing families that were interviewed kept some of their catch for their own consumption. Some households also fished recreationally for salmon and trout.



Illustration 7.1 Longliner in Trout River

The second most prevalent type of activity was growing vegetables and fruits. Forty-one percent of interviewed households grew their own fruits or vegetables. Traditional root vegetables, including potatoes, turnips, carrots, and beets, are still among the most commonly-grown foods. Some households had diversified to varying extents into tomatoes, peppers, greens, cucumbers, and herbs and two households had constructed greenhouses to extend the growing season. Several also had fruit trees, including a family in Rocky Harbour experimenting with growing apricots, cherries, and arctic kiwis.



Illustration 7.2 Vegetable gardens in Woody Point

Thirty-two percent of households hunted. Most were hunting for moose and several also hunted smaller game such as hares. However, many more households ate moose than hunted it directly. An extensive sharing of moose takes place because one moose is too large for a single family. Some households processed moose meat themselves. Bottling was a common way of preserving moose. Others took the moose they hunted to a local abattoir to get processed. Billy described the different cuts of meat he got made: “And I’ll get sausage made, I’ll get a lot of ground meat so if we’re making lasagna or hamburgers, stuff like that... got a lot cut up for stews. So you’re eating it all different ways.”



Illustration 7.3 Bottling moose

While traditionally it was men that hunted (see Chapter Four), increasingly women are getting hunting licenses. Having more than one hunter in a household increases the chances of getting a license every year. Most towns within Gros Morne National Park (which surrounds Bonne Bay) have enclaves within which moose hunting is allowed. Trout River is not within the Park and has its own hunting area. The season in these areas follows the same schedule as elsewhere in the province, taking place from early September to the end of December (Newfoundland and Labrador Department of Environment and Conservation, 2012). For the first time, in 2011 a moose hunt was also opened in the Park to reduce the size of an unnaturally high moose population and thereby allow forests to recover from the effects of moose overbrowsing (Newfoundland and Labrador Department of Environment and Conservation). In 2012, this hunt took

place from early October to the end of January, slightly longer than the regular moose hunting season. As in other moose hunting areas across the province, residents have to apply for a moose license through the Wildlife Division in the Department of Environment and Conservation. The sale of big game (including moose) is prohibited, with the exception of big game sold to tourist establishments that hold a wild meat service license. Hunters may obtain a permit from a wildlife officer to sell big game legally hunted by them to a tourist establishment that has a wild meat service license allowing them to purchase big game and serve it to their customers (Newfoundland and Labrador House of Assembly, 2012). In addition to moose, there are domestic harvesting provisions for showshoe hare written into the Gros Morne National Park Management Plan (Parks Canada, 2009). Only eligible residents, including residents who lived in the area prior to the establishment of the park, or children of those residents, can take part (Parks Canada, 2009). Two households interviewed for this study had taken part in this hunt.

Compared to fishing, hunting, and gardening, many fewer households harvested edibles or kept animals. Only 11% of households participated in harvesting edibles, which in all cases consisted of berry picking in the late summer and fall. Blueberries, raspberries, blackcurrants, squashberries, and bakeapples are all native to the region. The barren areas and sandy soil conditions that blueberries prefer are not as abundant in the Park as in other areas. Traditionally, some residents described traveling further inland to pick blueberries. Even fewer households, at 8%, raised their own animals. Of these, all kept chickens year round for eggs while two households raised larger animals including cows,

pigs and lambs and slaughtered them in the fall of the year. Omohundro (1994) in his study of subsistence food provisioning on the Northern Peninsula found that participation in animal husbandry had declined substantially since the 1960s. He suggested that finding sufficient winter fodder had become a burden, while free-ranging animals, modern roads, and lawns may be “in conflict” (1994, p. 125).

Food self-provisioning fit into a seasonal round of paid and unpaid work for many households, contributing to diversified food provisioning and livelihood strategies. While relatively little CFS research has looked at food self-provisioning, a much larger body of research in developing countries has documented the importance of food self-provisioning as a part of diversified livelihoods for rural households (Ellis, 2000; Ellis & Freeman, 2004). Around Bonne Bay, fishing, gardening, and harvesting edibles took place in the summer and early fall, followed by hunting later in the fall and winter. Raising animals was a year-round commitment. Self-provisioned foods were particularly important to sustaining a store of food over the winter when weather conditions made traveling to supermarkets more difficult. For example, when asked about winter grocery shopping, Elaine said, “Well I mean this is where we shop around town...But I mean usually our fridge is full anyway. Because we get our moose and everything.”

Self-provisioning also helped reduce food costs during the winter, particularly important for seasonally employed households. Lynn’s family of four relied on her husband’s seasonal income. Their winter meals included more self-provisioned foods, as Lynn explained: “In winter, it’s a moose roast- because chicken is so expensive- it’s a moose

roast on Sunday's dinner and moose roast or we'll have a rabbit stew, Sunday's dinner. So it's moose or rabbit there. If the chickens are on sale for a good price we'll have hot chicken dinner." Chapter Eight describes in more detail some of the seasonal changes in diets related to the availability of self-provisioned foods.

For some households, self-provisioning also made use of seasonally available inputs. For example Lynn maintained large vegetable gardens, with most of the food going towards feeding her family. She alternated between crab shells, lobster shells, and capelin as fertilizer for the garden. Lobsters that are not good enough quality to sell as food are sometimes given away by fish plants, as are the crab shells left over after processing.

Lynn explained:

And we got crab, and now capelin is gonna be in the garden. The natural fertilizers. It's the best, right? Yeah, so our ground it's actually now the best it's ever been. This is our second year for the crab shells. And we didn't get capelin last year or the year before. We ended up putting lobster shells in that last year. So it's really doing good this year. It's all recycled, right? It's all a big turn-around; it's all a big cycle.

For Lynn and some other gardeners, growing food was part of an adaptive cycle tied to changes in local ecosystems. For instance, Lynn substituted lobster shells for fertilizer when she couldn't get capelin. For several few years leading up to the summer of 2011 the capelin did not roll in Bonne Bay. Across many Newfoundland communities it is still common practice to go the beach and scoop the capelin up after they spawn.

In addition to fitting into a seasonal round of activities, self-provisioning for some households took place in a cycle that spanned from year to year. This was described by

one family that raised their own animals and sold some meat locally: “Some people where we were having beef to sell, they wouldn’t buy beef one year because they’d have their moose that year, and then next year they’d want their quarter of beef again because they didn’t have a moose license.” Self-provisioning and other local food-producing activities were thus closely linked.

As part of a seasonal and resource-based cycle, food self-provisioning was guided by local ecological knowledge about food and place. While science occupies a privileged status among ways of knowing, recent years have seen more attention devoted to understanding other forms of knowledge, such as the local knowledge of resource users (Neis & Felt, 2000). Local ecological knowledge (LEK) is generally understood to be a form of “vernacular” knowledge based in experience (Neis & Felt, 2000, p. 13). It is local in the sense that it is “derived from the direct experience of a labour process which is itself shaped and delimited by the distinctive characteristics of a particular place with a unique social and physical environment” (Kloppenborg, 1991, p. 528). LEK has been looked at fairly extensively in terms of building food systems, such as the knowledge of farmers in contributing to an alternative agricultural science, as well as the knowledge that local people have about their food systems (Bellows & Hamm, 2001). Residents in this study demonstrated a local knowledge about how to grow their own food that was closely tied to place and time, seen in the use of seasonally-available inputs, such as capelin, crab shells, and kelp.

This knowledge was also captured in informants' descriptions of hunting and fishing grounds. Some households preferred to hunt their moose near the end of season when they could bring it out more cleanly in the snow. Others described changes in the taste and texture of moose meat at different times during the fall and winter. Commercial and recreational fish harvesters described an intimate knowledge of marine ecosystems and fishing grounds. LEK research has looked at how the knowledge of fishing people may contribute to a fuller understanding of marine and freshwater ecosystems (Neis & Felt, 2000). In this study, many fishing families had been fishing the same ground that their parents and grandparents had before them. For example, Ernie has fished commercially out of the same port for about 40 years. In more recent years, Lynn fished with him as a crewmember. As she said, "When you're fishing so long in a certain area you know your ground." Tina participates in the recreational fishery with her husband and two kids. She described knowing the area where they fish: "Up to Port aux Choix, I don't know what the stock is like up there...we fish out here, just off Green Point. Baker's Brook - Green Point area." Baker's Brook and Green Point are just north of Rocky Harbour where Tina and her family live. Nancy and her husband fish commercially. She described large changes in catches depending on small variations in fishing grounds: "It makes a big difference where you put your gear. On the inside of Green Point Bank we got 3000 pounds of codfish. Just outside the bank another fellow only got three fish." Because self-provisioning, including gardening, hunting, and fishing, relies on local knowledge about ecology and place, not having this knowledge could be a barrier to food self-provisioning. For example, Trudy is a new resident to the region. She was accustomed to picking her own berries when she lived on the east coast of the island. Since moving to

Bonne Bay she hasn't picked her own: "Well I got them [berries] in my area before. I don't know what you'll get here."

7.3 Motivations for food self-provisioning

Recent research about informal economies has looked at why households participate in subsistence activities. Most of this work has challenged the common assumption that households participate in self-provisioning because of economic need (Teitelbaum & Beckley, 2006). For example, Felt and Sinclair (1992) in their study of 250 households along the Northern Peninsula found that subsistence production was a "constructive" response to the local environment, geographical isolation, small population, a relatively poor local economy, and also undertaken because of the cultural value of the activities (p. 60). In this study, households across a range of economic circumstances participated in food self-provisioning. The main reasons they described for provisioning their own food included maintaining traditions; wanting to know where their food comes from; accessing fresher and less expensive food; for recreation and enjoyment; and, for households with kids, teaching their kids about where their food comes from and how to grow and harvest their own.

One of the main motivations households described for self-provisioning was maintaining traditional foodways. Studies have shown that self-provisioning can provide a sense of connection to community traditions and identity (Teitelbaum & Beckley, 2006). In the face of rapid social and economic change in many Newfoundland over the past twenty years, O'Brien (1999) argued that practicing traditional foodways is an important

enactment of identity. For example, Danny and his wife keep their own animals. When asked why he explained, "That's been in our family for generations. We've always kept cattle, and horses and everything for your own food right...one time, everyone kept their own." Others have more recently started providing some of their own food to reconnect with traditional food practices. For example Ellen explained:

I've always wanted to grow my own vegetables. We decided to do onions, but maybe next year I'll do more...Because my dad, he grew up here so we always had gardens and fresh vegetables. I remember stealing turnips from my grandfather's garden. Taking them without even asking. Yeah, somebody always had a garden.

Karen and her husband have been fishing lobster out of Shoal Point, just south of Trout River, for nearly thirty years. The seasonal migration to their fishing cabin is strongly linked to family tradition. When their children were born, they used to take them each year to the fishing cabin, often with other family who would help tend them. Today the family continues to go to the fishing cabin not only for fishing but also for other recreational activities. As Karen said, "Come winter we'll go...and always take fried moose. Take moose and fry it when we get there."

Crucial to the continuation of self-provisioning practices, and the personal and family identities to which they are linked, is the passing down of intergenerational knowledge.

Tina grew up in Rocky Harbour and now lives there with her husband and two kids. She described her Dad's recipe for salt fish:

Over the last two years- yes most [salt] ourselves. But previous to that I depended on my father to get it - like to cure it, or I'm buying fish, do you want some. So a lot of times I depended on that. But now that he's gone it's like, I guess, I gotta do it myself. Sometimes we got some and we salt it. That's Dad recipe, I wrote that down. He passed away so I made sure I wrote that down.

This sharing of knowledge was also important to new families to the region. Kate, her husband and young daughter moved to the area about two years ago from Ontario. She described learning from an older couple in their community:

Yeah the older couple, we learn a lot of things from them. And at their cabin they have a massive gardens and they pretty much grow their own potatoes and save the potatoes for next year and keep that cycle going. And I don't think they really buy any potatoes. And then they have carrots and other stuff. So pretty much from them, they've kind of guided us.

However, some younger people expressed concern about not learning enough from their parents and grandparents to continue these traditional foodways. Deatra described relying on her father, who used to be a fisherman, to salt her fish for the winter. She said, "But the older generation is gonna go out; they [younger people] won't know how to do it. If anything happens to you father, where am I gonna get my [salt] fish. Could get it in the store but wouldn't be the same as father's." Deanna, a young woman, expressed a similar concern about not knowing how to preserve local berries:

In the past I've generally given my Nan a good store of my local berries and she sends it back to me as a pile of jam. She's not up for it now any more I don't think, but I have done that. I will buy them and give them to her. I've never tried to make jam. I would like freeze a few berries I suppose, but I don't have any skills in preserving stuff at this point in my life... So whether I missed my opportunity to get that from her or not, I'm not sure. But I would like to know how to make Nan's jam.



Illustration 7.4 Salt split fish

At the same time, food traditions are not static but are being continually reinvented. Coen (2004) wrote about “emergent tradition” to refer to the process through which cultures are “making themselves up” all the time (p. 110). For example, Kate adapted some of the traditional food practices she learned about upon arriving to the region. She explained:

...our friends sometimes, they cook with a lot of fat and stuff. And it's like the old way of cooking I guess. They take the pork fat and cook it with their veggies and stuff like that. So I don't do that cause I just always, my parents always boiled the veggies or steamed the veggies... But it's the old way of cooking I guess...I try to cook more fresh or something like that.

Another example of the reinvention of tradition is the eating of moose meat. Now a common part of self-provisioning, moose was largely unknown to local residents only a few generations ago. Aleck grew up in Norris Point and said his grandfather would not have recognized moose tracks, as he hunted caribou much more often. Moose were introduced to the island about 130 years ago to provide an extra food source at a time when the caribou population was declining (Newfoundland and Labrador Department of Environment and Conservation, 2012).

Further, as elaborated in Lowitt (2012), traditional Newfoundland foodways are also being drawn upon by tourism operators in the Bonne Bay region as a way of establishing authentic culinary experiences for tourists. As traditional foodways are being picked up in the tourism sector, they are also being reinvented. This reinvention emerges out of interactions and negotiations among tourism operators, tourists, and local residents. For example, some residents leave to train as chefs and return to work in the tourism sector with new ideas about dining and methods of food preparation. In other instances, local people work in restaurants and take home new ways of preparing food to try out with their families.

While important to community traditions and identity, self-provisioning for many households was also a way of knowing where their food comes from. This was true for households that had been engaged in self-provisioning for many years as well as for households getting involved for the first time. Nancy and her family have kept animals for about fifteen years and provide much of their own food. She explained:

I know if I'm putting it on the table where it came from, I know what went into it; I know what didn't go into it. It's that aspect of the farming issue that I like. With my beef I know what I'm getting. If I go to the supermarket and buy a piece of beef I don't know where it came from.

Conversely, Jackie said about eating moose that, "With moose you know- at least they are in the wild and whatever." Similarly, Karen who grows some of her own vegetables said, "A lot of our vegetables and stuff like that's fast grown." Similar to the preference for purchasing local foods that some households expressed, growing or harvesting foods oneself was associated with greater certainty about the safety of food. As Marilyn said,

“You grow your vegetables and you know what you’re eating then. You go to the supermarket, who knows where a lot of it’s coming from.”

Related to knowing where the food came from, getting food that was fresher and better tasting was another motivation. Sharon, who lives with her husband and two young sons, recently planted a small vegetable garden, explaining, “homegrown stuff is always better, always tastes better. So that’s why mostly.” Similarly, Jackie said about fish she caught with her husband, “...the best fish is right out of the water and into the pan.” In a context in which fresh foods are limited in local stores and there are long driving distances to supermarkets, growing and harvesting one’s own food was a desirable alternative for some households.

In addition to these reasons, self-provisioning was strongly linked to enjoyment and recreation. One woman described raising animals as a form of recreation for her akin to other people watching television:

The other day someone said coyotes are moving in, you’re gonna have to get rid of your animals, it’s not worth it. There’s no profit in it. But we’re not in it for profit anyway because you never make anything at it by the time you buy your hay and make the hay, you never make anything at it. I told him, I said b’y it’s like this. What do you do when you go in your house at nighttime? Oh I watch a bit of TV. I said, well you get rid of your TV, I’ll get rid of my animals. That’s what it equates to for me. Something I enjoy, it’s a pastime.

Similarly, Sylvia described the enjoyment of fly fishing for salmon: “Just being out fishing on the river, I don’t even care sometimes if I catch anything or not, just nice being outside, doing a little bit of walking. Forget all about your worries if you have things you got to do back home. Therapeutic I guess.” Omohundro (1994) similarly found that many

households on the Northern Peninsula continued to undertake self-provisioning activities to uphold a “quality of life in such arenas as recreation and taste” (p. 131).

Lastly, for households with kids, teaching them about where their food comes from and how to grow or harvest their own foods was a strong motivation for participating in self-provisioning activities. For example, Tina has two young kids. When asked why she started a backyard garden she said, “The kids. It’s just so nice for the kids for them to go out and pull up a carrot. They help me weed. We have a potato garden on the other side of the house. Especially Dylan, he likes to go out and help me pick off the peas. And I have strawberries.” One commercial fishing family described making time to take their kids out in the recreational fishery:

We still go out in the food fishery. Basically just to take the kids out...cause when we’re commercial fishing there’s not a lot of time to take the kids and let them fool around with jigging and stuff cause everything’s just so busy, busy busy, you gotta be go, go, go. So with the food fishery you can just go out, and if it takes all day for the kids to catch their fish, well it takes all day...but the kids love it on the water. They would be out on the water all the time.

Similarly, Lynn and her husband provisioned many of their foods and involved their nine year old daughter:

When we’re gone she’ll have some idea about snaring rabbits and moose hunting and fishing, trout and stuff, like she’ll be able to live off the land, have the garden, her vegetables, she’ll know that. Once you plant that seed it won’t leave you, you’ll always have that knowledge. If we can continue on this, getting close to when she’s up to her middle teens, hopefully it will have an impact on her.

7.4 Constraints to food self-provisioning

Food self-provisioning is a part of a diversified food provisioning strategy and households expressed a range of reasons for provisioning their own food. Nonetheless, households had to deal with constraints on their participation in these activities. In particular, there were tensions between the seasonality of self-provisioning activities, household time and labour, and changing environmental conditions and management regimes.

First, for most unpaid work, the principal resource for participating is time (Felt & Sinclair, 1992). Just as there has been a shift towards more purchased foods over the last forty or so years, there has been a corresponding shift to more paid employment. This includes more year-round work or employment in more than one job. Some family members work multiple jobs during the summer months when more employment is available - such as combining work in fishing and tourism - while others supplement primary income from seasonal work with part-time work in the winter. More demanding paid employment schedules places increasing pressure on the amount of time and household labour available for food self-provisioning. For example, Tina and her husband were employed full-time with two kids. She said:

Growing up we used to go raspberry picking. But we don't do that so much anymore. Not because I don't enjoy berry picking... But it's because we're so busy with work. That's probably another thing that's changed between the kids' generation now growing up and my generation growing up.

Lynn described some of the challenges many young families face in growing and harvesting their own food:

And young families that are here, both of the parents are working. And some of the moms are working two jobs, right? So do they have time to be farming; do they have time to have the animals...they don't really unless somebody stays home. That is a big challenge. And you're just providing for the family then.

In Lynn's case, income from her husband's paid employment was sufficient to allow her to work at home and provision more of her family's food.

Time was a particular constraint in the summer when most households were busiest with paid work. Households that were not working were still busy in the summer with traveling and visits from family and friends. The summer and early fall is the most active season for food self-provisioning including berry picking, fishing, and gardening. Sylvia and her husband both work full-time in the summer. She described not having time to pick berries like she did growing up: "Well I'd like to [pick berries] but I don't get the opportunity so much now. We got a few local raspberry bushes in our backyard and cherry trees, we usually get a few cherries...I guess the summers fly by so fast now, don't get a chance to go off in different places looking for them." Most recreational fisheries including cod, salmon, and trout take place during the summer. Lilith described her husband's restricted participation in the recreational fishery: "He's been busying working so he may not get out [recreational cod fishery] this time. The summer he was out once on the weekend. He and Sharon's [daughter's] husband were out. Just so happened it was open on their second weekend off work."

Compared to fishing, time was less of a constraint for moose hunting. Moose hunting takes place in the late fall and early winter when households generally have more

flexibility in labour scheduling. The season for hunting moose is also longer than for recreational fisheries providing more opportunity to participate. Time available for self-provisioning also changed over the lifecycle of families. Some described more time available for gardening and other activities since retiring from paid employment and raising kids. Marilyn explained, “Both of us were working and just didn’t seem like we had the time to put into it [gardening]. Since our boys are grown up, we’re starting to get back into it. Have more time for it.” While the last several decades have seen more pressure on household time and labour scheduling this is not only a recent challenge. Jim is a retired teacher who started teaching in the 1950s. He described having more time to garden than his neighbours because he had the summers off: “It was cheaper to grow them [vegetables] than to buy them. I had summers off because I was a teacher for thirty six years.”

While having sufficient time and labour within the household was a constraint for food self-provisioning, sufficient capital input was also necessary. There is tension between having sufficient time to engage in food self-provisioning while also having sufficient income to purchase the necessary materials and infrastructure. There is some indication from this research that the most economically marginalized households had challenges in affording the upfront costs of materials. Jane, who relies on a very limited income said, “I would like to grow tomatoes. But you don’t have money to buy plants.” Teitelbaum and Beckley (2006) in their national survey of rural self-provisioning similarly found that these activities were “not equally accessible to all, and that in fact, the poorest of the poor are shut out from participation in some activities due to a lack of access to land, materials

or capital required to participate” (p. 115). There are indications that the poorest of rural households in developing countries often similarly lack access to land and livestock holdings and fisheries resources and consequently have challenges climbing out of poverty (Allison & Ellis, 2001; Ellis & Freeman, 2004). Within CFS research, social inequity in terms of the inability of economically marginalized households to purchase food has received substantial attention. However, CFS research has yet to consider how those most economically marginalized may similarly face challenges in accessing the necessary inputs for food self-provisioning. A foodscape lens that is attentive to connections among different food systems structures - including formal and informal food economies - shows that there may be common food access challenges for the most economically marginalized across these realms.

However, it wasn't only households with limited incomes that faced constraints in material and capital inputs. Obtaining the necessary materials and infrastructure such as access to boats or land influenced the extent and nature of participation in food self-provisioning for many households. Sharing among households helped meet some of these needs. Lynn and her husband have a garden on their own property and were also provided access to land by an older neighbor who was no longer able to maintain his much larger plot. This larger plot provided Lynn's family with the extra space they needed to grow potatoes and turnips and, in exchange, they provided their neighbor with root vegetables for the winter. For fishing, some relied on other family or friends with boats to participate. For example, Tina explained: “...he [father] used to be a fisherman... We used to go participate in the recreational fishery...he would take us. So

we had quite a bit of experience in the boat.” However, there were limits to having to rely on others with boats. Sylvia said, “We don’t own a boat. Our friends own a boat but they’re away this year. Hopefully we’ll have the opportunity to go out before it closes.”

Similarly, Tina said now that they owned a boat they could explore new fishing grounds:

Before we had a boat of course- we had it now this last three years- we didn’t participate much... I grew up fishing in the Eastern Arm [of Bonne Bay] or what have you... but now that we have this boat we can launch up the launchway there in Rocky Harbour and go up to Green Point, which is supposed to be where the bigger fish are.

In addition to household resources including time, labour and capital inputs, environmental conditions and management of resources influenced participation in food self-provisioning. This was particularly clear in the case of the recreational cod fishery. Most households described a decline in the abundance and size of fish in Bonne Bay. Consequently, some said it wasn’t worth their effort to participate and just catch fish of small size. Furthermore, some were not satisfied with the timing of the recreational fishing season for catching fish, in terms of the abundance or quality of fish that could be caught. Billy has fished recreationally for many years. He explained:

I don’t catch a lot of fish. We used to one time when we were allowed to catch fish. But usually now when the season is open, when the food fishery, the recreational fishery is open, there’s nothing to catch out there anyway. And I find the summertime like, that the water I suppose is so warm, the fish is, I just find it so white and gooey and I don’t like it.

Marilyn used to fish commercially and expressed a similar perspective:

The food fishery, it’s good for some parts of the Island. Around here it’s not because by time they open it here it’s gone. Cause cod follow the capelin and by the time August comes there’s no cod around... Like years ago when there was plenty of fish, in August if you had to live on cod in August month old people would say around here if you had to live on cod in August month you’d starve to death, and that’s when cod was plentiful. So you know what it’s like now. You’d

be out here hours and hours and hours you might get a little Tom cod we call it.
Baby fish, baby cod.

Both Billy and Marilyn described a disjuncture between the recreational fishing season – which takes place mostly at the end of July and early August- and the time in the season best for catching cod. Northern Gulf cod undertake an extensive annual migration (Fisheries and Oceans Canada, 2012b; Murray, Neis, Palmer, & Schneider, 2008). In the winter, they are found off southwestern and southern Newfoundland in deeper water. In the spring, they migrate towards the west coast to begin spawning. Throughout the summer, the fish continue to migrate northward and move into coastal areas along the west of Newfoundland and Quebec’s Middle and Lower North Shore. Their migration is driven by the presence of capelin (on which they feed) and warmer water (Fisheries and Oceans Canada, 2012b; Murray et al., 2008). The commercial Northern Gulf cod fishery usually takes place in June and again in October, timed to coincide with the annual inshore cod migration in the late spring and early fall. By the time the recreational cod fishery in Bonne Bay opens in July and August most cod have already migrated further north. The recreational cod fishery also opens up at the end of September during the return migration of the cod, but only for a one-week period. Consequently, because of dissatisfaction with the fish they could catch themselves during the recreational fishery, some households purchased more seafood from local fish harvesters. As one informant said, “When I buy fish usually it’s from the guys that are fishing outside the Bay and they catch it in the fall and it’s a different fishery. It’s much different than what you get in the Bay here.”

Other concerns with management measures in place for the recreational cod fishery included daily limits on the number of fish that can be caught. For example, Edward said, “Gotta steam all that way just for five fish. Instead of that they should just let you get your amount, get it done with.” Presently catch is limited to a maximum of five fish per day per fisher or 15 per boat if there are more than three fishers (Fisheries and Oceans Canada, 2012d). Rising fuel costs for a small number of fish was a challenge mentioned by a number of households. Some said they would prefer to make fewer trips for a greater number of fish at one time. These challenges may account for the relatively low participation rate and low number of fish caught in the recreational cod fishery in this area. The West Coast/Northern Peninsula region had the lowest participation rate in the province in 2007 along with the lowest average number of cod caught (Fisheries and Oceans Canada, 2007).

Concerns about the management of recreational fisheries for cod, and other species, are linked to a context in which catching seafood for subsistence has become more restricted over time. Edward explained, “Years ago with no regulations on fishing we used to get all kinds of fish. Now we’re lucky if we get a bit of codfish... We were used to all this freedom, all of a sudden you can only do what they tell ya you can do. Bit inconvenient.” In the late 1990s, a more limited recreational cod fishery - with stricter limits on seasons and number of fish that could be retained - replaced the previous food fishery (Fisheries and Oceans Canada, 2007). In vernacular use, many Newfoundlanders still refer to the cod fishery as one for “food,” while regulators now describe it as “recreational” (Bavington, 2008). Bavington (2008) argued that this shift in language reveals

fundamentally different ways of valuing fish - one as a take-or-leave amenity, the other as a right to fish for food (p.186).

Since the collapse of cod fisheries in the 1990s there have also been new rules around local seafood access and allocations, including the *1997 Professionalization Act*.

Professionalization aims to restrict fish harvesting to those who meet established guidelines and training for full-time harvesters and limit those who only participate part-time (Bavington et al., 2004). While these policy changes have raised concern about distributional and intergenerational equity among commercial enterprises, in terms of who can fish and the rules for passing down enterprises (Khan, 2011), they also raise concerns about equitable access to fish for subsistence use. For example, as shellfish species including crab and lobster have become more lucrative commercially, they can only be fished by professional harvesters. This change in subsistence access to these species over time was described by Sam, a senior who grew up in the region: "You could set out a pot and get a few lobsters for yourself. Then after you had to have a license. Now you can't set a pot, only if you're a bona fide fishermen."

There are some tensions between commercial and recreational fish harvesters, particularly in a context of resource decline. For example, the Fish Food and Allied Workers Union (FFAW) expressed concern about a recreational fishery for cod in 2001 when total allowable catches were at historic lows (Fish Food and Allied Workers Union, 2001). Unlike before the cod moratorium, the allocation for the recreational cod fishery is now taken out of the total allowable catch for the commercial cod fishery (Alain Frechet,

personal communication, October 2012). In 2006, the most recent year for which data are available, about 161 tonnes of codfish were caught in the recreational food fisheries for the 4R3Pn region as a whole (Fisheries and Oceans Canada, 2007). In comparison, 1742 tonnes were caught in commercial fisheries in 2011 (Fisheries and Oceans Canada, 2012b). Although shrimp, lobster and crab have become more important commercial species, the inshore harvesters interviewed as part of this study still relied on the cod fishery as an important part of their enterprise. At the same time, catching cod for food is part of a cultural tradition for many residents and is ensured in the province's terms of union with Canada (Bavington, 2010). Studies of fisheries in other countries have similarly noted the divergent concerns and tensions that can arise among different user groups in shared ocean spaces, including conflicts among commercial and recreational fisheries due to competition for space or catches (Varjopuro & Salmi, 2003).

This foodscape analysis illustrates how the management of fisheries resources shapes CFS and the ocean as a site of food acquisition in terms of rules around who can fish, how much they can catch, and the setting of harvest levels for different species. A foodscape lens is also amenable with a governance perspective - in contrast to a more narrow management perspective - because it highlights the many actors, perspectives, and concerns that come together in decision-making (Jentoft & Chuenpagdee, 2009). There is growing recognition within some fisheries research that food security is an important issue tied to how fisheries are governed (Charles, 2011). Increasingly, many are arguing that co-management approaches that involve wide participation and discussion among

governments and fisher groups are needed for effective management (Salmi, Toivonen, & Mikkola, 2006).

Despite potential tensions among fisheries activities in a shared ocean space, a foodscape lens also reveals the many ways in which commercial and recreational fisheries are connected in the context of food provisioning. For instance, most households accessed local seafood from a combination of recreational fisheries and direct purchases from commercial fish harvesters, as well as purchases from local fish plants (Chapter Five). The extent of purchases from commercial fish harvesters partially depended on the amount and quality of fish households could obtain themselves. Furthermore, some commercial fishing families participated in both types of fisheries, taking part in the recreational fishery so that they could spend more time on the water with their family, children, neighbours, or tourists.

In terms of subsistence access to fish, there are also constraints facing subsistence use of fish for commercial fishing families. First, the trend towards professionalization and rationalization of the industry has implications for subsistence use, as limits on the number of enterprises results in a reduction of the number of families directly accessing fish. Second, many fishing families are having to make trade-offs between selling their catch to licensed buyers and keeping some for their own subsistence. Particularly as prices for many species are low, harvesters have to sell more of their catches to licensed buyers to qualify for maximum Employment Insurance in the off-season and may keep less fish for themselves. For example, as described by harvesters involved in this study,

the dockside price paid by licensed buyers for lobster in 2011 was only \$4/pound and 58cents/pound for whole codfish. Most harvesters kept enough cod to feed their families for the year, but even some cod was sold and nearly all of the catches for more economically valuable species such as lobster and crab were sold. Danny is a fish harvester. His kids are grown up and he provides seafood for himself and his wife:

Almost all of it is sold to the plants, right? We sell everything, but now we keep some for ourselves for the winter or whatever, right? But lobster you sell all your lobster, probably keep a little bit of halibut for yourself. Codfish, well we got a bit here for ourselves. But most everything is sold to the plant.

In addition to low prices from licensed buyers, it is hard for families to plan their income for the year and manage how much fish to keep for subsistence use because prices are changing and they often don't know the prices in advance of the season opening. As one fish harvester said, "it's hard...sometimes you don't know [the price] til you get ashore." The next section about informal economies looks more closely at the role informal direct sales by harvesters to local residents play in supporting fishing enterprises, as well as some of the constraints to these informal sales.

While environmental conditions and management regimes influenced commercial and recreational fishing activities, these factors also influenced moose hunting. However, unlike more limited fisheries resources, moose was easier for most households to access, particularly since a hunt has been opened up within Gros Morne National Park. For the first time in 2011, licenses to hunt moose were given out in the park to reduce a high moose population. However, none of the residents interviewed expressed concern about not being able to hunt within the Park prior to this season. Some hunted within the

enclaves or traveled a relatively short distance to hunt in areas outside the park boundary as explained by Billy:

Well you can't hunt in the Park. But it's really easy because it's only ten minutes or fifteen minutes and we're out of the Park. Like Lomond. Or in through Mackenzies Brook, only a few kilometers and you're out of the Park. So it doesn't really affect me. Affects you to a point, yeah. People say there's a moose there on the side of the hill you can't go shoot it. Which is true. But it's no big deal really right.

Further, most had been able to access a license as they needed. A relatively high number of moose licenses are given out in the management areas surrounding the park compared to other parts of the province (Newfoundland and Labrador Department of Environment and Conservation, 2012). Most hunters said they received a license every second year. Some households with more than one hunter were able to get a moose license each year. Tina and her husband both hunt. She explained, "We don't both have a license this year. We don't partner up with anybody. Way you hope it works is we each get one one year. It has been working that way. He would get one one year and I would get one the next year." Further, since the Park hunt has opened up, the chance of getting a license has further increased. More licenses were offered in the 2012-13 season than were taken up by local residents (Darroch Whitaker, personal communication, November 2012).

In summary, little research has looked at the role of self-provisioning in relation to CFS. A foodscape approach has highlighted the range of self-provisioning activities in which households in this study participated. Self-provisioning activities took place in a seasonal cycle involving paid and unpaid work. Participants described a range of motivations as well as constraints facing their engagement in food self-provisioning. Participation takes

place within the constraints of household resources including time, knowledge and skills, capital and material inputs, and is shaped by changes in resource conditions and management regimes. The following section looks more closely at how self-provisioned foods are distributed within communities through informal economic networks.

7.5 Informal economies: Sharing, bartering, and “under the table” food sales

While self-provisioning in this sample of households usually took place at the household level - such as in the form of household gardens or a moose license held by a member of a household - these activities were clearly influenced by factors at other levels, such as government regulations and changes in resource environments. Further, the distribution of self-provisioned and other locally-harvested and grown foods depended on community-level networks of exchange and reciprocity (or ‘informal economies’).

There is some emerging evidence in North America that informal economies are important to rural food access. For example, some studies comparing patterns of food access across urban and rural communities in the United States found that rural households were more likely to rely on informal food exchanges, and to give and receive food from family and friends including meat, fish, and garden produce (Morton et al., 2008; Smith & Miller, 2011). Similarly, some new research is demonstrating that social capital, in terms of social ties based on trust and reciprocity, are important to the food security of rural regions (Wesley & Sharkey, 2012).

A range of activities makes up informal economies. Tickamyer and Wood (1998) distinguished among three broad categories of informal economic activity: unreported or “under the table” money exchanges for goods and services; barter of goods and services; and self-provisioning activities. The informal food economy around Bonne Bay includes each of these types of activities, among which there is a great deal of overlap. The sharing and barter of self-provisioned goods through informal economic networks was important to accessing self-provisioned foods, while “under the table” purchases were also important to accessing some local foods and in particular seafood. I first look at the sharing and barter of self-provisioned foods among households, and then at informal “under the table” sales of local foods.

The sharing of foods among close family and friends was common among the households interviewed. Cultural anthropologists have distinguished among different types of reciprocity. The giving and sharing of food that takes place among family members and close friends without any expectation of immediate return is known as “generalized reciprocity” (Ferraro & Andreatta, 2010). One of the most commonly shared foods was moose. Of the households that did not hunt their own moose, nearly all described having some moose meat given to them by other family or friends, such as Marilyn:

Well I don't do much hunting. But I usually end up with a quarter moose every year. Like last year my sister and her husband had a moose license and there's only two of them and they got their moose. A full moose is too much for any one family- especially if you don't eat it that often.

Sometimes the bonds of reciprocity that contributed to sharing also spanned generations, as captured by Charlie: “Me son gives me a quarter moose. I feed them [children] one

time.” Despite the extensive sharing of moose that continues to take place, there was less of a preference among some older residents for eating moose. For example, Sally explained, “No, I don’t like moose...Ate it when I was home growing up. I liked it then. I liked lots of things then that I don’t like now.” These changing food preferences are elaborated further in Chapter 8 about food preparation and eating.

While the sharing of moose was common-place among households, seafood was also sometimes shared. For example Stephanie, a senior woman who lives by herself, explained, “And I’ve got relatives down to Port aux Choix and they have a big plant down there. And my brother-in-law usually gets fish in the fall, and sends up vacuum-sealed. His family’s really good to me.” However, some noted a decline in the sharing of fish compared to the past. Jackie has lived in the region most of her life and said, “Now if we were out around and they were fishing or whatever they would share, I think. But not like one time. One time you were there and people were jigging fish, oh take a fish and bring it home, but not today.” Less sharing of cod likely reflects the constrained access to the resource in both commercial and recreational/subsistence fisheries, limited landings and potentially the effect of other regulations implemented following the collapse of cod stocks, such as the requirement for dockside monitoring of all commercial cod landings (Fisheries and Oceans Canada, 2002). A foodscape approach illustrates the embeddedness of these economic arrangements in changing environmental and management contexts.

However, the sharing of foods among friends and family did not only take place within the region. Many households sent foods to family, and particularly kids, who had moved away from the island. For example, Danny is a fish harvester with grown kids that now live off the island. He said, “One of my sons just went back [to the mainland] and the other brother went back two weeks ago and he took back two coolers full of cod fish with him.” Bottled foods, including beets and moose, were also commonly sent to family on the mainland, as Sam described:

The ones up on the mainland they still love moose cause they can’t get it. Now I still likes a meal of moose myself too. If I bottles up two or three cases I’ll send it up there. And beets. Three years ago Lilith and me cooked it up. I believed she had three cases, I had three cases, and six cases for the mainland.

The distance over which these ‘local’ foods travelled challenges proximity as the main indicator of local. Rather, a foodscape lens reveals other characteristics that may contribute to the localness of a food. van der Meulen (2007) similarly argued that there are attributes beyond geographical proximity that contribute to local foods, such as traditionality - in terms of connection to dietary culture - and methods of production. For example, in this study, foods such as cod fish and beets have a long connection to local dietary culture, and the method or ‘typicity’ of production, such as the catching and freezing or salting of cod fish or the bottling of moose, also contributes to the unique attributes of these foods (van der Meulen, 2007). Even when shipped off the island, these foods are still understood as ‘local’ by the family members both sending and receiving them.

In addition to sharing, the barter of self-provisioned foods also took place. For example, Marilyn bartered jams she made for moose hunted by other people:

Every year seems like I get a fair amount of moose given to me because like where I make jams I give them a couple bottles and it's almost like a barter system. Only thing is you just don't exchange things right at that time- if they come I'll give them some jam and then when they get their moose they come back give me a couple meals of moose. I usually end up for enough moose for my winter like that.

Charlie similarly described trading capelin for moose meat: "Had a couple meals [capelin], somebody bought me some, I shared them up. Gave some to my sons. Time comes, they'll give me a piece of meat." This type of reciprocity, in which there is some expectation that goods of a similar value will be returned within a certain period of time, is known as "balanced reciprocity" (Ferraro & Andreatta, 2010). These descriptions also exemplify the seasonality of food self-provisioning as items are exchanged as they became seasonally available.

"Under the table" purchases were also very common, particularly for seafood, which was often purchased by residents directly from harvesters outside of formal channels such as fish plants. Technically under the provincial *Fish Inspection Act*, a person may not purchase fish from a harvester for processing or marketing without a fish buyer's license or a fish processing license. As such, this Act prohibits direct sales of seafood from fish harvesters to local people, tourists, or restaurant owners who lack these licenses (Khan, 2011; Murphy & Neis, 2011). Nonetheless, many households described purchasing some seafood directly from fish harvesters through informal economic networks. The selling of fish directly through informal markets may meet the twin CFS goals of economic

viability and social equity. Selling directly allows fish harvesters to retain a greater share of the final price for their catch, have more control over their marketing, at the same time that residents can access local seafood at a price lower than what they would pay in retail venues and also know where their seafood is coming from and that it is fresh.

As outlined in Chapter Five, friends and family were ranked on the survey as the most preferred source for local seafood. Buying fish directly from harvesters was preferable for reasons of quality, price, and traceability, and this continues a history of local acquisition and exchange in seafood. As one informant said, “Sometimes it’s illegal. I know the fishermen, a couple of them are friends, I basically know where to go. I know who’s going to give me top-quality, skinned fillets, dried. I can put in an order for fillets fresh or dried.” When accessing fish was closely tied to these community networks, it was not always described as “buying.” For example, one informant said, “[We] buy a bit of salmon in stores but never bought a dried [cod] fish. If we can’t get it from the food fishery we get it from fishermen.” Even though he paid the fishermen, he didn’t refer to this as “buying,” reflecting how other aspects of the transaction - such as knowing the fish harvester and a history of exchange - were more central than the money that changed hands.

However, the practice of purchasing seafood directly from local fish harvesters was highly dependent on having access to community networks. For some households that had moved more recently to the region this was a challenge. Kyle and his partner had moved to the region five years ago and explained, “Well we don’t really have connections

with local fishermen to say get it [fish] that way. We've never really done that." As Hinrichs (2003) pointed out, the local can sometimes be parochial. Kyle relied on getting fish from his Dad from the eastern part of the Island. He said, "Yeah, from the east coast. So it's not local, it's local from the east coast. Locally caught. I mean caught by a family member in Newfoundland waters, that kind of local." Kyle's comments highlight the ambiguity of what constitutes 'local.' In his case, other considerations such as the fish being caught from a family member and a history of eating fish caught by his Dad contributed to fish being 'local' to him even when he was bringing it from the east to the west coast of the Island.

The seafood accessed through informal economic networks came from independent harvesters operating small boats and longliners in the inshore and offshore. All cod is now harvested in the inshore by small open boats and longliners using only fixed gears such as longlines, gillnets and handlines (Fisheries and Oceans Canada, 2012b). Other fisheries have inshore and offshore sectors. The crab fishery takes place inshore and in deeper waters offshore, and some harvesters have licenses to fish in both. Danny, a fish harvester, explained, "Turbot is caught offshore. The license we got for the big crab boat is offshore. And we got another license for inshore crab. Lobster is all inshore. And cod is all inshore." These overlaps among fishing sectors and activities problematizes easy categorization of what constitutes the 'local.' Johnson (2006) similarly raised the question of where small-scale fisheries start and end. Researchers who have argued for understanding the complexity of 'local' food systems have made their arguments exclusively on the basis of land-based food production. However, this foodscape study

indicates that the 'local' is equally as complex in sea as it is in land-based food production.

While direct sales are important to local seafood access for households, direct selling of seafood outside the formal economy was also important to providing many fishing families with a better price for a portion of their catch. The combined challenges of low prices from licensed buyers and rising costs, including for bait, licensing, and fuel, often made informal direct sales an important supplement to sales to fish plants. Often, these sales took place to local residents, although sometimes fish harvesters also sold to restaurants. This was described by one fish harvester:

We sell our cod fish for \$4/lb for fillets to Corner Brook. \$4/pound fillet equals \$1.10/pound for whole fish. We can get about \$4000 from selling to Corner Brook or \$2000 from the fish plant. If they enforce regulations that you can't sell locally it will be a big problem. We can go to the fish plant and say you give me this price because I can get it for this locally. The way people have always done things, you've done it this way all your life, and now they're coming and saying you can't do that.

Sometimes, informal buying and selling of foods took place among fish harvesters and farmers, as described by one fish harvester:

I think, okay, I want them to buy my fish. I want them to give me a good price for my fish so they might have to pay me a little more for it, but then if I have to buy a little more for the products from them that help them out, I'm willing to pay that little bit more to buy the local produce.

However, there were constraints on how much seafood that could be sold directly by fishing families within their community. In particular, qualifying for maximum Employment Insurance earnings limited how much of their catch they could sell directly, just as it also influenced how much seafood families maintained for their own

subsistence. This challenge was described by Deatra, whose father used to be a small-boat harvester: “Yes the big boats, long liners got lots for stamps. But inshore can’t do it the same. Because of the quota the small inshore fishermen can’t get as much. All the seniors - say twenty five of them want a hundred pounds of fish each - they can’t get it all from small boats.” At the same time, the opportunities for establishing more formal arrangements for the direct marketing of local seafood are limited within the current regulatory context (Murphy & Neis, 2011), and because of concerns among some harvesters that setting up more formal direct marketing outlets, such as cooperatives or community-supported fisheries, might jeopardize existing relationships with licensed seafood buyers in their community (Lowitt, 2011b). In the Port aux Basques region, research has indicated that some harvesters were also concerned about the potential effect of direct sales on local employment opportunities for plantworkers in the two regional plants (Temple, 2010).

From a foodscape perspective, “constellations” of paid and hidden paid work - such as the selling of fish to fish plants and through informal economies - contributes to the broader goal of livelihood production for fishing families (Teitelbaum & Beckley, 2006, p. 119). Increasingly, it is not only from fishing that fishing families are earning a living. More families are taking part-time employment in non-fishing jobs to make ends meet. For example, John and Roxanne Decker have been fishing together for twenty years. In the last few years, Roxanne started working at a local restaurant after the lobster season is over in order to earn enough income to qualify for Employment Insurance. She noted, “If there was enough work, I’d be out in the boat with him.” Other harvesters are pursuing

training in other occupations, such as heavy equipment operating because of declining fishery incomes. Similar trends in the livelihoods of fishing families have been described in other places. Petterson (2000) noted that livelihood strategies combining fishing income, paid employment, and government payments are becoming more common among small-scale fishing families in Norway.

Even more recently, changes to Employment Insurance policy implemented in January 2013 with the purpose of keeping Canadians “connected to the job market” (Service Canada, 2013) pose potentially new challenges to the livelihoods of fishing families. These changes have come under scrutiny for targeting frequent claimants, including those in seasonal industries, by forcing them into the workforce sooner and changing the definition of “suitable employment” that involves having to accept lower-paid work potentially outside of their community (“Employment Insurance, 2013;” “Major Changes,” 2012). Premiers in the Atlantic Provinces have warned that the new rules could have a devastating impact on seasonal industries such as fishing, farming, and tourism, and expressed concern that if people are encouraged to leave their communities to take other jobs they may not return (“Employment Insurance,” 2013).

The economic viability of independent fishing enterprises is crucial not only to the local seafood access of local residents and subsistence access to fish among these households, but to maintaining the economy and social fabric of coastal communities. More and more, strong and vibrant communities, of which independent fishing enterprises are a vital part around Bonne Bay and other coastal communities, are seen as key to achieving

CFS and sustainable food system goals (Blay-Palmer, 2010; Feenstra, 1997; Knezevic et al., 2013; Winne, 2005).

In summary, a foodscape perspective highlights the ongoing importance of self-provisioning in the Bonne Bay foodscape and the embeddedness of these activities in informal networks of exchange and reciprocity. The importance of self-provisioning and informal food exchanges is well documented in this study, some emerging research about rural food systems in North America, and in research from other rural regions around the world. A foodscape approach indicates there are clearly systems of food provisioning in the Bonne Bay region and elsewhere that are long-standing, changing and 'alternative' to the conventional food system. Nonetheless, self-provisioning and informal food economies have only been explored to a small extent in the CFS literature, which continues to focus primarily on alternative market-based ways of procuring food. As such, rural systems of food provisioning may actually challenge what constitutes 'alternative' within much existing CFS and local food systems literature (Qazi & Selfa, 2005). Qazi and Selfa in their study of producer and consumer relations in rural Washington similarly argued:

Despite the lack of local markets and consumers for many organic and alternative products, like those available in Seattle and other affluent "foodie" regions, there are numerous alternative food provisioning systems in place in these rural regions. These challenge our conceptions of what constitutes alternative systems and what alternatives may achieve (p. 461)

Some respondents in this study, such as Nancy, separated themselves from what is often understood as 'alternative' food: "I'm not one of these vegetarian whatever, healthy, green, gotta have everything just so. But I like to know what I'm eating, where it came

from, what went into it.” Some researchers are beginning to question the “efficacy of local food movements as a consumer-based political movement in generating substantial political change” (Blue, 2009). Self-provisioning in which the consumers of food are also the producers may be a more substantial challenge to a capitalist food system than the market-based alternatives often studied among CFS and local food systems scholarship.

7.6 Connections among formal and informal food economies

Self-provisioning and informal food economies form alternatives to the conventional food system and challenge what constitutes the ‘alternative’ in much of the CFS literature.

However, in the search for an expanded look at alternative food systems it is important to not draw tight boundaries around how each of these is constituted. A foodscape lens that follows interactions among people and food also demonstrates the many connections that exist among informal and formal food economies and self-provisioned and purchased foods. While little CFS research has focused on self-provisioning and informal food economies, even less research has looked at the ways in which formal and informal food economies work together to support CFS. For example, self-provisioning influenced the types and amount of foods that were purchased by households. The livelihoods of some local food growers and harvesters depended upon a combination of selling, subsistence use and bartering. Informal economic bonds of reciprocity also applied to the sharing of some purchased foods. Lastly, informal economic activities relied on capital provided by the formal economy and some self-provisioning activities overlapped with the formal food system, such as paying a local abattoir to process wild harvested game.

A foodscape analysis indicates that CFS in the Bonne Bay region takes place at the intersection of formal and informal food economies. This is particularly significant in light of growing discussions within CFS research and beyond about resilient social-ecological systems. A resilient system is generally understood as one that can persist, adapt, be innovative and transform, and is prepared to deal with change (Davoudi, Brooks, & Mehmood, 2013). In the context of food systems, resilience has mostly been discussed in terms of maintaining diversity and variability in food sources (Feenstra, 2002; Knezevic et al., 2013; Stroink & Nelson, 2009). This study suggests that formal and informal food economies may help provide the “complexity of approaches” that are needed to increase resilience and provide “collective strength” for a local food system (Stroink & Nelson, 2009, p. 26). Particularly in rural regions such as Bonne Bay, relying on long food supply chains may reduce resilience as foods must travel long distances to reach their destinations and access to them may be disrupted by events such as weather or industry and market changes that influence what is produced and what is delivered where. When they do arrive, they often cost more and are likely less fresh (Stroink & Nelson, 2009). Self-provisioning activities that make use of a range of ecological niches may be important in reducing over-dependence on imported foods and long-distance transport. However, at the same time, changes in resource environments - combined with regulatory frameworks that often restrict subsistence access to wild foods - can pose challenges for securing local food sources such as fish or wild game. A diversity of food sources as documented in this study of the Bonne Bay foodscape may help provide some “slack and flexibility” so that the food system can better withstand change and absorb disturbances in either one of these realms (Berkes et al., 2003).

In the following chapter, I use a foodscape lens to connect this discussion about food acquisition, based on a combination of food purchasing and self-provisioning, to the preparation and eating of meals within households.

Chapter 8 Meal Preparation and Eating

The last two chapters focused on different ways households acquire food in the changing foodscape around Bonne Bay. This chapter looks more closely at the preparation and eating of food. I use a foodscape lens to look at how food acquisition (Chapters 6 and 7) interacts with a range of factors within the household - such as food preferences, kids' eating habits, lunch and work schedules, and ideas about healthy eating - to influence meal preparation and eating. Women performed the majority of this food preparation work and I consider this gender division of labour as an important part of the analysis. Given the important role that seafood traditionally played in the local diet a section is devoted to looking at changes in seafood preparation and eating over time.

8.1 Meal planning and preparation

One of the main influences on eating throughout the year was changes in food acquisition from both local and self-provisioned sources and purchased foods. Compared to previous generations, meals are much less structured today. In the past, structured meal plans were necessary for managing with limited food resources and diets shifted in accordance with locally available and self-provisioned foods (Omohundro, 1994). For example, Sally described cooking less structured meals when her children were growing up compared to meals her mother made for her:

After I got married I didn't have a pattern for meals, but Mom did. My mother usually had – they had different kinds of fish. Fish you might have salt herring on Monday. She would have like a jiggs dinner on Tuesday... Wednesday she usually had soup. Thursday she usually had a roast of some kind. They usually had their moose. Friday she'd have fish...probably have dried cod. Saturday, every Saturday for dinner we had pea soup. And Saturday evening she usually made saltfish and potato cakes...I didn't have a pattern like mom had.

Greater cash incomes and availability of purchased foods over the past several decades means that meals today are less dependent on local and self-provisioned foods than in the past. At the same time new media influences, including television, has contributed to the spread of new culinary ideas and supported the consumption of more imported foods (Omohundro, 1994). Consumers today are subject to an array of food advertising.

Researchers in Canada have noted that the food industry spends the most on advertising compared to any other major sector of the economy, with emerging evidence that the largest spenders on advertising are those that manufacture processed and packaged foods (Winson, 2004). As elaborated further below, this study found that the social pressure to eat processed and packaged was experienced the most strongly among kids, and in particular school lunches.

Despite these pressures and changes in traditional foodways (Chapter Four), meals for most households were still shaped by changes in the seasonal availability of different local foods. First, most households ate more seafood during the summer and less in the winter. Nancy described her family's seasonal change in eating fish: "In the summer we might have it two or three times a week when it's readily available, right from the water to the frying pan basically. I still try, if not once a week, once a week and a half I try to get a fish dish in [in the winter]." Although eaten less overall in the winter, most families ate some fish by storing it through freezing, salting, and, less commonly, bottling or pickling. Some developed preferred methods of freezing fish. For example, Lynn's family ate a lot of fish, including salmon her husband has a license to catch. She explained:

We freeze fish, yep. We usually put it in water. And put it in freezer bags and the water's like an insulation believe it or not. So now Bill keeps the salmon in milk containers. Because it's – the thickness of the milk container- the salmon fits right in there. You just close it up, tape it. It's insulation. It's great because this is wax, and in water.

Most households knew approximately how much seafood to put away to last them through the winter. For example, for her family of four Sharon said, "Last year I think we had seventy pounds. That's just of cod, that's not including like our halibut or our salmon or trout or anything that we get." Marilyn fishes recreationally and also works as a crewmember on a commercial boat for a short time each season. She put away fish meals for her family of two: "Time fishing season is over I'll have plenty of cod for the winter and mackerel. I usually try to put away 15, 16, 17 meals." Some households had different ways of cooking fish depending on whether it was fresh in season or frozen. For example, fresh fish was more often pan-fried, whereas frozen fish was more likely to be stewed or used in cod au gratin. For example, Marilyn said, "That [cod] will last us til January. After that it starts to get freezer burn and it just doesn't taste the same. Then you can use it for cod au gratin, makes it tastes a little better."

Getting moose meat was also an important part of winter meal planning for most households. Households ate more moose in the winter following the hunting season in the fall and early winter. This usually lasted until the spring when local seafood again became available. Tina, who plans the meals for her husband and two young children, described her family's transition between eating fish and moose: "Fish once a week because it's summer and cod we've been having a good bit of that the last three weeks.

But through the winter fish maybe once every two weeks, moose meat once a week.”

Freezing and bottling moose were common methods of storing moose for the winter.

While nearly all households ate some moose, the preference for moose and how often it was eaten varied across generations. Some older residents described not liking moose any more. For example, Sally a senior woman who grew up in the region explained, “No, I don’t like moose. I don’t like rabbit. Ate it when I was home growing up. I liked it then. I liked lots of things then that I don’t like now...when you get my age your tastes changes.” Lynn described a difference between her food preferences and those of her parents:

People that lived here for years and never left the island they’re sick of moose. Like my mom, oh you know, maybe once a year or something. So they’re all strayed away from it. And a lot of people here too...Not myself and Bill- now I don’t know how we’ll feel when we’re sixty years old.

There were also seasonal changes in meals for some families related to fruit and vegetable consumption. Lynn maintained large vegetable gardens and said her family eats more green vegetables in the summer: “This time in the year now [summer] it’s more salads - like the greener things that’s out. Cherries are out in Ontario. And blueberries are out you know.” Of the 41% of interviewed households that gardened, all grew some root vegetables and stored these in a root cellar, cold room, or through bottling. Many households did not plan for seasonal changes in fruit and vegetable consumption to the same extent as they did for moose or seafood. However, most had a seasonal fruit or vegetable they looked forward to eating. For example, Jane looked forward to fresh corn and potatoes: “My goal in summer is fresh corn and new potatoes. That I do go after. I don’t go for peas and carrots like they do here.”

Planning and preparing meals was not only shaped by the acquisition of local foods but also by purchased foods. Most households made shopping trips to supermarkets in Deer Lake and Corner Brook every two weeks. Most families knew their food needs and purchased the same foods regularly. Kate, a young mother, explained, "I just pick up the same things. Sometimes I may change it up or whatever, but usually it's the same things I buy. Unless something goes on sale and I'm like, oh, let's try that." However, throughout the approximately two-week period between shopping trips for most households, a changing supply of fresh fruits and vegetables was an important influence on meal planning. For example, Michael, who lives with his wife and son, described changes in eating fresh foods over this two week period: "It's a feast famine two weeks in terms of good stuff. End of two weeks back into the freezer again." Similarly, Mary lives by herself and explained, "I have to rely more on frozen foods if I haven't made a trip out for a while, never scarcity though." Tina described planning meals for her family of four based around fresh fruits and vegetables: "We don't have it [fresh fruits and vegetables]. Unless we're going to Corner Brook, Deer Lake then you pre-think about it, kinda analyze your schedule for the next week and so we'll think about what we're planning to do the next week so maybe we'll pick up more that time."

Meal planning and eating throughout the year was clearly shaped by food acquisition. However, individual meals were usually prepared day to day. On a daily basis, managing food preferences, school lunches, work schedules, and health concerns were all important considerations in preparing meals. It was in the actual preparation of meals that the most clear gender division of labour existed. Traditionally, women have been seen as the

“gatekeepers” of the household, deciding which foods their family should eat (Allen & Sachs, 2007, p. 1). While these strict gender roles have diminished over time, research indicates women are still most likely to be responsible for food-related tasks (Allen & Sachs, 2007; Lake, Hyland, Mathers, Rugg-Gunn, Wood, & Adamson, 2006).

Most households spent on an average between one to one and a half hours preparing meals each day, and women were most likely to do this on behalf of the household. Seniors and single-member households generally spent less time preparing meals. For seniors, this usually had to do with a preference for smaller portion sizes while single-member households didn't enjoy spending much time cooking for only one person. For example, Mary lives by herself and explained, “Don't like to cook. When you live alone, you couldn't care less. I might make a shrimp stirfry and eat it for a week. My daughter brought me baked beans and I had them for the next three meals.”

For most households breakfast was fairly routine. Most households had cereals or toast throughout the week and occasionally cooked more elaborate breakfasts on weekends. Kyle described having the same breakfast every morning: “Breakfast is usually pretty boring and standard. It's strange how breakfast is the meal people are most accepting of having the same thing every day every day. Whereas you wouldn't do that for supper, or even lunch.” Lunch was often planned according to work and school schedules. It was the meal families felt the most pressure to prepare quickly in order to minimize time spent cooking and to accommodate short lunch breaks. A large body of research about food provisioning has looked at how food practices are shaped by “trade-offs” between

preferred practices and constraints, resulting in practices that demand more convenience in order to maximize time (Bava, Jaeger, & Park, 2008, p. 486). For families with kids, school lunches were the meals in which processed foods were most likely to be eaten, even when this wasn't a preferred practice. Tina has a young son and daughter. She explained, "...for lunch usually a quick sandwich or the kids might have pizzas with mushrooms, cheese on them. Maybe canned alphagetti. We don't eat a lot of canned food. For lunch some time we will open up something like that." Cathy described the pressure to have something quick for her kids to eat when they come home for lunch: "Something quick. Hot dog, hamburgers, then you got the kraft dinner. Sometimes my husband will have something cooked up. But something quick. Just grab and go." Lynn has a daughter who eats a lot of fish at home. When asked if she takes fish for lunch she explained:

She doesn't do that, right? ... She don't, where all the kids in school too they have everything- there's hot dogs and these little sandwich packs with this little bar in it and the juice boxes – oh my gosh it's crazy. They say healthy lunches and that but I mean what do you get.

Lynn continued to express concern that lunch breaks are too short for kids to eat healthy meals:

...And it's very hard to pack a lunch for her, right, to have all these little healthy things. Because the kids are so rushed in the lunchroom and everyone's just dying to get out of there and go play and go into the classrooms and run around. So they're all lined up at the door and she's one of the last ones.

For older kids, a lack of control over lunch meals was also a concern for some parents.

For example, Billy said about his son in high school: "And now of course he's a little bit older and he's got a few dollars, he goes over gets his dinner from one of the restaurants.

So it makes it hard to control what he's eating sometimes."

For families without kids, lunches were still likely to be relatively simple and easy to prepare, although there was less pressure to eat packaged foods. For example, Sylvia and her husband both work seasonally. She explained, "...when I'm working I eat at work. I don't go home for lunch... not much. Usually sandwiches, yogurt, something left over." Even when lunches were not impacted by work schedules, this meal was still fairly simple, with most effort put into the dinner meal. For some households in which family members did not have regular nine-to-five work schedules other meals impacted by working were similarly likely to be quick. For example, Elaine sometimes works split shifts at a restaurant and described her dinner as "eat and run." Conversely, larger meals were more likely to be prepared when all family members were home. For example, Lilith's husband works away in construction for part of the year. She said, "Yeah, I cooks more then [when he's home]. When it's only me you're kind of picking."

Dinner was the meal most time was spent preparing. Many households tried to do some from scratch cooking. Cooking from scratch was often described in terms of a "cooked supper." For many households planning dinner often consisted of taking food out of the freezer in the morning. Tina, who plans most of the meals for her family of four, said, "So I'll take out- it's usually something that's frozen- whether it's meat, ham, pork chop whatever- so I'll take that out and cook it 4:30 when I get home." Similarly, Sally who lives alone said, "Well 10 o'clock this morning what will I have this evening for a meal, I think I'll take out a pork chop. I plan that far ahead. But you know I don't plan for days or things." Taking meals out of the freezer works alongside the common food acquisition strategy of bulking up and freezing food. Often frozen meat was taken out of the freezer

while sometimes meals were prepared in advance and frozen. For example, Debbie, a mother of three explained, “At least once on the weekend I’ll take a whole afternoon, special cooking day. Not as good as I used to be – take a day and freeze meals. And then thaw it.”

However, some families, and particularly those with two working parents, faced time constraints in preparing dinner. Just as growing constraints on time minimized the extent of self-provisioning some families could engage in (Chapter 7), it also influenced the type of meals families ate, including greater use of processed and prepared foods. For example, Ellen described her cooking as “...a combination. We do have packaged foods. So it’s a mixture. Mixture of both.” Michael and his wife both work full time and often have meetings in the evening. Due to their busy schedule they hired a friend to prepare meals for them:

She prepared meals, we signed off on them. She bought food. We said we like this and this, go for it, get what you need. She would record her time spent, hourly rate. It was a few hundred dollars at the end of the day but it was worth it because we had a freezer full of good meals. Not just meals from the supermarket.

Michael’s household had sufficient income to spend on a cook but for most families this wasn’t an option. Even when households were not doing all their own cooking, eating processed or prepared meals still often relied on women’s labour, such as the woman Michael and his wife hired to prepare meals for them. Likewise, women predominate in low paying jobs in food processing and retail (Barndt, 1999; Canada Food Industry Council, 2004).

Like other meals, kids' eating preferences were an important influence shaping the preparation of dinner. Sometimes kids' preferences influenced meals eaten by all members of the household, while other times meals were prepared in several different ways. For example, Billy described how their kids' eating preferences shaped what the entire family eats:

I will say our daughter will eat just about anything now, she's changing her eating habits a lot, but not Todd. Still gotta have the grease and the chocolate... And he refuses really to eat anything green or orange, a carrot or a pea or anything like that...So that makes us eat a little different. So sometimes we'll cook something because Todd won't eat such and such a thing- so we'll cook something else.

Ellen also prepared meals in different ways depending on her kid's preferences: "They don't like certain things. They don't want this, they'd rather have this...Like rice I usually make it with different things, different types of vegetables. My youngest he doesn't want that and he just wants plain white rice. So it can differ." The extent to which kids enjoyed traditional foods varied. Nancy described her two young sons as traditional eaters: "My kids are very traditional eaters. They like a lot of the moose soup, rabbit they love fresh rabbit, partridge soup, heart and liver from moose. They love that stuff." On the other hand, Mary who raised her kids in the late 1970s said, "My kids wouldn't eat local stuff, anything I could get for free. If mom didn't pay dearly for it, then they weren't gonna eat it." Some parents expressed the sentiment that kids needed to be introduced to traditional foods, such as fish, at a young age. Cathy said about her daughters, "My two young girls love fish. I started them when they were tiny things."

The types of meals prepared, including the extent of cooking from scratch and eating of local and traditional foods, also depended on cooking skills. Some research has

suggested that entire societies are undergoing a “culinary transition” characterized by a shift in the types of skills needed to choose, prepare and consume food (Lang & Caraher, 2001). However, the extent to which a process of ‘deskilling’ among people to prepare their own meals is taking place is debated (Jaffe & Gertler, 2006; Lang & Caraher, 2001; Lyon, Colquhoun, & Alexander, 2003). Among the households interviewed, most adults had basic cooking skills although some younger families described a lack of skills in particular areas. For example, Michael described now knowing what to do with local foods. He said, “So if there was programming in the area- here’s the local stuff and what to do with it. Even to make a bunch and freeze it...” Cooking seafood was also a challenge for some younger families. Michael continued, “My wife’s uncle is a fisherman. A lot of my generation we don’t have cooking skills. Don’t know what to do with it. Not having time is a lame excuse. We don’t know what to do with this.” Similarly, Tina described not eating as great a variety of fish species as she used to do when her Dad would prepare them for her:

...because you know when Dad used to be at it he used to be the one that Tina I have some turbot here, try some turbot or halibut. He would be the one cooking the variety of fish species, but I don’t cook a variety of fish species because I don’t know if it’s because I don’t know how to cook turbot. He would be the one to always expose me to that.

On the other hand, older residents that grew up eating seafood described the range of ways it could be used. For example, Trudy explained, “You know you can make a good meal on very little. You don’t have to buy expensive fish. But if it is expensive, a small amount because you cook it, don’t wash it to death. And the fish juices if you do it with leek or onions or something like that to draw it out.”

Learning from family members was important to gaining cooking skills. Many women took for granted knowing how to cook. For example, when asked how she learned to cook, Elaine said, “Oh my goodness. Well I don’t know. I guess being home. I was the oldest girl out of eleven kids. So mom needed help somewhere along the line right.”

Younger women, such as Kate, recalled learning from her mom: “Just watching my mom cook, I guess that’s how I learned.” Many families prepared regular meals for which they didn’t need recipes. Ellen, a mother of two said, “...most of the time I’m making the same things. Every once in a while we’ll get the cookbooks out.” Increasingly, recipes from the internet are being used in place of books, as described by Kyle:

I actually saw that book in the bookstore, it’s the best-selling cookbook in Canada right now. It’s called 365 ways to cook quinoa. And I saw it. And I thought I could buy this, but you can get them all online anyway. I’m sure if I went online I could find 500 recipes for quinoa.

Nonetheless, certain recipes were passed down within families. For example, Karen described using her Aunt’s recipe for pickles: “I’m making pickles with cauliflower, cabbages, and onions... Recipe from my aunt. And it’s an old recipe. She’s 85. Now my pickles are not as good as hers now.” Ways of preparing meals are also markers of identity. Some women described methods of preparation unique to the time and place they grew up. For example, Jackie who is around 80 years of age, grew up in Labrador and described eating ‘fishermen’s brewis.’ She said some people don’t know about this dish in contrast to the more common ‘fish and brewis.’ She explained, “...the fish and brewis is the three - fish, brewis and potatoes. And you fry different onions and things to put over. The fishermen’s brewis is just altogether. No potatoes.” She described the fishermen’s brewis as “Delicious. We had that for breakfast growing up. In the morning

that's what you would have." Jackie continues to cook this dish of fishermen's brewis for herself and her husband.

Within shared households, in which men and women were married or living together, women performed the majority of food preparation work. However, there were certain types of meals men were more likely to prepare. For example, men were more likely to cook moose meat. Nancy did most of the cooking for her family but noted, "Now there's certain things, with the moose and things, the way my husband cooks it my kids like it better. So if we're gonna have a moose dish I'll make him do it." Similarly, Tina explained, "...we also eat a good bit of moose meat - he'll usually do the moose meat and potato sort of meal. I don't do it exactly the way he does it. Okay I have no problem with you taking over, you do all that today." Some research has indicated that men may prepare meals that are seen as more "befitting" for them to prepare, such as barbecues or Sunday breakfast (Williams, 1997 as cited in Lake, Hyland, Mathers et al., 2006, p.476).

Compared to women who cooked growing up most men described learning how to cook later on as adults. For example, Sam described learning to cook after his wife passed away: "We had fifty-four years together... I didn't do a thing in the house... [Now] I just I had to do it. Learned the hard way I guess. I put a chicken in the oven and when I opened that door I couldn't see nothing only just black smoke." Similarly, Henry described learning how to cook as an adult:

Well see for me actually I never ever cooked when I was younger at all, because I was married when I was 21 until 34. And my ex-wife liked to cook and I didn't know how to cook. I never cooked at home. My mother did all the cooking, my

father never did. It never occurred to me growing up to cook my own food. And then my wife never really pushed me to it...Over the years I got a bit more daring. When we split up I was 35 then, and I was living in various combinations with another partner or on my own, and I kind of had to then.

Kids also contributed to varying extent in the preparation of meals. Young kids were not involved in activities around the stove but sometimes assisted in smaller tasks. Ellen said about her young son, "Pete will try. He'll try to help sometimes. Often times he'll get his own cereals and stuff like that, that's not a problem. But I don't really like him touching the stove." Nancy described her two young boys as "hands-on:"

Then on days they're home from school they'll be cooking, baking. They love to be involved. It's fun. Pies and things...They're very hands-on. Jack wants some cod tongues tomorrow. 'But Mom I need to help fry 'em, right? I do the flour part, right?' Yes my boy you can do the flour part.

On the other hand, Billy said about his teenage daughter, "Becky cooks a little bit. She likes to make cookies sometimes. If she's having kraft dinner or something she'll cook that. Not a lot." Billy's teenage son did even less cooking than his daughter. Women and mothers were usually the ones to lead kids in these activities.

8.2 Mealtimes

While the "demise of the family meal" has received popular attention, recent studies of food in the West indicate that the meal remains an important template in most households (Caplan, 1997, p. 6). Most households interviewed described three regular meals a day, although these meals took place in different circumstances. Breakfasts were usually fairly quick meals and families may or may not eat together. Lunches were often eaten at different locations depending on work and school schedules. For example, Lynn

explained, "...well Hannah's in school. She stays in for lunch. She likes that. She likes staying with her friends and that. Bill and I's like clock works at the table right. Sometimes we have the tv on if the news is on and we're eating late."

Dinner was the meal families were most likely to eat together. In particular, most households continued the tradition of having a hot Sunday dinner. Often, families would get together to share in the meal. Traditionally in Newfoundland the main meal on Sunday was a boiled dinner (also called jiggs dinner) served at midday, consisting of salt beef, carrots, cabbage, potatoes and bread pudding or 'duff' (Omohundro, 1994). Jiggs dinner was also served other days of the week but on Sunday the boiled salt beef was supplemented with moose, caribou, rabbit or duck (Omohundro, 1994). Tina grew up with a hot dinner every Sunday and continues to cook this meal every Sunday for her husband and two young kids. She said, "Hot dinner, grew up with hot dinner every Sunday. And I like to do that." As Tina described, this usually consisted of a jiggs dinner and a roast such as chicken, pork, or moose:

Roast. Jiggs dinner- now what I know is just salt beef with the vegetables. Hot dinner, we grew up with chicken or moose meat roast. Now usually what I do here is chicken or roasted pork. But often chicken and I'll put in a bit of moose meat with that. And vegetables and salt beef and a pudding over it, peas pudding that sort of thing.

The hot Sunday dinner was an important symbol of tradition for families. Holidays and special occasions were also events for family and friends to share meals. Nancy said, "...special occasions like I might have twenty people come for Christmas dinner, maybe thirty. Massive giant turkey. Birthday we'll have the big family dinner type thing."

In addition to the Sunday dinner and special occasions, a regular sharing of meals took place across some families and friends. For example, Sue and Edward live near their children and grandchildren. As Sue said:

We trade. Someone cooks something special, we exchange it around. Edward's sister next door and James, Bruce, Dan, and Dorothy. Dan and Dorothy cook. I make those dumplings. Mr. James says you make one for me too. Sunday is hot roast or chicken. Today we had jigs dinner, gave some to James for lunch.

Similarly Cathy described sharing meals among family "A lot. Sometimes share meals with my sister and spouses and cousins we do." Similar to the bonds of reciprocity that characterized the sharing of locally-harvested and grown foods, Cathy described a tradition of sharing meals: "That's how we were brought up to share. Especially if you knew someone didn't have much, you go without."

8.3 Eating seafood over time

This section draws on findings from the seafood survey and interviews with households and fishing families to examine more closely changes that have taken place in eating and preparing seafood. Using a foodscape lens to trace seafood from acquisition to consumption shows that eating seafood is influenced not only by factors pertaining to access (such as proximity to fish plants, resource conditions, or cost) but is also closely related to food preferences, family structure, time, and food skills.

Some types of seafood being eaten today have a long history in the local diet. While the survey asked households to indicate changes in eating local seafood over the past five years, in interviews households were asked to reflect on changes over a longer period of

time, including what they ate growing up compared to what they eat now. Cod has long been a main type of seafood eaten. It was described in interviews as playing an important role in diets historically and was ranked by surveyed households as the most frequently eaten and favourite type of local seafood today. However, salmon, halibut, lobster, herring, and mackerel were also named in interviews with older residents as commonly eaten types of seafood. For example, Edward who grew up in region in the 1930s, explained, "Herring, mackerel, cod, salmon, lobster, crab not so much. [Crab] not a food we was eating lots of."

Some other species such as crab and shrimp have started to be eaten more recently. These are relatively new fisheries in the province, beginning in the late 1960s and 1970s and increasing substantially since that time (Rose, 2003). On the survey, shrimp was ranked as the third most frequently eaten type of local seafood, with 31% of households eating it often. An increase in shrimp consumption over the past five years seen in the survey results may be a way households are gradually adapting their diets to include more shellfish since there has been a decline in groundfisheries. However, as noted in Chapter Five, while the survey asked specifically about consumption of local seafood, it is possible the increase in consumption for shrimp may be coming from non-local fisheries, such as farmed tropical shrimp. While local shrimp is available in supermarkets, it is not always easy to find.

Crab is another type of seafood that has started to be eaten more recently. Among surveyed households, 17% ate crab often and 75% ate it now and then. Aleck fishes for

crab and lobster in Bonne Bay. While Aleck now eats crab, he explained that when his father was fishing he would release crab back in the water, and if he did keep it, “no one knew how to cook it anyway.” Likewise, Charlie said crab was renamed when it became a species for export: “We never had any...snow crab, that’s only a pretty name they put on. They were spider crabs when we went to school. But nobody’s gonna eat spiders see. American markets came and they put a different name on em.”

In addition to these more widely eaten species, some fishing families utilized less commonly eaten species that they caught as bycatch. For example, Nancy described eating skate. She said, “I like skate wings. They have somewhat the taste of scallop....Usually it’s bycatch, it’s not something we fish for direct for that species. But they’re actually good.” Lynn was a crewmember on Ernie’s boat. Sometimes they caught blackback, a type of winter flounder, as bycatch, which she described eating “lots of.” While Fred described it as in abundance it is not fished commercially or commonly eaten. Sociological and anthropological literature on food and eating has shown that food is closely associated with cultural ideas about classification, including what counts as “food and non-food, the edible and inedible” (Caplan, 1997, p. 3). As this study shows, food preferences and ideas about edible/inedible foods can change over time and may also vary among families, such as among fishing and non-fishing families. Some anthropological food research has similarly pointed to the large range of potentially edible items that are ignored in every culture (Caplan, 1997). For example, squid has long been and continues to be caught for bait in Newfoundland. It is still not commonly thought of as food. Over 50% of surveyed households said they never eat it. There are also other

marine edibles not consumed. For example, Charlie said about seaweed, “No, never eats it. I suppose there’s nothing wrong with it. Something to munch on. Animals will eat it, but we never eat it here.”

A closer look at eating seafood also shows potential tensions in what ‘sustainable’ is in the context of CFS. For example, many households enjoy eating cod fish because of its long connection to dietary culture and it was the favourite type of local seafood among surveyed households (Chapter Five). Obtaining food that is culturally acceptable is part of the definition of CFS (Hamm & Bellows, 2003). However, as fish harvesters have come to rely on income from shellfisheries following the decline of cod and other groundfish stocks, some harvesters are concerned that the potential rebuilding of cod stocks could affect shellfish quotas since cod prey on crab and other shellfish (Schrack, 2005). Some previous CFS research has highlighted tensions around how elements of sustainability in local food systems fit together, such as ensuring equitable access to food and enabling harvesters to capture a fair price. Similarly, this study suggests there may be tensions in terms of what is sustainable for diets, in terms of access to codfish as a preferred and culturally appropriate source of food, and what is now sustainable for fish harvesters as they adapt to changing fisheries and rely more on shellfish.

Alongside changes in the types of seafood eaten there have been changes in how fish is processed and in the parts of the fish that are eaten. Older people expressed a dislike for how fish is salted today. For example, Emily said, “...stuff they call dry fish, it’s not dry. It’s heavier. It’s not all brown. You want dried fish you have to dry it yourself.” Older

residents also described a time when you couldn't waste any parts of the fish. For example, Howard who grew up in the region in the 1930s said, "They could take three days on one fish cause they did so much with it. And they didn't throw anything away." Edith likewise said, "Cod, salmon, herring. You had a fish you cut it up, probably you'd cut up the faces, cut off the heads. Whatever you'd get you'd eat."

It is less common today for families to use every part of the fish when cooking. One part of the cod fish that is still popular is the tongue, with 91% of surveyed households saying they ate tongues. A woman who worked at a fish plant described them as, "gold dust...you can't keep 'em." However, not all parts of the fish were equally preferred. Survey results indicated that 77 % of household ate cheeks, followed by only 45 % that ate heads and 43% that ate britches (or spawn). For example, Joanie, a senior woman said, "I don't know all the innards and the cod heads, I don't go for that." Nonetheless, some accustomed to eating the whole fish enjoy parts of the fish that today have become more of a delicacy. For example, Danny has been fishing for over thirty years, with his father and grandfather fishing before him. He said, "Only thing we don't eat are the bones. Well the head, the tongue and the cheeks - we eat that. And in the stomach is the eggs, the britches whatever you wanna call it. We eat those." Some of these parts are harder to get as fish, particularly as fish is increasingly sold in the form of fillets. For example, Sylvia enjoys herring spawn but can only access limited quantities directly from fish harvesters. She said, "That's something that we always used to have... If we got fresh herring we all wanted a piece of the spawn." When asked if they can get the spawn now she explained: "Normally when they're catching them they'll just give you a few

herring. Some of them in the family still fishing. Or some of the guys that we know, if they're from Trout River, Cow Head they'll bring a few. But I don't get spawns much anymore."

One of the most consistent changes across households in seafood consumption was ways of cooking fish. While nearly all households agreed that fish was healthy, many described cooking fish with less fat and less salt, perceiving these as aspects of an unhealthy diet. For example, when Billy was asked if he thought eating seafood was healthy, he said, "Oh my gosh yes. If you stay away from pork fat, I guess it depends how you cook it." Diets that are low in fat and salt have been emphasized in many public health messages including Canada's Food Guide. Traditionally, fish was cooked with pieces of pork fat known as 'scrunchions.' While fish is still very often pan-fried this is increasingly done with vegetable oil rather than pork fat. Jackie is in her 70s and said, "Back then we used to cook in with the pork. Now you don't. Now I use mazola, cooking oil." Sam avoided frying fish altogether, saying, "I don't use the frying pan much...well they says the fat is not good for you." Some also expressed concern about salt intake. For example, Sam soaked his salt fish longer to remove the salt. He explained, "No, I don't use no salt. Well if we cooked dried fish - that's salt - we strain the water off. I don't salt. If I want any, I take out a few fillets and just sprinkle a bit of salt."

At the same time that certain aspects of traditional cooking are being adapted to reflect ideas about healthy eating, a few families have begun experimenting with new ways of preparing fish, such as Laura who was introduced to sushi when she went away to school

and now prepares it using local fish with her husband. Kyle obtained new cooking ideas while traveling. He said "...in the last couple years, we're influenced by travelling a bit. We're having more variety in how we eat cod. And having it more Mediterranean style with garlic and olive oil and tomatoes."

Lastly, another change in seafood consumption over time is how often it is eaten. While local fisheries still make important contributions to diets, compared to past generations seafood is not the staple it once was. The survey results indicate that over the past five years there has been a decline in consumption for most types of local seafood (Chapter Five). However, interview results show that the particular form this overall decline takes within households is shaped by a range of other factors, including cooking skills, time, family structure, and food preferences. As elaborated in the previous section about meal preparation, there was a lack of skills among some young families about how to prepare seafood which served as a barrier to eating it more often. Additionally, some young families said that not having enough time to sufficiently plan prevented them from eating more seafood. Debbie, a mother of three, said: "With me and a busy schedule I don't have time, I don't plan. Would love to eat it [seafood] more." Like other types of foods, food preferences also influenced how often seafood was eaten. The preference of one family member could influence how much seafood was eaten by an entire family. Often, this changed over time as the structure of families changed. For example, Elaine explained, "Fish is eaten only now again here because Clyde is not a fan of fish right, no. Now when Charlie was alive he had the corned fish or fresh fish or something."

Likewise, Mary explained, "I'm eating more and a greater variety because my kids have

grown and left and they weren't big fish eaters. I've developed more of a liking for fish than meat. Had nothing to do with the cod moratorium but it happened about the same time." Cathy ran low on fish for the first time as her daughters, who both enjoy eating it, were growing up. She said, "We know how much we need to have now. This is the first year we ran out of cod. But I think that's cause the girls are getting bigger now too."

A range of household factors influenced the types of seafood eaten and how often it was eaten. While survey results show a small decline in how often seafood is eaten this does not reflect a linear relationship between seafood availability and consumption. Rather, in line with an interactive approach to restructuring that looks at the interplay of social influences with the biophysical environment (Ommer & the Coasts Under Stress Research Team, 2007), this study shows that eating seafood reflects changes to resource environments and management regimes interacting with changing family structures, time, cooking skills, and food preferences. A foodscape lens that connects the acquisition, preparation and consumption of seafood from the ocean to plate highlights the interactions among these various influences on eating seafood.

8.4 Perceptions of healthy meals

Issues related to health and eating are receiving more and more attention. Healthy eating has risen to the forefront in recent years as there is more and more time attention on prevention of diet-related chronic diseases and in particular obesity (Ward, Coveney, & Henderson, 2010). Despite increasing acceptance about the role of food environments in shaping health, many food and nutrition initiatives often perpetuate individualistic models

of health based on the adoption of “healthier life-styles” (Schubert, 2008, p. 274).

Consequently, households bear the burden for putting into practice these healthy eating messages (Schubert, 2008). Further, just as women did most of the cooking, they were most likely to take responsibility for the health of their family based on what they ate.

For example, Tina cooks most of the meals for her family of four. She explained: “...as a parent when you have two kids they need a good meal with their vegetables and their meat that sort of thing, so you want to have a cooked supper.” Some women expressed concern that the family, including kids, wouldn’t eat enough fruits and vegetables if their husbands were responsible for preparing meals. For example, Debbie said, “When I’m cooking meals I don’t worry about them [kids] getting nutrients. They’re always snacking on vegetables...If my husband is cooking at home it’s not so good- bacon, sausage, and cook eggs and hashbrowns.” Likewise, for families without kids, some men interviewed similarly described their wives as more concerned about health: “Especially my wife she’s very health conscious when it comes to fish and vegetables and that. More so than what I am.”

While households and women in particular carry most of the weight for implementing healthy eating messages, concerns have also been raised that health messages do not fit in with everyday lay models of health (Wiggins, 2004). Increasingly, sociological research is examining the meanings that people ascribe to healthy eating (Wiggins, 2004). In this study, households were asked to describe what a healthy meal meant to them and a range of meals was described. Sometimes a healthy meal was one that was nutritious. For example, Tandy said, “A plateful of salad or vegetables. A couple ounces of protein.

And a small bit of carbohydrates - rice, potato, preferably yam, or couscous, even some bread if there's no rice and potato. Pita. That's a healthy supper." Mary described a healthy meal as, "Little fat, little sugar, little salt, a number of food groups. For me, carbohydrates and protein in particular."

When respondents spoke about nutrition, sometimes this was described in terms of 'good' and 'bad' foods. Increasingly, some are arguing that nutrition is not only a science but a morality (Coveney, 2000). As Coveney (2000) argued, nutritional knowledge does not simply consist of objective facts from scientific experts, but instead provides a guide for people in assessing 'good' and 'bad' food choices according to what, when, and how they should eat. For example, Michael described healthy eating in terms of "feeling good" and not eating "bad stuff:"

For the first time I signed onto a diet. Up to now I have consumed whatever whenever I'm hungry. My motivations are my little boy and more healthy eating. Not about weight loss, more about healthy eating... Wife's excited I'm on board too. Neither one of us will pick up the bad stuff. Both on board and feeling good about it.

While few spoke specifically about weight gain or loss in relation to health, a number of households expressed awareness about fat in their diet. Most often, this was raised in the context of preparing seafood, and in particular adapting traditional ways of cooking seafood to use less fat, such as shifting from pork fat to vegetable oil.

While many spoke about healthy meals in terms of nutrition, nutritious alone was rarely considered a healthy meal. For example, Mary added it "has to be tasty." Other aspects

of a healthy meal included well-presented, traditional, and eaten with others. Cathy's description of a healthy meal captured many of these attributes:

Sunday's dinner. Meat and vegs and all in there. Chicken, dressing. We have our turkey, big supper. Then for dessert cheese cake with strawberries, for special occasions. We have his sister down cause they're not cooking big meals all the time.

Debbie focused on making an attractive-looking plate. She said, "When I was in school I did a cooking class. I'm a big person on making my plate look attractive. Roast beef, mashed potatoes, colourful broccoli, colourful carrots." Among others emerged the sentiment that natural food was healthy. Natural was framed not in terms of contemporary ideas about 'organic' food, but foods that had been traditionally eaten. Charlie explained, "I believe in natural stuff now. I don't like all this stuff changed around now. The end results- a piece of fish and a potato- now that's good food."

Similarly, Nancy described looking to history for what is healthy to eat:

A lot of older people, when you look at people in their 80s and 90s, what did they grow up eating? Fish and a lot of what we call rough grub. It stands to reason- they work hard, they eat good food, they live eat longer. All these studies okay tell you fish is better for you. I like to look at history.

Fish was often considered part of a healthy meal. For example, when asked to describe a healthy meal, Sylvia began with "in the terms of fish..." All interviewed households agreed fish was healthy to eat, with many, as described above, noting that this depended on how it was cooked. Many households were also aware of recent health messages about the benefits of essential fatty acids in fish. For example Tina said, "We'll...I'm not up on all the research of the omega 3s and 6s and 9s and all that sort of thing, but I'm sure it [fish] is [healthy]." Often these benefits were described alongside an understanding of

fish as healthy to eat because of ties to local culture and traditional foodways. For example, Edith, a senior who grew up in the region, explained: "...my daughter's husband, all I gotta do is let him know [I want fish]. Or go to the fish store. Fish is good for ya...People tell ya fish is good for you, you should eat fish."

These descriptions of meals highlight how every day constructions of healthy eating are "thoroughly social and localized definitions" (Wiggins, 2004, p. 537). Wiggins argued that these local definitions are more important than general nutrition guidelines in terms of how people account for their eating habits and are more likely to guide food choices. Further, some critical nutrition researchers have argued that we are increasingly stuck in a good versus good for you paradigm in which what is 'good' (e.g. tasty) is not 'good for you' (Womack, Lapp, Lizie, McIntosh, & Wilkerson, 2012). Some of the descriptions of meals by households in this study, including an emphasis on taste, appearance, commensality, and ties to local dietary culture challenge this simple good versus good for you duality.

A final consideration in health and eating is the idea of risk. Sociologist Ulrich Beck (date) has argued that risk is a defining characteristic of modern society. Research on risk has also been influential in thinking on food and health (Caplan, 1997). Sometimes assessment of risk relies on medical advice but it also depends on personal experience and lay knowledge (Caplan, 1997). A consideration of risk in this study sometimes arose in regards to fish consumption. Fish consumption has been described as a "classic case of risk balancing" because while it provides high-quality protein, vitamins, and essential

fatty acids it also potentially contains contaminants including polychlorinated biphenyls (PCBs) and methylmercury (Burger & Gochfeld, 2009, p. 343). As Mansfield (2010) said, “this is the conflicting set of messages surrounding consumers: eat more fish because it is a wonderful food, and eat less fish because it is toxic.” While all households agreed fish was healthy, some described balancing benefits and risks. For example, when asked if she thought seafood was healthy, Lynn said, “Oh my gosh yes. Except now that we know mercury’s in some of the fish, right? But anyway we don’t eat enough of it to affect us. I don’t think so anyway, right?” For some, these risks were ameliorated by knowing where the fish they ate came from. For example, when Ellen was asked if she had any concerns about eating fish she said, “I guess not really. I mean we know where it comes from.”

Some scientific studies have measured the level of toxic contaminants in fish and shellfish populations of the Northwest Atlantic. However, as described by Lowitt (2010b), there is a large gap in ongoing research, with the most recent studies published by Department of Fisheries and Oceans Scientists between 1992 and 1997 as part of the Toxic Chemicals Program. This baseline research suggests that contaminants in cod populations in the northwest Atlantic were not at levels in the mid-1990s high enough to be of concern to human health. Similarly, studies analyzing contaminants in Northern shrimp, flatfish, and Bluefin tuna showed that levels of contaminants in these species in the Northwest Atlantic were comparable to, and in some cases lower, in comparison to other regions of the North Atlantic at the time. More current data about levels of toxic

contaminants in fish and shellfish species are necessary to understand any potential human health risks.

In the context of risk and eating seafood, Mansfield (2010) also argued that what is risky to eat is influenced by the political economy of food production. Looking at the rise of aquaculture, Mansfield argued that aquaculture produces a materially different fish compared to wild capture fisheries and consequently raises new risks in terms of what is healthy to eat. Some households in this study expressed concerns specifically about farmed seafood and described local, wild-caught fish as less risky to eat. For example, Kate expressed some concern about farmed salmon: “I think the fish you get freshly caught is healthier than the store fish. Because I heard a lot of things. Like I heard the salmon, they dye the meat, it’s not actually pink.” Descriptions of eating seafood among Bonne Bay households align with recent studies showing that eating seafood increasingly involves weighing risks and benefits (Burger & Gochfeld, 2009; Mansfield, 2010). However, a foodscape lens also reveals how these benefits and risks are understood and negotiated in this particular coastal context. For example, for some households, potential risks in eating seafood were alleviated by knowing where the seafood they ate came from, either by harvesting it themselves or purchasing it from fish plants or directly from friends and family. At the same time, fish was understood as part of a healthy diet not only because of recent healthy eating messages but also because of its ties to traditional foodways.

In summary, this chapter has used a foodscape approach to look at how food acquisition interacts with a range of factors within the household - such as food preferences, kids' eating habits, lunch and work schedules, and ideas about healthy eating- to influence meal preparation and eating. Women performed the majority of food preparation work in households and took the bulk of responsibility for healthy eating. While households today are much less dependent on local and self-provisioned foods than in the past, meals in most households were still shaped by changes in the seasonal availability of different local foods. Further, some aspects of traditional foodways persist in common practice, such as the Jigg's dinner on Sunday. A range of characteristics was used to describe healthy meals, including nutritious, tastes good, well-presented, eaten with others, and tied to traditional foodways. Most households described seafood as healthy to eat because of its close ties to the local culture and diet and in light of more recent healthy eating messages about the benefits of fish consumption.

Chapter 9 Conclusion

This study arose out of an interest in how fisheries restructuring may impact the food security of coastal communities. A growing body of research in the field of community food security (CFS) is emphasizing the importance of local and sustainable food systems for ensuring sustained food security. However, very little CFS research has focused on coastal regions, including the contributions fisheries make to food systems or how fisheries-related restructuring may impact food security and local food systems.

Conversely, a large body of research has looked at restructuring in coastal regions with particular attention in Newfoundland and Labrador focused on restructuring following the collapse of groundfish stocks. However, relatively little of this research has looked specifically at the implications of these changes for food security, although initial research by the Coasts Under Stress research team suggested there are important linkages between environmental change and food production and availability in coastal communities (Parrish et al., 2007).

This thesis used the Bonne Bay region on the west coast of Newfoundland as a case study for examining seafood and other related kinds of food security in a region that has experienced and continues to undergo substantial social and economic change related to fisheries. This study was based in an analysis of foodscapes as a way of understanding CFS. While the idea of the foodscape is growing within recent food scholarship, bringing a foodscape lens to the study of CFS is a new application. A foodscape approach responds to some of the existing challenges with the CFS concept. This chapter

synthesizes the key findings from the study, reflects on what may be learned for the study of CFS from a foodscape approach, and presents recommendations for future research and policy in the area of sustainable food and fishing systems.

9.1 Synthesis of main findings

A foodscape lens in this study has shown the interrelated food sites and sets of relations that contribute to CFS in the Bonne Bay region, as well as the range of meanings about local and sustainable that converge in the Bonne Bay foodscape. Household food provisioning interviews, a seafood survey, participation observation, and historical research about traditional foodways was undertaken as a way of understanding CFS and the changing foodscape around Bonne Bay.

For most households, food acquisition was based on a combination of food purchasing and self-provisioning. Households have developed strategies for adapting to long distances to supermarkets and a lack of fresh foods and higher prices in local stores, including bulking up on food; purchasing frozen and canned fruits and vegetables; purchasing food on sale; and combining grocery trips with other appointments and activities. For seniors and those with low incomes, utilizing personal connections with friends and family was important in ensuring access to food. Fish plants were also a vital feature of the retail foodscape around Bonne Bay as both buyers and sellers of local seafood.

Nearly all of the households interviewed provisioned some of their own foods or ate self-provisioned foods given to them by others. Hunting grounds, berry patches, and fishing grounds are interrelated foodscapes in which these self-provisioning activities take place. However, what was understood as local food varied. For example, for some households, local seafood was fish they harvested themselves in fishing grounds near their community. For others, seafood sent to them from family living elsewhere on the island was considered local. Households described a range of motivations for provisioning some of their own food, including continuing traditional foodways, accessing fresher and better tasting food, knowing where their food is coming from, and involving their kids in food activities. However, there were tensions among the seasonality of these activities, household time and labour, environmental conditions, and changing regulatory regimes. Sharing and bartering through informal economic networks was important to the distribution of self-provisioned and other locally-harvested and grown foods.

While there have been substantial changes to fisheries in this region, local seafood is still an important part of the diet. Survey results indicate that households eat local seafood much more often than imported seafood. Local seafood consumption changed throughout the year and was eaten most often during the summer when it is most readily available from commercial and recreational fisheries. Informal economic networks were also important for “under the table” sales of seafood. Many fishing families relied on selling some of their seafood directly through informal economic networks to capture a higher price for a portion of their catch. Friends and family were ranked by surveyed households as the most preferred source for obtaining local seafood. Survey results also show a small

decline in most types of local seafood over the past five years. Contextualized with findings from household interviews, the analysis shows that environmental restructuring alone does not explain this decline in seafood consumption, but rather reflects changes to resource environments and management regimes interacting with changing family structures, time, cooking skills, and food preferences.

Food acquisition from both self-provisioned sources and purchased foods shaped meal preparation and eating throughout the year. While meals are much less structured compared to previous generations, many households upheld some aspects of the traditional meal plan, such as the Jigg's dinner on Sunday. Further, there were some seasonal changes in diets for many households related to the availability of different local foods. Many described a transition throughout the year between eating moose and seafood, with moose eaten more during the winter and early spring until local seafood is available and eaten during the summer.

In summary, findings show the range of changing and interconnected foodscapes that contribute to CFS in the Bonne Bay region. Unlike most CFS research, which has focused on agri-food systems, this coastal case study shows the important role of fisheries to CFS and how fisheries are connected to broader foodscapes.

9.2 Analytical and methodological reflections on CFS

A foodscape lens used in this case study provides a new way of understanding CFS that overcomes some of the challenges with the existing CFS concept. While recent food

scholarship is increasingly using the idea of the foodscape, bringing a foodscape approach to the study of CFS is a new contribution. Drawing on Appadurai's (1990) work on global cultural flows, I have elaborated the foodscape as a conceptual lens for understanding CFS that is attentive to shifting interactions among people, places, and food across space and time; highlights the interconnections across food system formations; and brings to light the range of perspectives, power relations, and interests that make up local and sustainable food systems.

First, using a foodscape lens, this study has shown the range of food sites that contribute to CFS in the Bonne Bay region. For example, food purchases from supermarkets and grocery stores took place alongside self-provisioning of wild foods from the ocean and land and direct purchases from farmers and fish harvesters. Food scholarship, including CFS research, has been critiqued for perpetuating a duality between the local and the global (Dupuis & Goodman, Hinrichs, 2003). A foodscape lens aligns with recent calls for research that is more attentive to the connections across food system scales and the "hybrid" qualities that both local and conventional food systems show as a result (Mount, 2012). In this way, a foodscape lens aligns with more recent geographical theory challenging exclusivist notions of place (see Massey, 1993) by illustrating how local food systems are constructed out of social relations that span many scales. For example, fish harvesters and small-scale gardeners in Bonne Bay sold their goods to customers in Corner Brook as well as in the communities in which they live. Families bartered and shared vegetables and fish with family living on other parts of the island. Community

gardens and farmers' markets attracted interest from tourists, who sometimes purchased these locally grown foods.

However, a foodscape approach looks not only at interactions across space but also across time. This study began with a discussion of traditional foodways, in terms of socially and culturally informed patterns of food use. A recurring theme throughout this foodscape analysis was how traditional foodways shaped contemporary food practices in the Bonne Bay foodscape. A foodscape lens is important for understanding CFS because it is amenable to historical perspectives. For example, many households described provisioning some of their own food because of these activities ties to traditional foodways and family and cultural identities.

In addition to looking at interactions across spatial and temporal scales, a foodscape approach to CFS can reveal the range of meanings surrounding the 'local' and 'sustainable.' Some have argued that the 'local' and 'sustainable' are contested concepts that too often proceed un-interrogated into food scholarship (Hassanein, 2003; Hinrichs, 2003; Qazi & Selfa, 2005). For example, for some households, 'local' seafood was fish they had harvested themselves in their traditional fishing grounds; for others, seafood harvested by relatives elsewhere on the island and given to them was considered local. Yet for others, seafood purchased from a fish plant in their town that sources from fish harvesters along the west coast was considered local. By revealing the range of meanings surrounding the local, a foodscape lens may help in "mapping out the local" in local food systems (Feagan, 2007). A foodscape lens also reveals differences in what 'sustainable'

means from the position of different actors. For example, many households enjoyed eating cod fish because of its long connection to dietary culture. Cod was ranked by surveyed households as the favourite and most frequently eaten type of local seafood (Chapter Five). Obtaining culturally acceptable food is part of the definition of CFS (Hamm & Bellows, 2003). However, as fish harvesters have come to rely on income from shellfisheries following the decline of cod stocks, some harvesters are concerned that the rebuilding of cod stocks could affect shellfish quotas since cod prey on crab and other shellfish (Schrang, 2005).

In the context of fisheries rebuilding, the question of “rebuilding for whom” has been raised (Khan & Neis, 2007, p.348). Likewise, in the context of working towards CFS goals, a foodscape analysis highlights the question, sustainable for whom? This question also relates to power dynamics in terms of who influences and defines what the local and sustainable mean. For example, some households that participated in the recreational cod fishery expressed a lack of agency in being able to influence the existing regulations that they felt made it more difficult for them to take part in this fishery. Other commercial fishing families expressed uncertainty and concern about how the industry and their communities will function in the future particularly because of the substantial push at the provincial and federal levels towards rationalization and eliminating more small harvesters and processing plants from the industry (Walsh, 2011). Understanding power dynamics also requires looking at changing systems of property ownership. While the agricultural system has been critiqued for growing corporate ownership and control (Clapp & Fuchs, 2009), fisheries managers are similarly attempting to “divide, package,

and assign” fish to private owners, such as in the form of individual transferable quotas that can be bought and sold in the free market (Copes, 1999, p.19). Further, with the decline of many wild fish stocks, the aquaculture sector is growing rapidly, with support from governments and industry within Canada and globally (Bavington, 2010; Food and Agriculture Organization, 2013). As Bavington (2010) argued, this may further amplify the shift towards individual and corporate ownership of fisheries resources as aquaculture development is, “tied to the enclosure of the coastal commons and connected to a narrative of economic and technological progress” (p. 6). Changing systems of property ownership on both land and sea need to be more closely examined in future research in terms of the implications for CFS and capacity for local control over food systems.

Thus, the foodscape as a conceptual lens provides a new entry point into understanding CFS that allows researchers to ask: what constitutes the local (or community) in a particular place? What are the perspectives that different actors bring to what the local and sustainable means? Whose understandings of community, food, and fisheries shape the development of CFS? In asking this set of questions a foodscape approach responds to recent calls for a more “reflexive” approach to local food systems (Dupuis & Goodman, 2005; Hinrichs, 2003). It also allows a closer interrogation of the contested notions of locality and sustainability that are at the heart of CFS.

A foodscape lens for CFS is also particularly relevant at a time in which interdisciplinary approaches to the study of food systems is becoming more crucial in light of increasing sustainability challenges (Feenstra, 2012; Hinrichs, 2010). It is well accepted that

studying food is an inherently interdisciplinary undertaking because food intersects biological, social and cultural realms. And yet, many conceptual frameworks for the study of food remain restricted to examining particular aspects of food (Dixon, 1999). Even the CFS literature often remains split along political economy /cultural economy lines. A foodscape lens, like other emerging interdisciplinary approaches to food, does not suggest that different parts of the food system do not have specific attributes (Dixon, 1999). Rather, a foodscape approach highlights the links between different parts of the food system and suggests that looking at any one part of the food system must take place in a way that acknowledges its connections with other parts of that system (Dixon, 1999). For example, this foodscape analysis has shown that the governance of resources such as fisheries has implications for household and community access to fish as a culturally appropriate food source. It also has shown how seafood consumption is influenced by a range of factors from changes at the level of marine environments and restructuring of the fishing industry to considerations at a household level such as food preferences, food skills, and time to prepare meals.

Further, a foodscape analysis is interdisciplinary as it is not tied to any one particular theoretical perspective. Rather, by using the foodscape as an “ontological reframing” (Gibson-Graham, 2008) it may make visible the range of theories that may be useful for explaining and understanding the particular phenomena under investigation. As Gibson Graham asked, “how might we, as academic subjects, become open to possibility rather than limits on the possible?” (p. 614). This foodscape study drew on diverse theories

related to place, sociology of food and eating, and social embeddedness to understand CFS.

Lastly, a foodscape is also a methodology as it shapes how a researcher approaches the study of food. It helps guide reflections about epistemological and ontological perspectives and subsequently the choice of research methods. Because foodscapes are ever changing, the position of the researcher becomes one of attempting to understand the relations and places from which they are constructed. Existing CFS studies and food scholarship are characterized by a range of methodological approaches. Relevant questions to think about thus include, how may a foodscape lens change the ways in which we understand existing food methodologies? Conversely, how will existing methodological approaches play out in studies of foodscapes? Some emerging foodscape scholars have argued for more conversations with other fields, such as science and technology studies, to address foodscape questions (Friedberg, 2010). If a foodscape approach enlarges the field from which we can understand CFS, it also potentially enlarges the range of conversations with other fields that may contribute to new methodologies. Further, Johnansson et al. (2009) suggested that if the aim of foodscapes studies is to not only know, for instance, “what” is eaten but also the contexts in which people eat and the knowledge they have, then methods that enable people to become co-researchers may be more appropriate (p.28). There is already a movement underway in some CFS studies to more directly involve participants in the research process (Vasquez et al., 2007; Williams, 2012a; Williams, 2012b).

9.3 Recommendations and future directions

This study of CFS in the Bonne Bay region points to three main directions for future research and policy in the area of sustainable food and fishing systems. These include more interdisciplinary research and policy-making linking food and fishing systems; more attention to the role of self-provisioning and informal food economies in supporting CFS; and a greater consideration of the role of food systems in community development.

First, by focusing on a coastal, fisheries-dependent region, this CFS study has highlighted important areas of convergence among fisheries social science and sustainable food systems research. As elaborated in Lowitt (2013), these areas of research remain disconnected despite the fact that they have identified common concerns across fishing and agricultural systems, including corporate control of resources, industrial practices, centralized governance structures, and viability of communities and livelihoods. Bringing these areas of research together will be crucial to addressing sustainability in food systems across local and global scales. While this study has documented the importance of fisheries to CFS in a coastal, fisheries-dependent region in Canada, fisheries also make important contributions to food security globally. Fish provides nearly 20% of the protein intake for nearly three billion people around the world and global demand for seafood has been rising steadily over the past several decades (Food and Agriculture Organisation, 2012). As seafood consumption continues to rise, the declining state of fish stocks poses significant food security challenges, including for developing coastal nations (Food and Agriculture Organization, 2012). Threats to the food security of developing coastal

nations are exacerbated by inequitable global trade arrangements that contribute to a net flow of seafood from developing to developed countries (Swartz et al., 2010).

Developing interdisciplinary approaches that bring together food and fisheries researchers will be crucial to responding to these mounting sustainability challenges and understanding the relationships among fisheries, marine ecosystems, and sustainable food systems at interrelated local and global scales.

Alongside developing interdisciplinary connection for the study of food and fishing system, there is a need for more integrated policy-making in the area of fisheries and food. Presently, the structures dealing with food in Canada are widely dispersed and split across federal, provincial, and municipal jurisdictions (MacRae, 2011). For example, it is estimated that 37 federal agencies across the country are involved in food safety, with additional legislation at the provincial level for food products not covered in the federal system (MacRae, 2011). These jurisdictional divides exist in part because Canada has never had a coherent and integrated national food policy (MacRae, 2011). Jurisdiction over fisheries policy is similarly split, with the federal government having jurisdiction over the management of fisheries, including licensing and quota allocations, and provincial governments retaining control over processing and marketing (Murphy & Neis, 2011). As MacRae (2011) argued, a lack of a “joined-up” food policy for Canada makes it difficult to address the interconnectedness of issues related to food, including production, health, cultural, environmental, and food security goals. In response, some community-based organizations including Food Secure Canada, producer organizations

such as the National Farmers Union, and federal opposition parties have come forward with their own food policy statements.

The challenges in creating a more “joined-up” food policy are perhaps even more evident in the case of issues related to food and fisheries. While much food policy in Canada remains focused on production, efficiency, and economic competitiveness to the expense of broader social and ecological aims (MacRae, 2011), this is particularly evident in fisheries policy which rarely even treats fish as food. For example, in late 2011 Fisheries and Oceans Canada released *The Future of Canada's Commercial Fisheries*, a document discussing potential changes to fisheries policy and management. The document contains no mention of fish as food or even of fisheries communities, reflecting the agency’s central focus on the management of fish as stocks and resources for export production (Lowitt et al., 2013). A continued emphasis on fish production for export across provincial and federal jurisdictions is to the detriment of policies for supporting domestic consumption and marketing of seafood consumption (Food Secure Canada, 2011; Khan, 2011). Many food policy statements put forward by community-based and producer organizations, including a survey of local food initiatives and associated policy recommendations from the Canadian Cooperative Association (2009), do not make any mention of fisheries (Lowitt et al., 2013). This study points to the need for more integrated food policy-making, including across food and fisheries realms. It has shown that many of the core topics dealt with in fisheries policy, including distributional issues such as who can fish, how much they can catch, and the setting of harvest levels for different species, are also CFS issues as they impact who can access seafood, how

much, and the types of seafood that can be eaten and sold. While fisheries policy needs to be more inclusive and consider fish as food, future food policy discussions also need to think more about fisheries as a part of food systems and engage in a timely way with relevant debates taking place in fisheries policy.

Second, this study points to the need for more research to consider the ways in which food self-provisioning contributes to CFS in rural and coastal contexts. As challenges with conventional food systems continue to mount, CFS research and the broader field of food studies needs to extend its focus on alternative market-based ways of securing food to also think about the role of self-provisioning and informal economies. While little CFS research has focused on food self-provisioning and the informal economy, even less research has considered how the formal and informal food economies may jointly contribute to CFS. This study has shown the close linkages that exist among formal and informal food economies in supporting CFS. For example, many local food growers and harvesters depended upon a combination of selling, subsistence use and bartering; at the same time, many households acquired foods based on a combination of food purchasing and self-provisioning. Particularly in the context of growing discussions about resilience in food systems and food security (see Eriksen, 2008) there is a need for future research to look at how formal and informal food economies may provide the “collective strength” necessary for supporting more resilient and diversified food systems (Stroink & Nelson, 2009, p. 26).

Finally, as rural and coastal communities in Canada and beyond look for sustainable opportunities both within and beyond traditional resource industries (Ommer & the Coasts Under Stress research team, 2007; Winson & Leach, 2003), food provides another lens to bring into community development discussions. While how food is produced and distributed is important to understanding the food security situation in a community, the role of food harvesting and production is also being increasingly recognized for its contributions to social, economic and cultural renewal. For example, rural development work is increasingly focusing on how local food systems may provide new economic opportunities for small producers (Marsden, 2000). To a small extent in Bonne Bay and increasingly in other places, food and fisheries are being linked to opportunities in culinary and experiential tourism (Lowitt, 2011b; Lowitt, 2012). A closer look at the linkages among food systems, fisheries, and social and economic goals may help support future directions for community development (Cohen, 2002; Meter, 2008; Winne, 2005).

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Appendix I ICEHR approval letters



Interdisciplinary Committee on
Ethics in Human Research (ICEHR)

Office of Research
Services
Memorial University
St. John's, NL A1B3X9
Tel: (709) 736-5711
www.mun.ca

ICEHR Number:	2010/11-124-IO
Approval Period:	May 16, 2011 – May 31, 2012
Sponsor:	SSHRC, CURRA
Responsible Faculty:	Dr. Barbara Neis Department of Sociology
Title of Project:	<i>A food security research project in the Bonne Bay region</i>

May 16, 2011

Ms. Kristen Lowitt
Interdisciplinary Studies
School of Graduate Studies
Memorial University of Newfoundland

Dear Ms. Lowitt:

Thank you for your email correspondence of May 12, 2011 addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) concerning the above-named research project.

The ICEHR has re-examined the proposal with the clarification and revisions submitted and is satisfied that concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* for one year from the date of this letter.

If you intend to make changes during the course of the project which may give rise to ethical concerns, please forward a description of these changes to Mrs. Brenda Lye at blye@mun.ca for the Committee's consideration.

The *TCPS2* requires that you submit an annual status report on your project to the ICEHR, should the research carry on beyond May 2012. Also to comply with the *TCPS2*, please notify us upon completion on your project.

We wish you success with your research.

Yours sincerely,

Catherine G. Penney, Ph.D.
Vice-Chair, Interdisciplinary Committee on
Ethics in Human Research

CP/en

copy: Supervisor – Dr. Barbara Neis, Department of Sociology
Dr. Marlies Rise, Director, Office of Research Services



**Interdisciplinary Committee on
Ethics in Human Research (ICEHR)**

Office of Research
St. John's, NL, Canada A1B3X9
Tel: (709) 737-8865 Fax: (709) 737-8872
www.mun.ca

ICEHR Number:	2010/11-089-IO
Approval Period:	February 16, 2011 – February 28, 2012
Funding Source:	MITACS Internship
Responsible Faculty:	Dr. Barbara Neis Department of Sociology
Title of Project:	<i>Exploring opportunities for fishery-tourism products, business collaboration, and fisheries market development in the Bonne Bay area</i>

March 2, 2011

Ms. Kristen Lowitt
School of Graduate Studies (Interdisciplinary PhD. Program)
Memorial University of Newfoundland

Dear Ms. Lowitt: *Kristen*

Thank you for your submission to the Interdisciplinary Committee on Ethics in Human Research (ICEHR) seeking ethical clearance for the above-named research project.

The Committee has reviewed the proposal and appreciates the care and diligence with which you have prepared your application. We agree that the proposed project is consistent with the guidelines of the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans* (TCPS). *Full ethics clearance* is granted for one year from the date of this letter.

Although ethics clearance has been granted, the Committee would like to point out that the ICEHR statement was revised in 2009 to read, "*The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at (709) 864-2861.*" and we ask that you use this revised version in all your consent forms. This statement should also be included in Appendix B.

The Committee would also like to suggest that you review the frequent changes in the use of grammatical persons (I, we, she) for consistency.

If you intend to make changes during the course of the project which may give rise to ethical concerns, please forward a description of these changes to Mrs. Brenda Lye at bye@mun.ca for the Committee's consideration.

The TCPS requires that you submit an annual status report on your project to ICEHR, should the research carry on beyond March 2012. Also, to comply with the TCPS, please notify us upon completion of your project.

We wish you success with your research.

Yours sincerely,

Lawrence F. Felt
Lawrence F. Felt, Ph.D.
Chair, Interdisciplinary Committee on
Ethics in Human Research

*Kristen,
Take care. A
nice application
J.*

LF/bl

copy: Supervisor – Dr. Barbara Neis, Department of Sociology
Director, Office of Research Services

Appendix II Project flyer

A food security research project in the Bonne Bay Region

What the study is about

This summer and fall, Kristen Lowitt will be spending time in the Bonne Bay Region doing research for her PhD project about food security and fisheries. She will be doing interviews and focus groups to understand household food practices and residents ideas for their local food system. This research builds upon the community food security assessment that Kristen completed in the region in the summer of 2009. The outcomes of this research will be used to help inform recommendations for developing community-based sustainable food systems in the region.

This study is funded by the Social Sciences and Humanities Research Council and by the CURRA at Memorial University, which is based out of the Bonne Bay Marine Station. The research is being co-supervised by Dr. Barbara Neis and Dr. Charles Mather of Memorial University. Upon completion of the project, a report summarizing the results will be available on the CURRA website at www.curra.ca

About the researcher

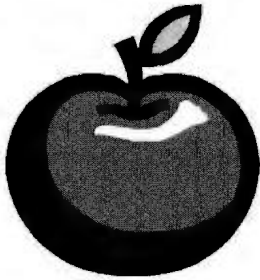


Kristen is in the Interdisciplinary Studies PhD program at Memorial University. Her research is about food security and fisheries in the Bonne Bay area. In 2009, Kristen completed a food security assessment in the Bonne Bay area funded by the CURRA. Before coming to Memorial, she received a Master of Environmental Studies (MES) degree from Dalhousie University.

To get in touch

If you have any questions or want to participate in the project, please email Kristen at klowitt@mun.ca or phone (709) 864-3065.

Appendix III Recruitment flyer for food provisioning interviews



What's on your plate?
Looking for households to participate in a food security research
project in the Bonne Bay Area

This summer and fall, Kristen Lowitt, a PhD student at Memorial University, will be spending time in the Bonne Bay Region doing research about food security and fisheries. She is looking for people to speak with her about their food practices in their home.

This includes topics such as what you eat, where you get your food, and your ideas for your local food system. The information gained in the interviews will help Kristen come up with recommendations for developing sustainable community-based food systems in the Bonne Bay Region.

To participate

If you are interested in being involved, please get in touch with Kristen Lowitt by email at klowitt@mun.ca or phone her directly at (709) 699-8944. Your name and contact information will be kept confidential.

About the researcher



Kristen is in the Interdisciplinary Studies PhD program at Memorial University. Her research is about food security and fisheries in the Bonne Bay Region. In 2009, she completed a food security assessment in the Bonne Bay area funded by the CURRA based at the Bonne Bay Marine Station. Before coming to Memorial, she received a Master of Environmental Studies (MES) degree from Dalhousie University.

Appendix IV Description of participant observation partners

Fish harvesters

Darrell Burden and Greg Kennedy, Norris Point

Darrell lives in Norris Point with his wife Dianne, son David, and dog Cassie. He has been fishing all his life. He comes from a family with a long history in fishing. As he said, "that's all everybody in my family has ever done." Darrell grew up fishing with his uncle. In later years, a fishing license was transferred to him from a relative who fished in Martin's Point. Darrell begins the fishing season in Bonne Bay, fishing for crab out of the wharf in Norris Point. His cousin Greg Kennedy joined him crab fishing this year. He then heads up the shore to Martin's Point just north of Sally's Cove, to fish for lobster. Darrell has a fish store in Martin's Point that has been in his family for as long as he can remember. Greg also has a lobster license and sets his traps in Bonne Bay. After the crab and lobster seasons are over, Darrell joins other enterprises to fish further up the coast for capelin, turbot, cod, mackerel and herring. During this time he can be away for two weeks to a month at a time. During the summer food fishery, Darrell and his wife Dianne go out in their boat together to catch cod and put some away for the winter.

Ernest Decker and Lynn Halfyard, Rocky Harbour

Ernie has been fishing for over forty years. He grew up fishing in Baker's Brook, and returns there each season to fish. Lynn Halfyard also began fishing when she was young and has been fishing with Ernie for fifteen years. Lynn refers to Baker's Brook as Ernie's "home port" and said "when you're fishing so long in a certain area you know your

ground.” Lynn is a shareman in Ernie’s business with a Level One helper’s license. They begin the season fishing for crab departing from the wharf in Rocky Harbour. When the crab fishery ends they go up the shore to Baker’s Brook to fish lobster, herring, halibut, lumpfish, mackerel, and cod. Ernie has a fishing cabin in Baker’s Brook along with a fish store. In summers past Lynn has maintained a small garden at Baker’s Brook where she grows onions, carrots, cabbage, turnips, and beets. They enjoy a diet with plenty of fresh seafood in season. Lynn jokes that Ernie has “expensive tastes” because he loves crab and lobster.

John and Roxanne Decker, Rocky Harbour

Baker’s Brook has been John’s home fishing port for 30 years. John’s father also fished out of Baker’s Brooks and his enterprise was transferred to John. John is Ernie Decker’s younger brother. Since 1991, John and his wife Roxanne have been fishing together. They fish for crab, lobster, cod, mackerel, halibut, herring, and lumpfish. They maintain a fish store in Baker’s Brook. In recent years lobster has become their main fishery. Two years ago, when the price of lobster started to drop, Roxanne started working at a local restaurant after finishing up lobster fishing with John in early July. She works at the restaurant until the end of September. John and Roxanne have two children, including a ten year old son who loves it in the boat and would like to fish like his father.

Glenn Samms, Norris Point

Glenn started fishing with his father in Bonne Bay when he was twelve years old. Later on, his father’s fishing enterprise was transferred to him and Glenn now fishes for

groundfish, crab and lobster departing from the wharf in Norris Point. Glenn's younger brother Dennis is also a fish harvester, and they have fished for crab together for three seasons. Glenn's family is from the Norris Point area, including relatives who grew up in Gadd's Harbour before Gros Morne National Park was established. Glenn remembers the many meals of fresh and salt cod that were a main part of his grandfather's diet. Glenn continues to enjoy meals of fresh fish in season and puts away some fish for his family for the winter. He lives in Norris Point with his family, including a son and young daughter.

Tourism operators

Todd Wight, Ocean View Hotel and Restaurant, Rocky Harbour

This is Todd Wight's fifth season as Managing Partner of the Ocean View Hotel and Restaurant in Rocky Harbour. The Ocean View was originally established in 1972. Todd came to the Ocean View with a background in business and marketing. The Ocean View Restaurant is a fine dining establishment specializing in seafood. It is the largest restaurant in the Bonne Bay area serving around 10,000 guests a season. The restaurant is open for breakfast and dinner from Mothers Day until early October and the Anchor Pub downstairs in the hotel is open for Pub style dining from 3pm daily. The restaurant offers many different types of seafood including halibut, cod, salmon, mussels, lobster, crab, and scallops. The restaurant's Head Chef is Red Seal certified and has six other cooks to assist her in the kitchen. Seafood is prepared in the traditional Newfoundland way combined with some new flavours and tastes. The restaurant also offers samples of items that guests may never have tried before, such as cod tongues and scrunchions. The dining

room is decorated with items from the sea and boasts a beautiful ocean view overlooking the harbour. A wine cellar is a recent addition to the dining room, allowing guests to go into the cellar and select their own bottle of wine.

Tom and Doris Sheppard, Sheppard's Bed and Breakfast, Trout River

Doris said it has always been her dream to have her own Bed & Breakfast. In 2009, with the official opening of Sheppard's Bed and Breakfast, Doris' dream came true. Doris and her husband Tom operate the Bed and Breakfast, which they built themselves on land that belonged to Tom's family. Doris has been involved in tourism for many years. She first started working in the tourism sector in 1967 in Deer Lake. Thirteen years ago, she returned to school and completed a program in Hotel Management in Ottawa after which time she became Dining Room Manager of a hotel there. Tom has a background in teaching. He spent his first year teaching in a one-room schoolhouse in Lance aux Meadows and subsequently taught high school for twenty five years in Newfoundland.

The Bed & Breakfast features four guest bedrooms upstairs and one room on the first floor. Their busy season starts in early May and continues until October although they are open for bookings year-round. They had 600 guests stay with them last summer from as far away as New Zealand, the Netherlands, and Iceland. Doris and Tom offer a wide variety of choices for breakfast including pancakes, french toast, bacon and eggs, and fish cakes.

Vince McCarthy, Sugar Hill Inn, Norris Point

The Sugar Hill Inn opened in 1992. Vince McCarthy, the owner and operator of the Inn came to Norris Point in 1985. The Inn was originally built as a family home and dental clinic. However, after spending time in the area, the potential for a tourist establishment became evident to him. He began to develop a high-end inn and restaurant, a type of tourist establishment that was not common in the Gros Morne area at the time. The Inn now features eleven guest rooms and a formal fifty person dining room that has been open since 2007. The dining room is opening seasonally for dinner from May to October and also provides breakfast for guests in the Inn, as well as boxed-lunches. Seafood is a feature in the restaurant, with cod, halibut, salmon, scallops, shrimp, and mussels among some of the regular menu items. Vince does a lot of the food preparation himself with the support of another cook. He explained that he “always had a passion for cooking.” He has also gone on numerous wine tours throughout France and Italy and the restaurant features an extensive list of wines that he has personally selected. The Inn also has several small gardens in which fresh herbs, leeks, shallots, and lettuce are grown for the restaurant.

Ken Thomas, Lighthouse Suites and Restaurant

The Lighthouse in Woody Point consists of suites overlooking the waterfront, a gift shop, as well as the Lighthouse Restaurant. The Lighthouse Restaurant was established thirty years ago and Ken Thomas took over the business four years ago. The restaurant features an eat-in dining room which is open from late May to early October, along with a take-out that is open year-round. The restaurant employs six women full-time from May to

October. The Lighthouse has always been known as a family-style restaurant. Since Ken took over the business, he has made a few changes to the interior decoration, added a few new menu items, and has tried some different ways of preparing seafood. The restaurant specializes in seafood, including cod, halibut, salmon, and scallops and features an extensive wine list. The take-out is especially popular among local residents and offers items such as chicken and chips, chicken burgers, and fish and chips. The Lighthouse has a small greenhouse and garden which guests enjoy. By the middle of August, most of the vegetables in the restaurant are coming from the garden and greenhouse including lettuce, carrots, beets, peas, beans, broccoli, celery, zucchini, and tomatoes.

Appendix V Interview guides

Household food provisioning interviews

Interview guide adapted with permission from McIntyre, Thille, & Rondeau, 2009

Outline

Introduction of interviewer

1. Explain purpose of the interview: To elicit a descriptive account of the everyday experiences and practices of managing the family's food resources.
2. Consent Process
3. Information about household and family history (see below)
4. Commence in-depth interview
5. Administer the Canadian Household Food Security Survey Module.
6. Observation of food provisioning supports

Household and family information

To be collected through a discussion with participants.

Household information

- Elicit a general description of the household composition, including household members' age, gender, level of education, occupation and employment status. As well, researcher may note general details about type of housing and access to a backyard.

Family history

- Elicit a general description of the family history, including how long the family has lived in the town, where they/their parents lived, and how close they live to family members.

Interview

A semi-structured format will be used. This guide provides a list of topics and potential questions to be covered, but the interviewer can change the order and wording of questions to suit the individual respondent. This is a basic guide written for a household with multiple members; however, with minor changes to the wording of questions by the interviewer, the guide can easily be used with single-person households.

1. Can you describe for me your family's meals in a regular week?

Probes

e.g. Monday, Tuesday, etc?

What do you usually eat for breakfast, lunch, dinner?

Planning meals

- Tell me about how you usually plan meals for you and your family?
(Spontaneous? daily plans? weekly plans?) Who's responsible?

- Are there times when you have less/more food on hand? Can you tell me about how you manage with less?
- Can you tell me about how your food budget fits with the rest of your household budget?
- Can you talk about how you plan to divide up the food among different family members?
- Does anyone in your family, including yourself, have any health concerns that you have to think about when you are planning meals? Can you tell me about them?
- Have your family's meal patterns changed over time? When/why?

Meal preparation and planning

- Who can cook?
- Who does most of the cooking at your home?
 - If self: Do you enjoy cooking?
- Do you cook from scratch? Prepared?
- If children in the household: Are your kids ever involved in preparing meals?
- Can you tell me about the process of getting meals ready?
 - Who decides the menu? When? (by week, some days before, at the time of preparing the meal?)
- How much time do you allocate for preparing meals each day? How much time do you actually spend preparing meals?
- Do you have any favourite ways of preparing food? (i.e. steamed? fried? boiled?)
- How did you learn how to cook?
- Do you use recipes when you're cooking? (If yes, where do they come from? (cookbooks- which ones? Passed down?))
- Can you tell me what an ideal meal would be, without restriction of cost?

Eating/Feeding

- What are mealtimes like at home?
 - Who eats together?
 - Is it rushed or relaxed?
 - Do you eat at the table?
 - Are there special mealtimes (e.g. dinner, weekends)?
- Other than at home, where else do you and your family eat? School? Offices?
- Do you take food to other people's houses?
- Are any changes related to meals such as when income comes in? Seasonal changes? Grocery days?
 - How do you manage to be sure your family has enough to eat?
 - What would be different if you had more money to spend on food?
- Can you describe for me what you think a healthy meal is?

2. Where do you get the food you eat in your meals?

Probes

Food shopping

- Can you tell me about where your grocery shopping is done? Has this changed over time?
- Who does the grocery shopping?
- When do you do your grocery shopping? How often?
- Can you tell me about any money concerns you may have when buying food? Do you use lists? coupons?
- Can you tell me about how you get to the grocery store and back?
- How long do your shopping trips usually last?
- If kids: Do your kids go shopping with you?
- How would you describe the affordability of the foods where you shop?

Food selection

- Do you usually buy the same foods?
- How do you select the foods that you will buy? [taste (own, family members), money, health, etc.]
- If children in the household: Do your kids eat the same foods as you?
- How would you describe the quality of foods available where you shop?
- Is there anything you look for in a 'quality' food item?
- How important is it to you to buy 'local' foods? What do you consider to be 'local'?
- Do you have ways of storing food at home? (i.e. cellar? freezer?)

Self-provisioning food activities

Other than by purchasing food are there any other ways your household presently or in the past used to acquire food? For example, this may include fishing, gardening, and hunting. (If yes, what are they? If not, why?) For each activity identified, the following set of questions may be asked (these may easily be adapted for the past tense as appropriate):

- Who is in charge of (e.g. gardening) _____?
- When did you start _____? Why?
- Are you still _____? If not, why did you stop?
- How did you learn to _____?
- Do you usually _____ alone or with other people?
- If kids in the household: Are your kids ever involved in _____?
- What do you do with the food you get? (e.g. household consumption? share/trade? sale?)
- How important is the food you get from _____ to your family's diet?
- Is there anything you like most about _____? Least?
- Have you encountered any challenges in _____?
- Has anything helped you in _____?

Other food sources (networks)

- Where else, other than the store or through your own food activities, do you get food? (e.g. gifts, exchange with friends/family, food banks, school feeding programs, church, etc.)?

- Can you tell me about your experiences with these places/ people?

3. How would you describe the importance of fish and seafood to your family's diet?

Probes

- What types of seafood do you eat most often? Why? Has this changed over time?
- Where do you get your seafood? (e.g. recreational fishery? Keep share of commercial catch? Fish plant?) Has this changed over time?
- Do you have a preferred source for seafood?
- How do you prepare your seafood?
- Do you think eating seafood is healthy? Do you think it is more or less healthy than in the past? If so, why?
- Did the way you feed seafood to your family change since the groundfish moratorium in 1994?
- Are you and your family able to eat as much seafood as you want? (Are you happy with the availability? Affordability? Quality? If no, what could help you and your family eat the seafood you want?)
- Do you have any concerns about seafood consumption?

4. What do you think could be done to help you provide the food you want to your family?

Probes

- Are the foods you want available? Is the cost of food realistic?
- Are there any strategies that would help? Are there any policies that could be changed?
- Comments on commercial/recreational fishing

Observational Component

Walk about with interviewee to observe anything in/around the home of relevance to food provisioning (i.e. kitchen, garden, root cellar/food storage areas, nearby berry patches, fishing boats, stages, etc as possible.) Digital photographs will be taken by the researcher of items of interest with the permission of the interviewee.

Household Food Security Survey Module

The following questions are about the food situation for your household in the past 12 months.

Q1. Which of the following statements best describes the food eaten in your household in the past 12 months, that is since [current month] of last year?

1. You and other household members always had enough of the kinds of food you wanted to eat.
2. You and other household members had enough to eat, but not always the kinds of food you wanted.
3. Sometimes you and other household members did not have enough to eat.

4. Often you and other household members didn't have enough to eat.

– Don't know / refuse to answer (**Go to end of module**)

Note: Question Q1 is not used directly in determining household food security status

STAGE 1: Questions 2–6 — ask all households

Now I'm going to read you several statements that may be used to describe the food situation for a household. Please tell me if the statement was often true, sometimes true, or never true for you and other household members in the past 12 months.

Q2. The first statement is: you and other household members worried that food would run out before you got money to buy more. Was that often true, sometimes true, or never true in the past 12 months?

1. Often true

2. Sometimes true

3. Never true

– Don't know / refuse to answer

Q3. The food that you and other household members bought just didn't last, and there wasn't any money to get more. Was that often true, sometimes true, or never true in the past 12 months?

1. Often true

2. Sometimes true

3. Never true

– Don't know / refuse to answer

Q4. You and other household members couldn't afford to eat balanced meals. In the past 12 months

was that often true, sometimes true, or never true?

1. Often true

2. Sometimes true

3. Never true

– Don't know / refuse to answer

IF CHILDREN UNDER 18 IN HOUSEHOLD, ASK Q5 AND Q6;

OTHERWISE, SKIP TO FIRST-LEVEL SCREEN

Now I'm going to read a few statements that may describe the food situation for households with children.

Q5. You or other adults in your household relied on only a few kinds of low-cost food to feed the children because you were running out of money to buy food. Was that often true, sometimes true, or never true in the past 12 months?

1. Often true

2. Sometimes true

3. Never true

– Don't know / refuse to answer

Q6. You or other adults in your household couldn't feed the children a balanced meal, because you couldn't afford it. Was that often true, sometimes true, or never true in the past 12 months?

1. Often true
2. Sometimes true
3. Never true
- Don't know / refuse to answer

FIRST-LEVEL SCREEN (screener for Stage 2):

If AFFIRMATIVE RESPONSE to ANY ONE of Q2–Q6 (i.e. "often true" or "sometimes true")

OR response [3] or [4] to Q1, then continue to STAGE 2; otherwise, skip to end.

STAGE 2: Questions 7–11 — ask households passing the First-Level Screen

IF CHILDREN UNDER 18 IN HOUSEHOLD, ASK Q7;

OTHERWISE SKIP TO Q8

Q7. The children were not eating enough because you or other adults in your household just couldn't afford enough food. Was that often, sometimes or never true in the past 12 months?

1. Often true
2. Sometimes true
3. Never true
- Don't know / refuse to answer

The following few questions are about the food situation in the past 12 months for you or any other adults in your household.

Q8. In the past 12 months, since last [current month] did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?

1. Yes
2. No (Go to Q9)
- Don't know / refuse to answer

Q8b. How often did this happen?

1. Almost every month
2. Some months but not every month
3. Only 1 or 2 months
- Don't know / refuse to answer

Q9. In the past 12 months, did you (personally) ever eat less than you felt you should because there wasn't enough money to buy food?

1. Yes
2. No
- Don't know / refuse to answer

48 Canadian Community Health Survey, Cycle 2.2, Nutrition (2004)

Q10. In the past 12 months, were you (personally) ever hungry but didn't eat because you couldn't afford enough food?

1. Yes
2. No
- Don't know / refuse to answer

Q11. In the past 12 months, did you (personally) lose weight because you didn't have enough money for food?

1. Yes
2. No
- Don't know / refuse to answer

SECOND-LEVEL SCREEN (screener for Stage 3):

If AFFIRMATIVE RESPONSE to ANY ONE of Q7–Q11, then continue to STAGE 3; otherwise, skip to end.

STAGE 3: Questions 12–16 — ask households passing the Second-Level Screen

Q12. In the past 12 months, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?

1. Yes
2. No (IF CHILDREN UNDER 18 IN HOUSEHOLD, ASK Q13; OTHERWISE SKIP TO END)
- Don't know / refuse to answer

Q12b. How often did this happen?

1. Almost every month
2. Some months but not every month
3. Only 1 or 2 months
- Don't know / refuse to answer

IF CHILDREN UNDER 18 IN HOUSEHOLD, ASK Q13–16; OTHERWISE SKIP TO END

Now, a few questions on the food experiences for children in your household.

Q13. In the past 12 months, did you or other adults in your household ever cut the size of any of the children's meals because there wasn't enough money for food?

1. Yes
2. No
- Don't know / refuse to answer

Q14. In the past 12 months, did any of the children ever skip meals because there wasn't enough money for food?

1. Yes

- 2. No
- Don't know / refuse to answer

Q14b. How often did this happen?

- 1. Almost every month
- 2. Some months but not every month
- 3. Only 1 or 2 months
- Don't know / refuse to answer

Q15. In the past 12 months, were any of the children ever hungry but you just couldn't afford more food?

- 1. Yes
- 2. No
- Don't know / refuse to answer

Q16. In the past 12 months, did any of the children ever not eat for a whole day because there wasn't enough money for food?

- 1. Yes
- 2. No
- Don't know / refuse to answer

End of module

Fisheries and tourism sector interviews

Fish harvesters

- Can you tell me about your fishing enterprise?
- Where do you fish?
- Approximately how much fish do you catch? What species/sizes? During what seasons do you catch each species? What type of gear do you use for each?
- When do you get the best quality of each kind of fish/shellfish?
- Are markets for seafood better at some times of the year than others?
- Under the current system, to what extent can you catch fish/shellfish when the quality is the best? When the market is the best?
- If the extent is low- why is it low?
- Where do distribute your fish? For your household? Processor? Local market? For export?
- What are the barriers to selling and marketing fish in your community and beyond (within the province, Atlantic Canada etc.)?
- Do you think there are any potential markets (both local and beyond) that are not being taken advantage of (e.g. certain species such as herring?) Why and are there any barriers to accessing these markets?
- What for you would be a good price to receive for your fish?
- How would you describe demand/interest for seafood in your community?
- What types of projects or policies do you think could help you fish more/sell more fish locally?
- How important, if at all, is the local tourist industry to your business?
- What kinds of collaborations (related to your business), if any, do you have with the local tourism sector?
- Can you think of any other kinds of collaborations that might benefit your business and the tourism industry?
- From your point of view, what is the best fishery-tourism related product currently available in the area? Why is it the best?
- From your point of view, what would be some ideal fishery-tourism related products to offer in this region? Do they exist? If not, why not? What would it take to make them happen?

Fish retailers/ processors / distributors

- Can you tell me about your business?
- Where do you source your seafood?
- Approximately how much seafood do you process? What species/sizes? During what season do you process each species?
- When do you get the best quality of each kind of fish/shellfish?
- Approximately how much seafood do you sell each year?
- Where do you sell your seafood? Approximately how much seafood do you sell into local markets? Which species do you sell the most?
- Are markets for seafood better at some times of the year than others?

- Do you get the price you want for your seafood? Why or why not?
- What for you would be a good price for your seafood?
- What barriers have you encountered, if any, to marketing/selling seafood locally and beyond?
- Do you think there are any potential markets that are not being taken advantage of (e.g. certain species such as herring?) Why and are there any barriers?
- How would you describe demand/interest for seafood locally? From elsewhere? From visitors?
- How important, if at all, is the local tourist industry to your business?
- What kinds of collaborations (related to your business), if any, do you have with the local tourism sector?
- Can you think of any other kinds of collaborations that might benefit your business and the tourism industry?
- From your point of view, what is the best fishery-tourism related product currently available in the area? Why is it the best?
- From your point of view, what would be some ideal fishery-tourism related products to offer in this region? Do they exist? If not, why not? What would it take to make them happen?

Tourism operators

- Can you tell me about your establishment?
- How important is the local fishery to your business? i.e. Are the tourists who stay with you or use your services interested in the local fishery? Fishing cultures? Is it one of the attractions of the area?
- Do you incorporate any aspects of local fishing culture into your business?
- What kinds of collaborations (related to your business), if any, do you have with local fish harvesters? Processors?
- Can you think of any other kinds of collaborations that might benefit your business and the local fishery?
- How important is it to you to feature seafood in your restaurant/catering aspect of your business?
- Approximately how much seafood do you buy/sell during the tourist season? Over the year? What types of seafood do you buy?
- What do you look for in the seafood you buy?
- Where do you source your seafood?
- Can you get as much seafood as you want locally? The right types of seafood for your business? When you need it? Of appropriate quality? What requirements do you have, which aren't currently being met?
- What do you think could make your access to local seafood easier?
- From your point of view, what is the best fishery-tourism related product currently available in the area? Why is it the best?
- From your point of view, what would be some ideal fishery-tourism related products to offer in this region? Do they exist? If not, why not? What would it take to make them happen?

Appendix VI Consent forms

Household food provisioning interviews

Study Title: A food security research project in the Bonne Bay Region

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Introduction

You are invited to take part in a research study being lead by Kristen Lowitt as part of her PhD program in the Interdisciplinary Studies Program at Memorial University. Taking part in this study is completely voluntary; you may withdraw from the study at any time. The study is described below. The description tells you about the risks, inconvenience, or discomfort which you might experience. Participating in the study may or may not benefit you directly; however, we might learn things that will benefit others. You should discuss any questions you have about this study with Kristen Lowitt, Barb Neis, or Charles Mather (contact information above).

What the study is about

The purpose of this study is to understand people's food provisioning practices and ideas for their local food system in the Bonne Bay region. It builds upon the earlier community food security assessment that Kristen undertook in the Bonne Bay region in the summer of 2009. The outcomes of this research will be used to help inform recommendations for developing sustainable, community-based food systems in the Bonne Bay area.

How the study is done

You have been asked to participate in an individual interview in which you will be asked to share your experiences about your household's food provisioning practices. The interview will last between 60 and 90 minutes and will take place at the most convenient location for both you and the interviewer. The interview will be audio taped but you do have the option to opt out before the interview begins or at any point during the interview, in which case the interviewer will take detailed notes.

Confidentiality and anonymity

Your privacy will be maintained throughout and upon completion of this study and your identity will not be shared. To protect your identity, a false name will be used in place of your real name in reports and papers emerging from this research. Audio-recordings will be kept for 5 years after publication as source documents as Memorial University requires and then destroyed. Audio-files, tapes, transcriptions, consent forms, digital images, notes and raw data will be kept in password protected computer files or stored in a secure filing cabinet. You will be given the option of having the tape and/or transcript archived at the Memorial University Folklore Archive. Unless consent for deposit to the archive is granted, access to the original data will be limited to the researcher and the PhD supervisory committee.

Risks and Benefits

There are no anticipated direct personal benefits, but the information you provide may help improve our understanding of your household's food practices and your local food system. We believe any potential risks and discomforts from participating in the study are minimal. You will have the opportunity to review the interview transcript and digital photos and remove any information or photos you do not want included in the study.

What else?

Results of this PhD research project will be made available to all participants through the CURRA at Memorial University (www.curra.ca).

Liability statement: Signing this form gives us your consent to be in this study. It tells us that you understand the information about the research study. When you sign this form, you do not give up your legal rights. Researchers or agencies involved in this research study still have their legal and professional responsibilities.

Questions

You are welcome to ask questions at any time during your participation in this research. If you would like more information about this study, please contact Kristen Lowitt at klowitt@mun.ca / 709-864-3065 or Barb Neis at bneis@mun.ca / 709-864-7244

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have

been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at (709) 864-2861.

Consent

Your signature on this form means that:

You have read the information about the research

You have been able to ask questions about this study

You are satisfied with the answers to all of your questions

You understand what the study is about and what you will be doing

You understand that you are free to withdraw from the study at any time, without having to give a reason, and that doing so will not affect you now or in the future

You will have the opportunity to review the interview transcript and digital photos and remove any information/photos you do not want included in the study

If you sign this form, you do not give up your legal rights, and do not release the researchers from their professional responsibilities. The researcher will give you a copy of this form for your records.

Your Signature

I have read and understood the description provided; I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project, understanding that I may withdraw my consent at any time. A copy of this Consent Form has been given to me for my records.

Signature of participant

Date

I give permission for the interview to be audio-recorded.

Signature of participant

Date

I give permission for the researcher to observe and take photos around my home/property for evidence of food provisioning supports.

Signature of participant

Date

I give permission for the researcher to contact me about participating in a future focus group as part of this same study.

Signature of participant

Date

Researcher's Signature

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of investigator

Date

Participant observation

Study Title: Exploring opportunities for new fishery-tourism products, business development, and fisheries market development within the Bonne Bay area of Newfoundland

Researcher

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Introduction

We are inviting you to take part in a study about ways to promote synergies between fisheries and tourism in the Bonne Bay region as a way to improve the sustainability of these two industries. This study is being organized through the Community-University Research for Recovery Alliance (housed at the Bonne Bay Marine Station and in St. John's) and funded by the federal government through the MITACS program and by the provincial government's Rural Secretariat. The research is being led by Kristen Lowitt, a PhD Student at Memorial University and supervised by Dr. Barbara Neis of Memorial University and by Marion McCahon of the provincial government's Rural Secretariat.

A steering committee of local people has helped design the research and will review the results. These results will also be summarized in a plain language report on the research to be posted, upon completion, to the website of the Community-University Research for Recovery Alliance at www.curra.ca and presented at an upcoming workshop in the area. In addition, they will be used in Kristen Lowitt's doctoral thesis on food security in the Bonne Bay area.

Taking part in this study is completely voluntary; you may withdraw from the study at any time. The description below tells you about the risks, inconvenience, or discomfort which you might experience. Participating in the study may or may not benefit you directly; however, we might learn things that will benefit others.

What the study is about

The purpose of this study is to identify and raise awareness of opportunities for, and barriers to, fisheries-tourism business development, enhanced local seafood markets, and fisheries-food security in the Bonne Bay area.

How the study is done

You have been asked to host the researcher for four days as part of a MITACS internship. During this time, she will participate in your daily activities, observe your business operations, and seek your ideas and perspectives on topics related to fish supply, markets, and fisheries-tourism opportunities. She may also take digital photos during this time, including of your business activities, infrastructure, and food provisioning supports around your home.

Confidentiality and anonymity

As a host partner for this study, we cannot ensure your anonymity. However, in order to protect your business and to ensure you are fully informed about the research results, you will be provided with a complete set of all of the written notes and any digital photos taken by the researcher at the end of the four day period she spends with you. You will be encouraged to review these and invited to remove any information and photos you wish prior to these data being used in any way. You will also be invited to participate as a co-author with the researcher on the writing of a report summarizing the results of her internship with fish harvesters and tourism operators in this area.

Any audio-recordings (key informant interviews) and transcripts will be kept for 5 years after publication as source documents as Memorial University requires. Audio-files, transcripts, consent forms, digital images, notes and raw data will be kept in password protected computer files and stored in a secure filing cabinet. Access to the original data will be limited to the researcher and the PhD supervisory committee.

Risks and Benefits

There are no anticipated direct personal benefits, but the information you provide may help improve our understanding of local seafood markets and fisheries-tourism business opportunities. We believe any potential risks and discomforts from participating in the study are minimal.

What else?

A report summarising the results of the research will be made available and you will be provided with a copy. Results of the study will also be shared at a regional workshop.

Questions

You are welcome to ask questions at any time during your participation in this research. If you would like more information about this study, please contact Kristen Lowitt at klowitt@mun.ca / 709-864-3065 or Barb Neis at bneis@mun.ca / 709-864-7244

The proposal for this research has been approved by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at (709) 864-2861.

Consent

Your signature on this form means that:

You have read the information about the research

You have been able to ask questions about this study

You are satisfied with the answers to all of your questions

You understand what the study is about and what you will be doing

You understand that you are free to withdraw from the study at any time, without having to give a reason, and that doing so will not affect you now or in the future

You agree to host the researcher as an intern in your business

You will have the opportunity to review the researcher's field notes/digital photos and remove any information/photos you do not want included in the study

If you sign this form, you do not give up your legal rights, and do not release the researchers from their professional responsibilities. The researcher will give you a copy of this form for your records.

Your Signature

I have read and understood the description provided; I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project, understanding that I may withdraw my consent at any time. I understand that I will be able to review the researcher's field notes prior to the data being used. A copy of this Consent Form has been given to me for my records.

Signature of participant

Date

Researcher's Signature

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of investigator

Date

Fisheries and tourism sector interviews

Study Title: Exploring opportunities for new fishery-tourism products, business development, and fisheries market development within the Bonne Bay area of Newfoundland

Researcher

Kristen Lowitt, PhD Candidate
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St. John's, NL
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Email: klowitt@mun.ca

Supervisors

Dr. Barb Neis
Principal Investigator, CURRA
Department of Sociology, Memorial University
Telephone: 709-737-7244
Email: bneis@mun.ca

Marion McCahon

Regional Partnership Planner, Rural Secretariat
Telephone: 709- 637 2937
E-mail: marionmccahon@gov.nl.ca

Introduction

We are inviting you to take part in a study about ways to promote synergies between fisheries and tourism in the Bonne Bay region as a way to improve the sustainability of these two industries. This study is being organized through the Community-University Research for Recovery Alliance (housed at the Bonne Bay Marine Station and in St. John's) and funded by the federal government through the MITACS program and by the provincial government's Rural Secretariat. The research is being led by Kristen Lowitt, a PhD Student at Memorial University and supervised by Dr. Barbara Neis of Memorial University and by Marion McCahon of the provincial government's Rural Secretariat.

A steering committee of local people has helped design the research and will review the results. These results will also be summarized in a plain language report on the research to be posted, upon completion, to the website of the Community-University Research for Recovery Alliance at www.curra.ca and presented at an upcoming workshop in the area. In addition, they will be used in Kristen Lowitt's doctoral thesis on food security in the Bonne Bay area.

Taking part in this study is completely voluntary; you may withdraw from the study at any time. The description below tells you about the risks, inconvenience, or discomfort which you might experience. Participating in the study may or may not benefit you directly; however, we might learn things that will benefit others.

What the study is about

The purpose of this study is to identify and raise awareness of opportunities for, and barriers to, fisheries-tourism business development, enhanced local seafood markets, and fisheries-food security in the Bonne Bay area.

How the study is done

You have been asked to participate in an individual interview in which you will be asked to share your thoughts related to fish supply, marketing opportunities, and local seafood consumption. The interview will last about 60 minutes and will take place at the most convenient location for both you and the interviewer. The interview will be audio taped but you do have the option to opt out before the interview begins or at any point during the interview, in which case the interviewer will take detailed written notes.

Confidentiality and anonymity

Your privacy will be maintained throughout and upon completion of this study and your identity will be kept confidential. Your name will not appear in any resulting publications unless you provide written consent to do so.

Any audio-recordings (key informant interviews) and transcripts will be kept for 5 years after publication as source documents as Memorial University requires. You will be given the option of having the tape and/or transcript archived at the Memorial University Folklore Archive. If this consent is not provided, these will be destroyed. Audio-files, transcripts, consent forms, digital images, notes and raw data will be kept in password protected computer files and stored in a secure filing cabinet. Unless consent for deposit is granted, access to the original data interview and participant observation will be limited to the researcher and the PhD supervisory committee.

Risks and Benefits

There are no anticipated direct personal benefits, but the information you provide may help improve our understanding of local seafood markets and fisheries-tourism business opportunities. We believe any potential risks and discomforts from participating in the study are minimal.

What else?

A report summarising the results of the research will be made available and will also be presented at a regional workshop. If you wish to have a copy of the report sent to you directly, you may indicate this at the bottom of the consent form.

Questions

You are welcome to ask questions at any time during your participation in this research. If you would like more information about this study, please contact Kristen Lowitt at klowitt@mun.ca / 709-864-3065 or Barb Neis at bneis@mun.ca / 709-864-7244

The proposal for this research has been approved by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at (709) 864-2861.

Consent

Your signature on this form means that:

You have read the information about the research

You have been able to ask questions about this study

You are satisfied with the answers to all of your questions

You understand what the study is about and what you will be doing

You understand that you are free to withdraw from the study at any time, without having to give a reason, and that doing so will not affect you now or in the future.

You agree to participate in an interview

If you sign this form, you do not give up your legal rights, and do not release the researchers from their professional responsibilities. The researcher will give you a copy of this form for your records.

Your Signature

I have read and understood the description provided; I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project, understanding that I may withdraw my consent at any time. A copy of this Consent Form has been given to me for my records.

Signature of participant

Date

I give permission for the interview to be audio-recorded.

Signature of participant

Date

I give permission for my name to be used in publications and be attributed to any direct quotations.

Signature of participant

Date

I give permission for the researcher to collect my contact information in order to send me a report summarizing the results of this study.

Signature of participant

Date

Researcher's Signature

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of investigator

Date

Appendix VII Seafood consumption survey



Household Seafood Consumption Survey

This survey is being sent to households throughout the region to gather information about seafood consumption and access to Newfoundland and Labrador seafood for people living in the Bonne Bay area. It is part of a larger research project looking for ways to increase food security, fishery-tourism products and business opportunities, and the sustainability of local fisheries.

The survey is organized through the Community-University Research for Recovery Alliance (housed at the Bonne Bay Marine Station and in St. John's). It is funded by the federal government through the MITACS program and by the provincial government's Rural Secretariat.

This research is being led by Kristen Lowitt, a PhD Student at Memorial University. It is supervised by Dr. Barbara Neis of Memorial University and Marion McCahon of the provincial government's Rural Secretariat. A steering committee of local people has helped design the research and will review the results. The results of the research will be summarized in a plain language report which, upon completion, will be available on the Community-University Research for Recovery Alliance website at www.curra.ca. They will also be shared at an upcoming workshop in the area. The results will also be used in Kristen Lowitt's doctoral research about food security in the Bonne Bay area.

Completing this survey is voluntary. By completing it, you are indicating your consent to participate in the study. This is an anonymous survey and we ask that you please not include any identifying information on the survey.

When the survey is completed, please return it directly to the researcher using the self-addressed stamped envelope provided. We ask that you please return the survey no later than **May 15th, 2011**.

The proposal for this research has been approved by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at (709) 864-2861.

Introduction

This survey should be completed by the person in your household who is responsible for shopping and cooking. It is divided into five parts and should take approximately 20 minutes to complete. Some questions ask specifically about "Newfoundland seafood." This is meant to include seafood from the island as well as mainland Labrador. If a question does not say "Newfoundland seafood" specifically, then we are asking about seafood from anywhere.

Part One: Frequency and types of seafood eaten

In the table below, please indicate how frequently your household eats Newfoundland seafood at different times of the year.

	Fall	Winter	Spring	Summer
Less than once a week				
Once a week				
1-2 times a week				
More than twice a week				
Every day				
Unsure				

Comments: _____

In the table below, please indicate how frequently your household eats seafood not from Newfoundland at different times of the year.

	Fall	Winter	Spring	Summer
Less than once a week				
Once a week				
1-2 times a week				
More than twice a week				
Every day				
Unsure				

Comments: _____

Are there any children in your household?

☐ Yes ☐ No

If yes, how often do they eat seafood compared to adult members in your household?

☐ Same

☐ More

☐ Less

During what meal is your household likely to eat seafood?

☐ Breakfast

☐ Lunch

☐ Supper

☐ None of the above

☐ All of the above

Please rank your household's five favourite types of Newfoundland seafood from 1 (highest) to 5 (lowest).

For the following types of Newfoundland seafood, please indicate (to the best of your ability) their frequency of consumption in your household now and five years ago:

Type of Seafood	I now use			5 years ago I used		
	Often	Now and then	Never	Often	Now and then	Never
Capelin						
Catfish						
Cod						
Crab						
Halibut						
Herring						
Lobster						
Mackerel						
Salmon						
Shrimp						
Scallops						
Smelts						

Type of Seafood	I now use			5 years ago I used		
	Often	Now and then	Never	Often	Now and then	Never
Squid						
Trout						
Turbot						
Other						

In addition to the fillets, are there any other parts of the fish you eat?

- ☐ Tongues
☐ Cheeks
☐ Britches
☐ Heads

Other: please explain

Part Two: Ways of eating seafood

What are your household's preferred forms of seafood? (Please check all that apply).

- ☐ Fresh
☐ Frozen
☐ Canned
☐ Salted
☐ Pickled

In the list below, please indicate any ways your household may preserve seafood. (Please check all that apply).

- ☐ Make salted fish
☐ Make pickled fish
☐ Freeze for the winter
☐ Other: please explain

What are your household's preferred ways of cooking seafood? (Please check all that apply).

- ☐ Fish and brewis
☐ Pan fried
☐ Baked
☐ Au gratin
☐ Deep fried
☐ Poached

- ☐ Barbecued
☐ Smoked
☐ Chowder/soup
☐ Other: please explain _____

Part Three: Sources of seafood

For each of the following types of Newfoundland seafood your household consumes, please indicate where you get it (check all categories that apply):

Type of Seafood	Sources of Seafood					
	Friends/family members	Local fish plant	Local grocery store	Supermarket (e.g. Dominion)	Superstore (e.g. Walmart)	Other/own catch/recreational fishery
Capelin						
Catfish						
Cod						
Crab						
Halibut						
Herring						
Lobster						
Mackerel						
Salmon						
Shrimp						
Scallops						
Smelts						
Squid						
Trout						
Turbot						
Other						

Overall, what is your household's main source of Newfoundland seafood? (Please check one)

- ☐ Recreational fishery
☐ Friends/family members
☐ Fish plant
☐ Local grocery store
☐ Large supermarket (not local)
☐ Other: please explain _____

Overall, what is your household's preferred source of Newfoundland seafood? (Please check one)

- ☐ Recreational fishery
☐ Friends/family members
☐ Local fish plant

- ☐ Local grocery store
☐ Large supermarket (not local)
☐ Other: please explain _____

Why is this a preferred source for Newfoundland seafood?

On average, how often does your household eat out at restaurants?

- ☐ Less than once a month
☐ Once a month
☐ 2-3 times a month
☐ Once a week
☐ More than once a week

When your household eats at a restaurant, how likely is it for at least one member of your household to order seafood?

- ☐ Very likely
☐ Likely
☐ Not likely
☐ Never

Part Four: Seafood in your community

In general, how satisfied are you with the availability of Newfoundland seafood in your community?

- ☐ Very dissatisfied
☐ Dissatisfied
☐ Neither dissatisfied or satisfied
☐ Satisfied
☐ Very satisfied
☐ Don't know

Please explain:

In general, how satisfied are you with the affordability of Newfoundland seafood in your community?

- ☐ Very dissatisfied
☐ Dissatisfied
☐ Neither dissatisfied or satisfied
☐ Satisfied
☐ Very satisfied
☐ Don't know

Please explain:

In general, how satisfied are you with the quality of Newfoundland seafood in your community?

- ☐ Very dissatisfied
- ☐ Dissatisfied
- ☐ Neither dissatisfied or satisfied
- ☐ Satisfied
- ☐ Very satisfied
- ☐ Don't know

Please explain:

Part Five: About you and your household

We are including a few questions about you and your household to help us better understand the sample of households that responded to this survey.

Please indicate the highest level of education you have completed.

- ☐ Less than high school
- ☐ Some high school
- ☐ High school diploma
- ☐ Some college
- ☐ College diploma
- ☐ Trade certificate or diploma
- ☐ Some university
- ☐ Bachelor degree
- ☐ Graduate degree

Please indicate your age.

- ☐ 21 and under
- ☐ 22 to 34
- ☐ 35 to 44
- ☐ 45 to 54
- ☐ 55 to 64
- ☐ 65 and over

Please indicate your sex.

- ☐ Male ☐ Female

Including yourself, how many people, presently live in your household? _____

Does any member of your household work:

In the fishing industry (i.e. in harvesting, processing, or retail)?

☐ Yes ☐ No

In the tourism industry?

☐ Yes ☐ No

What is your household's gross annual income?

☐ Less than \$10 000

☐ \$10 000 to \$19 999

☐ \$20 000 to \$29 999

☐ \$30 000 to \$39 999

☐ \$40 000 to \$49 999

☐ \$50 000 to \$59 999

☐ \$60 000 to \$69 999

☐ Greater than \$75 000

☐ Greater than \$100 000

